NHS

How Change Happens

Theory Guide & Phrasebook
Change Day 2015 Re-Valuation

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Contents

Introduction and recommendations

The Theory of Change is one of a series of reports produced to support the Re-Valuation of NHS Change Day 2015. For a complete summary of the evaluation reports and its findings see the *NHS Change Day 2015 Re-Valuation Report*.

The Theory of Change brings together key thinking from social theories on how bottom-up change takes place in organisations and what are the underpinning ideas, concepts and processes at play. The purpose of the theory is to make explicit the assumptions that are often taken for granted in the way volunteers contribute to innovative social change. The concepts used are multi-disciplinary as activities evaluated in NHS Change Day transcend different boundaries and ways of knowing. Themes are used to explore key ideas and thinking that are featured throughout the Re-Valuation of NHS Change Day 2015 report. These are based on how people talked about NHS Change Day and what the research team observed and reflected on NHS Change Day. The selected themes both reflect what NHS Change Day is in terms of it being:

- *what it is understood to be* about by those who participate in it (their mental models, or 'theories in use'[1])

and

- how Change Day *could be explained* by those outside it, viewing it from an 'expert' perspective developed through working on other change activities and healthcare improvement programmes.

A new language is needed in order to express the innovative ways that change can emerge and particularly how social value can be captured. This is important in order to move beyond the limitations of orthodox measures of social change. The Theory of Change is supported by a phrase book to support participants and activists who are new to the way in which NHS Change Day can be talked about. The phrase book can be used as a resource bank as it sets out short definitions of the key terms used and cross-references them to the appropriate themes in the Theory of Change.

Not one theory

The first theme is based on the premise that "*there is no one winning model*"[2]. Each discipline provides its own insights and within each discipline different models and theories are relatively stronger or weaker at explaining different specific behaviours (they have different levels of explanatory power, varying from behaviour to behaviour). It is possible to use different factors and influences from different models and theories and to explain particular behaviours as context dictates.

In the context of this Re-Valuation of NHS Change Day, there is no single new Theory of Change for NHS Change Day. This is based on a number of findings from the Re-Valuation of Change Day 2015:

Firstly, many activists are averse to using 'change theory' (or at least acknowledge the use of it). The idea of a 'social movement' is in part attractive because it is a way of talking about 'change' and 'mobilisation' and 'power' that does not feel 'theoretical'. So, there is a strong *a-theoretical* dimension to thinking and talking about how NHS Change Day brings about change.

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[1] See eg. Argyris & Schon (1978) for the distinction between 'theories in use' and 'espoused theories': the former being tacit/unspoken, the latter explicitly talked about and referenced.
[2] Darnton, A (2008) *Behaviour Change Knowledge Review – Practical Guide*. Andrew Darnton for the Government Social Research Unit, July 2008

Secondly, this a-theoretical stance is itself – one could argue – the basis of a change theory. To the extent that this is acknowledged, it is described by activists in terms of 'values', and motivational states like 'passion' or 'doing something for patients'. There were many different ways in which 'theories about change' were used in NHS Change Day to support this implicit framework of values. Different actors will have different 'mental models' or theories of change of their own, which are more or less relevant to different activities and aims which they are trying to achieve.

Thirdly, some activists were fluent in using different ways of talking about change and how it comes about. There are 'trends' in theory running through NHS Change Day, with ideas like 'dialogue', 'relational change' and ideas like 'platforms' being commonly used. Fragments from different change theories are useful to actors and these are more applicable and relevant to the contexts they encounter across the whole diversity of NHS Change Day. The theories presented are effectively collections of fragments from different disciplines, grouped together to form themes. Activists will make use of the fragments of theory that they find to be of value.

Change in systems

Despite not advocating a single Theory of Change to explain the processes at play in NHS Change Day (as, for instance, there are clearly multiple processes at work in the many different NHS Change Days that people experience) there is one model in particular that provides an overarching theory and illustrates how change in systems happens, and this can be applied to the specific context of NHS Change Day at multiple levels (e.g. to NHS Change Day nationally and at the level of specific campaigns and localities which take actions as part of NHS Change Day).

Frank Geels' multi-level model[3] is presented under the Transitions theme below:

Figure 1: A dynamic multi-level perspective on technological transitions (Geels 2001)

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[3] Geels, F (2001) 'Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study'. Paper presented at DRUID Nelson and Winter Conference, Aalborg, Denmark, June 2001.
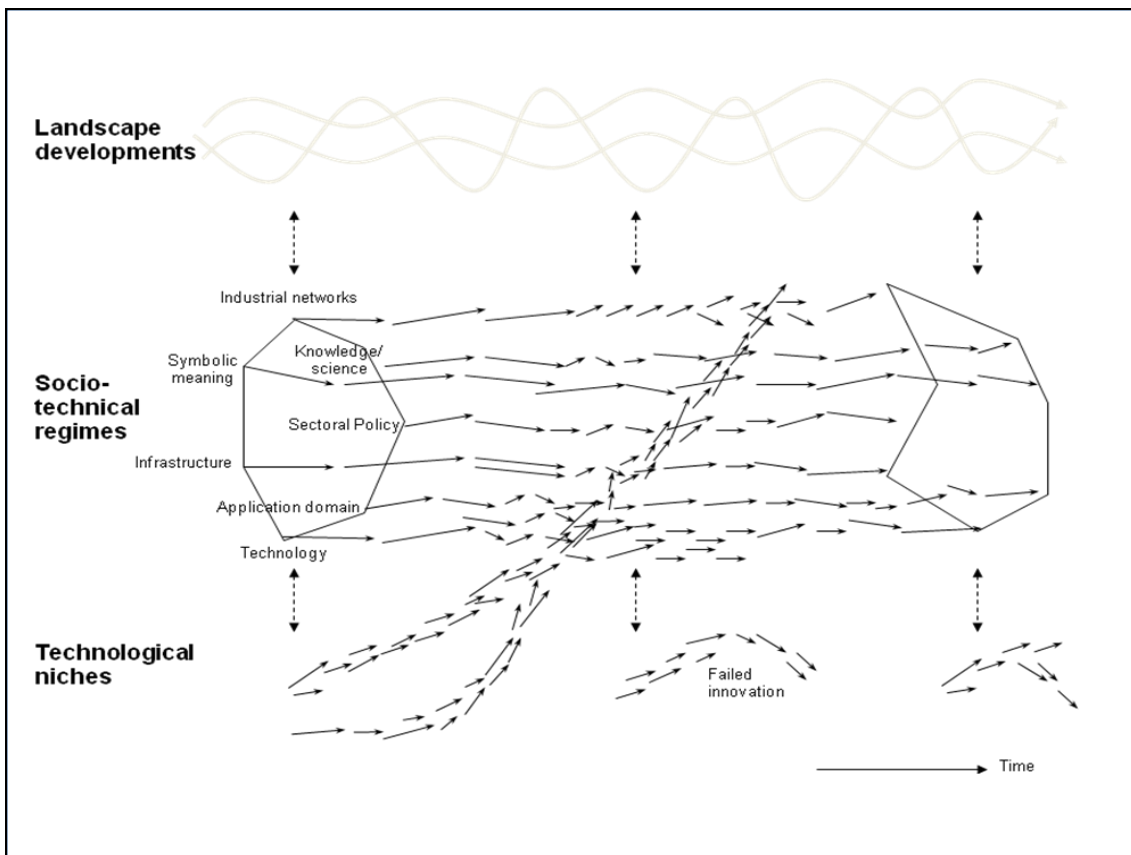
Geels' model shows how systems change when innovations which emerge from niches (in our case NHS frontline settings) are drawn into mainstream practice (the 'regime' as Geels calls it). The regime in turn is under pressure from the landscape: the prevailing set of policies and practices which are formally endorsed by the top of the hierarchy in the system. As gaps in the regime appear (e.g. through budgetary pressures or suboptimal outcomes for patients), innovations are drawn in to meet them.

The identification of this multi-level model as the overarching Theory of Change for NHS Change Day makes clear (perhaps for the first time) the purpose of NHS Change Day as a whole as being about bringing system change in the NHS; not just to improve experiences and outcomes for patients in all the settings where NHS Change Day takes place (which we have identified as the shared purpose of NHS Change Day activists – see e.g. in the Overview Report). In the process, the Geels' model can help all participants and activists in NHS Change Day to see where they fit in and how the activity they are committing their effort to can contribute to the need to bring about systemic change across the NHS as a whole.

This is just one illustration of the practical value which participants and activists gain from engaging with this body of theory.

Therefore at the level of *the individual activist and their local context*:

- It is powerful to understand NHS Change Day 2015 through a range of theories, rather than through one single theory. NHS Change Day 2015 accommodates the use of a range of fragments of theory and this is one of its characteristics as a social movement.

- In the context of the NHS, this is part of the space which NHS Change Day opens up for activists: an arena for action in which various theories of change can inform a wide

range of different activities. So, the over-arching theory in use by activists is that many theories are of use.

However, in understanding the role of NHS Change Day 2015 _in the NHS system_, it is proposed that:

- The multi-layered model of transition develop by Frank Geels provides interesting insights. The NHS Change Day activism takes place in the 'niche' layer and some of these innovations work their way into the 'regime' layer.

- This theoretical model explains the dynamics of innovation and change in terms of transitions at all spatial scales.

- This could apply to the relationship between pledging and the hierarchy in a particular NHS Trust or to the relationship between NHS Change Day (as a national movement) and the governance systems and prevailing practices of the NHS system as a whole, or it could apply to a ward or a team in a local care system.

Fourteen implications for NHS Change Day

The following points comprise an executive summary of the implications from theory for NHS Change Day. They demonstrate both the practical applications of theory in the context of NHS Change Day and the value of theory to NHS Change Day.

Each point is taken from the set of implications for NHS Change Day supplied at the end of each theme in the Theory Guide – hence fourteen points. For more implications and a discussion on the theory they arise from, turn to the relevant theme.

Theme	Selected Implications
The Commons	Commons Theory highlights the way in which care systems constitute the 'core economy', outside of both the public and the private sector (as Hazel Henderson's Layer Cake model shows, they are foundational to both those sectors, which depend upon this self-organising layer). Such a thesis argues for care activity to be community organized (e.g. through platforms like Buurtzorg) and to be kept clear of medicalised and commercialised structures. This finding echoes ongoing public conversations about the future of social care and the role of the NHS in it. A Commons reading also endorses the positioning of NHS Change Day as a platform to support those fundamental but non-monetised activities on which the rest of the economy depends. This theory lends further weight to our emphasis on NHS Change Day as a platform. It could also imply that in future, the co-ordinating function for NHS Change Day (currently NHS England Sustainable Improvement Team) could be constructed as a social enterprise (neither a public nor a private sector entity).
Communities	Campaigns and other local systems affiliated to NHS Change Day may in fact be more like communities of practice than social movements: for instance, in the way they self-organise around a common set of practices (e.g. sepsis prevention) not against but from within the organisations they work in, and through their intertwining of learning and change (whereas social movements are single-mindedly focused on the change: when that change is achieved they can pack up and go home, 'demobilise').
Dialogue	The term 'dialogue' is used widely in the world of NHS Change Day to mean conversation, ora meeting, in which there is a loose agenda. This selection of theory pushes the concept in a particular direction that stresses the 'social processes' involved and the benefits that may come from a more open-sided approach to dialogue.
Dilemmas	The use of the term 'dilemma' for a complex problem or 'wicked issue' is new. NHS Change Day2015 is centrally concerned with negotiating dilemmas, rather than solving problems.
Disruption	In Theory, 'positive deviants' are originally mothers of at risk children; we might call them frontline carers. The focus on positive deviance as a formal change theory underlines that innovation is not (necessarily) a form of rebellion. NHS England Sustainable Improvement Team's pre-occupation with being maverick (e.g. 'rocking the boat while

	staying in it', 'leading from the edge' and, to a lesser extent, 'speaking truth to power') draws on social movement thinking but may be more of a self-conscious identity (designed to convey Sustainable Improvement Team's affiliation to the frontline staff who populate NHS Change Day, as opposed to the NHS England hierarchy which Sustainable Improvement Team connects to) than a prerequisite of effective organising for social change.
Emergence	Emergence helps us understand the notion of 'making visible', by 'seeing' the inter-relationships between the myriad actions in NHS Change Day2015 and the 'whole'. Knowing this means devising a new approach to measuring the capacity of complex systems to produce change, now and in the future. Emergence, by definition, starts where orthodox, linear understandings of causality stop: it is what happens when causes of phenomena are (at first) invisible. Re-Valuation takes account of this; its approach (especially to 'capacitating' value) is akin to looking for Vygotsky's 'buds' and 'flowers', rather than what has already fruited.
Leadership	NHS Change Day is a complex system, presenting complex leadership challenges. Note that across all the sources gathered here, non-hierarchical approaches are a minimum requirement. Complex systems also require multiple leaders: if we think of NHS Change Day as a system of systems i.e. transcending traditional organisational ways of organising - we can identify many 'leaders', though it is notable they do not self-identify as such; instead they appear to have much more in common with Margaret Wheatley's concept of host (collaborative and trusting as a form of leadership) than heroes (leading from the front on your own). At the national level leadership of NHS Change Day is further complicated by the need to engage with the NHS hierarchy, all the time presenting the illusion of leading from within NHS Change Day as a social movement. Seeing NHS Change Day as a platform may ease this tension and help to distinguish between the central co-ordination role of the Sustainable Improvement Team and the role of activitists.
Learning	Learning and change are intertwined. Transformational change requires reflective learning. It can also be argued that for change to last there must have been learning, otherwise when you switch off the intervention (e.g. remove the incentive) behaviour 'reverts to type'. Change agents are change learners. Having impact means being both an activist and a learner: reflecting on assumptions and values; and value is inherent in doing change (re-valuation is not a bolt-on). All knowledge is co-constructed. From a constructivist position all knowledge is socially constructed; we would say the same of value: that it is negotiated between groups with a shared interest in it,hence the Re-Valuation method of 'socialising value'. This also requires reflection, through iteration internally and with others.

Platforms	Theories of platforms help to illuminate: - the significance of community as a way of creating value and generating innovations - the significance of indirect as well as direct benefits - the impossibility of predicting value (of what type and for whom), but the certainty that it will arise for all of the platform participants - that a core function of a platform is its capacity to make the participants visible to one another. It is as illuminating to see NHS Change Day as a platform as it is to see it as a social movement. Meanwhile, many of the contradictions inherent in NHS Change Day as a (managed from the inside) social movement dissipate when we switch to a platform perspective.
Social Movements	Social movement thinking is core to what NHS Change Day is. Until this Re-Valuation, movement language was the best way of explaining how NHS Change Day works, for instance in terms of its visibility/invisibility, governance and hierarchies, use of stories and insistence on shared values. Many of these concepts are fundamental to NHS Change Day and are picked up elsewhere in this Theory of Change. Many of them also fall into the category of dilemmas where neither of the oppositions trumps its other. In turn, this makes sense of some of the apparent contradictions in NHS Change Day as a managed social movement from inside the system.
Stories	The role of narrative is prominent in the architecture of NHS Change Day. Narratives flowing from individuals and shared stories become the basis of a movement. Re-Valuation also highlights the role for stories in sense-making: particularly socialising value through the mode of storytelling and methods of iterating and cascading. There is also a need for new language to bring new possibilities for valuing social change (not just surface-framing or spin, but based on fundamentally different understandings of how change happens and what matters).
Systems	In approaching NHS Change Day as a complex system, with emergent properties, we move beyond orthodox understandings of 'change programmes' and their 'evaluations' to mobilise a wealth of theory from systems thinking. Key concepts in the systems thinking of this Re-Valuation include: - Visible/Invisible: Triggered by the recognition that social movements draw strength from being visible and invisible, given further methodological clarity thanks to taking a systems approach (standing back to see wholes, in order to make systems visible). - Capacitate: The idea that the potential value in a movement/platform can be measured, based on the quality of the relationships in the network, would not be possible without a systems perspective. - Openendedness: It follows from recursion (and the idea of 'nested networks') that when one system has been modelled, we can move on to model the next (in line, or up or down a level).

Transitions	The implications of adopting Geels's model of socio-technical transitions are many, including: - System change becomes the overarching objective for NHS Change Day. - System change requires changes at all levels: of niche, regime and landscape. - Knowing this, NHS Change Day activists can better direct their efforts. For instance, those on the frontline (i.e. in the niches) might concentrate on generating new innovations and sharing their best practice with their peers; local managers (i.e. in the regime) can develop cultures which are on the lookout for and accepting of 'niche innovations', giving them the best chance to be trialled effectively; NHS Leaders (i.e. in the landscape) can do likewise, celebrating both ends of the niche/landscape relationship and exploring how they can write policies and strategies to enable transition to more sustainable systems. Meanwhile, NHS improvement experts should adopt the model as their own theory of change and expound it to all those they work with. It is their role, as Geels suggests, to harmonise changes across niche regime and landscape to ensure that innovations become mainstreamed and their impacts understood.
Values and value	The two literatures on values and value are theoretically distinct, although there are some linkages between them in practice. These theories reveal: - orthodoxies of value as financial value and how hard they are to resist (e.g. in the Standard Return on Investment process) - the nature of value as both subjective and social: requiring an active process to agree upon valuations if they are to be externalised - the importance of measuring what is valued (and the inference that what is measured is what is valued) - how consensus may not be reached over questions of value, once the debate has gone beyond the extent of value to ask questions which can only be answered with reference to values - how values can be influenced (e.g. through the use of frames) not just to build social movements, but as an inherent part in bringing about social change (in which 'reframing' is a fundamental task).

Part one: Theory guide

1. The Commons

Theme

The Commons is about avoiding the depletion or abuse of common pool resources by implementing an agreed common stewardship system through a community of stakeholders who develop and agree shared principles, practices, rules and sanctions. The Commons can described in the following ways:

- a governance structure, equivalent to the state or the market; although it is a far older way of organising and stewarding resources than either
- an invisible social economic system below the radar, rooted in reciprocity and underpinning the market and the state in the way that systems of trust underpin legal systems and commercial contracts
- used by a community of stakeholders as an alternative method for allocating and increasing resources to meet collective needs and to secure wellbeing.

Commons theory has developed from a close observation of how common pool resources and in particular natural resources (rivers, fisheries, forests, moors, etc) have culturally been managed by communities (and effectively so) over hundreds of years. More than one billion people on the planet depend for their livelihoods today on access to such natural commons. The free software movement has extended commons theory to argue for treatment of information and knowledge as a commons resources and part of our common cultural inheritance. They have developed creative commons licensing for managing and legally protecting the digital commons.

In the context of the NHS, commons theory offers a powerful way of looking at the role of social movements and forms of co-production that need to be better aligned to secure the potential for transformation, with a primary focus on prevention. Thus we might creatively approach the maintenance of the nation's health, including the integration of health and social care, as a commons and move to co-develop a democratic stewardship system with collaborative responsibility among a diversity of carers – from the paid expert to the unpaid respite carer, and to the those working on public health issues from improved nutrition to tackling damp conditions in housing. If we pursue such thinking rigorously we can draw upon existing and emerging governance structures based on mutuality and co-production, such as those beginning to appear in communities including the North East Lincolnshire Foundation Trust in the UK and Buurtzorg district nursing services that have spread across the Netherlands and are attracting strong interest in the UK, for example from both the Royal College of Nursing and the Kings Fund[4].

Commentary on theme

The Commons can be thought of as a provisioning system for managing commonly-held resources: most fundamentally, natural resources. The observation that not all economic structures are markets is a significant challenge to orthodox economics and indeed to the prevailing culture as a whole; but it is not new. Economist Karl Polanyi argued in the 1940s that markets should be understood as subordinate to society (or 'embedded within' society, in his terms). Many other economists have followed that trend, though they also remain outside

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[4] RCN (2015) The Buurtzorg Nederland (home care provider) Model - Observations for the United Kingdom *RCN* Policy Briefing 02/15 (Updated August 2015) London: Royal College of Nursing; Kings Fund (2015) 'The Future Is Now' report, online at http://www.kingsfund.org.uk/reports/thefutureisnow/

dominant economic approaches. Commons Theory thus foregrounds the problems that occur when all resources and structures are viewed through, and subsumed within, a free market frame.

A popular account of this analysis is provided by the environmental economist Hazel Henderson. Writing in *The Politics of the Solar Age* (1981) Henderson developed the analogy of the 'three layer cake with icing' to describe the structure of the 'total productive system of an industrial society' (note the trouble she goes to not to say '…of the economy': precisely because of the prevailing assumption that 'economy' equals 'market') – see figure 1 below[5]. The layer cake model shows how the private sector is actually dependent on the public sector, and this in turn depends on the 'sweat-equity' or 'core economy', what we in turn might call the commons: a non-monetized system for sharing resources, including, in the bottom layer, natural resources. The model has become widely adopted in environmental circles as it demonstrates the dependence of the classic 'monetised' economy on natural resources. However, it also shows how the most celebrated sectors of our economy (e.g. private sector 'growth' and the fortunes of the money markets) are just the upper layer of the cake and the 'icing' (in the case of finance). Finally, Henderson highlights how the health and care tasks of parenting and caring tend to be undertaken by people who collectively comprise the Commons: this work is largely unpaid, highly gendered and mostly invisible; yet generates value which is then monetised (and traded) in the upper layers.

Figure 1
Total Productive System of an Industrial Society
(Three-Layer Cake with Icing)
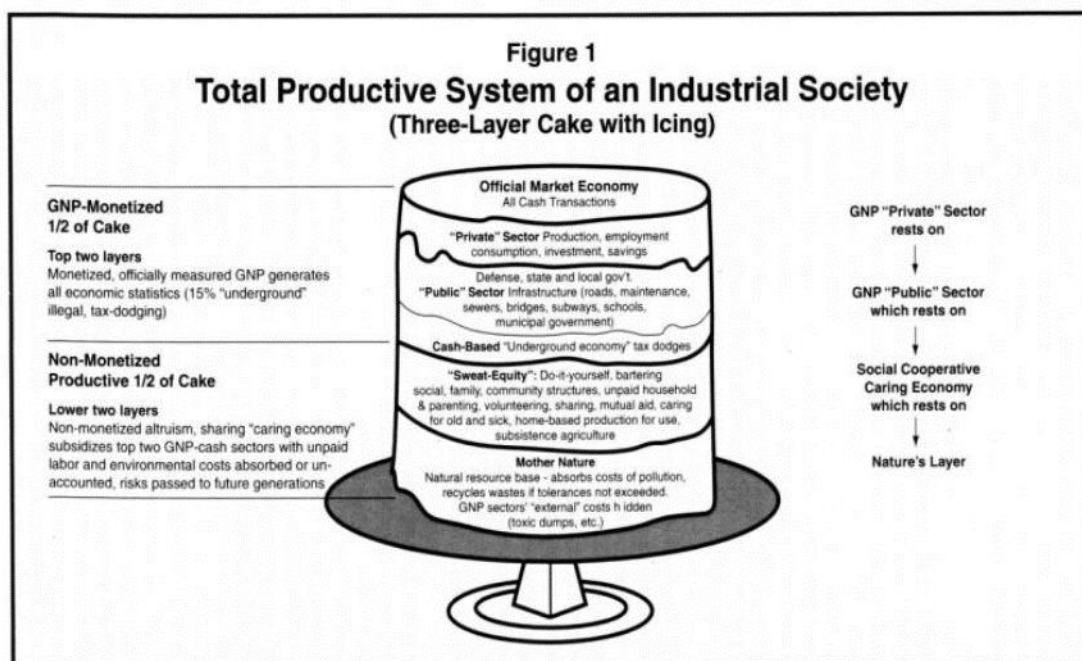
Source: Hazel Henderson, *Paradigms in Progress* (San Francisco: Berrett-Koehler Publishers, 1991). Copyright © 1982 Hazel Henderson.

Work on the Commons has underpinned ecological economics since the 1990s and has informed platform thinking over the last decade. Given the importance of platform thinking to our reading of NHS Change Day, it is timely to understand the contours of theories of the Commons, which in turn hold fundamental implications for how to provide health and social care in a complex system.

The leading platform economist Marshall Van Alstyne sees the management of cities, health care and education as the major fields now opening up[6]. What is not normally noted is that a foundation of platform economics and guidance can be traced back to the world of the

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[5] Henderson, H (1991) *Paradigms in Progress*. New York, NY: Doubleday.
[6] Regalado, A (2014) 'The Economics of the Internet of Things' *MIT Technology Review*, 20 May 2014.

commons. Commons are the opposite of commodities: they refer to shared convivial space where value is co-created and shared as relational goods and commonwealth. The free software movement has been developing the digital commons in this fashion since the late 1980s.

Not all platforms are commons and this is a salient point. The difference between corporately owned platforms and those based on democratic and mutual ownership is important.

Co-production between paid and unpaid people is key to the third industrial revolution. Wikipedia is a good example, with some 83per cent of value and content added by volunteers as open information and knowledge.

Elinor Ostrom won the Nobel Prize in economics in 2009 for her work to demonstrate the economics of the commons. She showed that the commons is an overlooked provisioning system. Based on mutual aid, the commons as a fundamental economic structure is older than both the market or the state. It is culturally based and can flexibly harness the power of diverse stakeholders to manage together a wide and diverse range of resources. As Ostrom's research showed, commons management of nature, including forests, fisheries, water systems and other ecological commons, has been happening for thousands of years and commons she identified as still operating can be traced back to the middle ages.[7] Today there are many emerging modern day commons in both the material and immaterial worlds.

Ostrom demonstrated that there is a difference between common pool resources like the oceans or the atmosphere that are degrading, and a commons that is richly maintained and stewarded. The key difference she pointed out is that a true commons has a system of community governance. This basically involves an identifiable group of collaborative stakeholders who jointly agree to co-manage and steward a resource and to do so through a set of agreed ethical rules that they abide by, to curb what David Bollier has described as 'free riders, vandals and shirkers'.[8]

In the field of health services and social care, platform technology linked to a co-created commons can play to the strength of the complex social ecology of provision in welfare services. This is the view of Shoshana Zuboff[9]. In England there are, for example, 6.3 million unpaid carers; some ten times the number in paid home care roles. As Zuboff shows, platform economics can unite the paid and the unpaid in public health promoting ways. To succeed collaborative organisations and citizens need to use platforms dynamically to harness social capital and reciprocity and tap into what Bollier and Helfrich call 'the wealth of the commons'[10].

Elder Power is a programme that relies on technology, staff support and a network of volunteers to help people elderly people stay in their homes. It is a good example of 'the wealth of the commons': In Maine, USA where hospital care and nursing care costs are ten times the costs of care in the community, Elder Power is demonstrating how these costs can be reduced by platform systems that unite both paid and unpaid home carers in co-production networks, that secure horizontal 'economies of co-operation and scope'. Elder Power's starting point is that in most normal circumstances 90 per cent of care is provided by family members and friends, so by utilising the latest information and community technology (we could draw the analogy with

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[7] Ostrom, E (1990) *Governing the Commons - The Evolution of Institutions for Collective Action*, Cambridge: CUP.
[8] Bollier, D (2014) *Think Like a Commoner - A Short Introduction to the Life of the Commons*. BC, Canada: New Society Publishers.
[9] Zuboff, S (2011) 'Creating value in the age of distributed capitalism', *McKinsey Quarterly*, September 2010.
[10] Bollier, D & Helfrich, S (eds.) (2012) *The Wealth of the Commons: A World Beyond Market and State* Amherst MA: The Levellers Press.

Wikipedia) they connect up the paid and unpaid provision and do so highly strategically and effectively. Moreover to build the provisioning networks and fill gaps, Elder Power volunteers earn a local economy social currency that is accepted by public sector and private businesses including restaurants, shops, cinemas, petrol stations and many retailers.

Another good example of 'the wealth of the commons' is Wessex Resolutions. Wessex Resolutions has developed a public social partnership network in the South West of England involving a growing network of 20 local authorities, advice services, home improvement agencies and approved home repair firms. They install aids and adapt homes for senior citizens, to mitigate the risk of falls, and insulate homes and change heating systems in the homes of low income vulnerable people, to reduce fuel poverty. A fall by an elderly person leading to a hip fracture will cost the NHS £28,000 for a hip replacement, so these interventions can both reduce hospital admissions and enable vulnerable and elderly people to return to their homes quicker. Like Elder Power, Wessex Resolutions has developed a common platform for its growing network of collaborative agencies that operate regionally to co-deliver public health related services. Their success is expanding year on year and has led to other similar networks being established in the South East of England. The shared interagency platform of Wessex Resolutions is an expanding commons.

These examples demonstrate well the 'economies of co-operation and scope' potential of a commons and verify the complexity management and governance insights of Ross Ashby and Stafford Beer (see 'Systems' theme below). Ashby's Law and the Principle of Requisite Variety holds that: 'If the stability (of a complex system) is to be attained, the variety of the controlling system must be at least as great as the variety of the system.'[11] This is exemplified by the generative efficiencies of both platform economics and the economics of the commons. Inversely, as John FC Turner and Mike Franks point out, the unstated consequence of Ashby's Law is the command and control management *Principle of Requisite Uniformity* which holds that: *'*Any organisation seeking management control over a complex system, inevitably reduces diversity of the system to below that of the organisation itself.'[12]

As Zuboff points out, imposing management and control can be hugely inefficient and costly[13]. She argues that decentralised and network governance models can tackle the inefficiencies of the large private sector health and social care models in the USA that are rooted in concentrated centralised control, overpaid senior management and investor ownership. All these factors have a tendency to load costs into the pricing equation and thus favour high cost solutions that are not prevention-oriented.

Venturing further afield, beyond the USA and the UK, there are indeed many highly innovative governance models in health and social care sectors that unite diverse stakeholders in co-productive and horizontal ways. In this field, since the 1980s, northern Italy has led the innovations to prove how 'economies of co-operation and scope' work. After legislation in 1991, a national network of social co-operatives in Italy emerged and evolved and today they operate in the fields of social care, community health and education. This innovation in health and social care demonstrates the local benefits of this approach through autonomous social co-operatives, collaborating intelligently and co-developing provision within local networks in a partnership now connecting more closely with the Italian NHS in pilot areas of Italy.

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[11] Ross Ashby, W (1956) *An Introduction to Cybernetics*. London: Chapman & Hall.
[12] Turner, JFC & Franks, MA (1991) 'Realizing People's Productivity: The Third Partner in Sustainable City Development' - a discussion paper for URBE 6, the Second International Congress on Urbanism, Maringa, Parana, Brazil, 17-21 September 1991.
[13] Zuboff (2010) op. cit.

The social co-operatives have developed a multi-stakeholder governance system whereby paid staff, volunteers, service users and families are encouraged to become members and to work together to co-design and collaborate on service provision and innovation.

Common platforms have been developed through co-operative consortia for the sharing of diverse functions including accountancy, finance, research, quality control and purchasing. Such consortia solutions are operated diversely at appropriate town, city or provincial levels. This good practice in Italy has spread to other countries in Europe and North America and there are early stage developments in the UK. A recent international study by Girard points to an international spread of co-operative health care practices aligned with public services in many countries.[14]

Similar to the Italian multi-stakeholder governance practices, Community Health Service Mutuals in the NHS have emerged in the South East and the North of England, such as those designed by Cliff Mills and Chris Brophy at Mutuo (Cliff Mills notably also served on the expert group for this NHS Change Day Re-Valuation).[15]

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	Commons Theory is useful in illuminating the following aspects of NHS Change Day 2015: - Non-monetised value tends to be invisible to orthodox economic observers. This is a central point in Commons theory and echoes the finding from Re-Valuation that invisible value in a social movement always exceeds the visible. - Invisible value is associated with self-organising movements of people who negotiate access to shared resources, for the collective good. Again, there is a read-across to the grassroots-led organising of collective resources (e.g. NHS staff's time and effort) represented by NHS Change Day. - Taking these implications literally, Commons Theory highlights the way in which care systems constitute the 'core economy', and these are outside of both the public and the private sector (in fact, as the Layer Cake model shows, they are foundational to both those sectors, which depend upon this self-organising layer). Such a thesis argues for care activity to be community organized (e.g. through platforms like Buurtzorg) and to be kept clear of medicalised and commercialised structures. This finding echoes the ongoing public conversations about the future of social care and the role of the NHS in it. - A Commons reading also endorses the positioning of NHS Change Day as a platform to support those fundamental but non-monetised activities on which the rest of the economy depends. This theory lends further weight to our emphasis on NHS Change Day as a platform. It could also imply that in future the co-ordinating function for NHS Change Day (currently provided by the Sustainable Improvement Teaam) could also be provided by a social enterprise (neither a public nor a private sector entity).

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[14] Girard, JP (2014) *Better Health & Social Care: How are Co-ops and Mutuals Boosting Innovation and Access Worldwide? Volume 1: Report.* Montreal, Canada: LPS Productions.
[15] Mills, C & Brophy C (2011) *Community Health Services Made Mutual.* London: Mutuo.

New and re-purposed phrases	In/visible Layers Platforms

2. Communities

As a social phenomenon, group dynamics are vital to the functioning of NHS Change Day. Since its inception, the nature of NHS Change Day as a community has been both at the foreground but also contested. Most prominently, it is framed as a social movement, a particular kind of group which comes together to pursue a shared goal, normally against a prevailing 'establishment' or regime (see the theme on 'Social Movements' below). However, this identification is problematic in a number of ways, including that NHS Change Day is co-ordinated by the host institution it is constructed to challenge (or improve), be that the NHS nationally or a host trust locally,and that the 'movement' is co-ordinated at all (hence the constant reminders that NHS Change Day originated from the idea of the hubbies (a group of volunteers) and remains the property of frontline workers. Perhaps, more critically, social movement theory overlooks the need for learning to accompany change (see the 'Learning' theme below). This misses one of the secret ingredients of effective change activity, and also overlooks one of the direct benefits which participants seek and receive from participating in the group. If we are to reveal the full value of NHS Change Day, we need to understand the group dynamics which mediate between the resources put in by individuals and the benefits they take out.

Commentary on theme

This review focuses on three conceptualisations of community and the importance this has for advancing personal and social change.

- **Group Dynamics**

Wilfred Bion's work on groups illuminates aspects of NHS Change Day. In this context, we cannot do justice to the range and subtlety of his ideas, only mention one or two of the more useful. In his *Experiences in Groups (and other papers[16])* he discusses the process within a group, based on his own experience and observations. Bion mentions several ideas which are of real use to thinking about the dynamics and value of NHS Change Day, including:

- The capacity to absorb new members and to lose members without fear of losing group individuality – i.e. 'group character' must be flexible.
- Freedom from internal sub-groups having rigid (i.e. exclusive) boundaries. If a sub-group is present it must not be centred on any of its members, nor on itself (treating other members of the main group as if they did not belong within the main group barrier) and the value of the sub-group to the function of the main group must be generally recognised.
- Each individual member is valued for their contribution to the group and has free movement within it, their freedom of locomotion being limited only by the generally accepted conditions devised and imposed by the group.
- The group must have the capacity to face discontent within the group and must have means to cope with discontent.
- The basic assumption is that people come together as a group for the purposes of preserving the group.
- The group seems to know only two techniques of self-preservation: fight or flight. The frequency with which a group, when it is working as a group, resorts to one or other of these two procedures, and these two procedures only, for dealing with all of its problems, made Bion first suspect the possibility that a basic assumption exists about becoming a group.

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[16] Bion, WR (1961) *Experiences in Groups and other papers.* London: Brunner Routledge. 1961.

- Preoccupation with fight/flight leads the group to ignore other activities, or, if it cannot do this, to suppress them or run away from them. Bion found that leaders who neither fight nor run away are not easily understood.
- There is a further basic assumption that may be relevant: it is the basic assumption that the group has met together to obtain security from one individual on whom they depend.
- Finally (for our purposes only) it is important to notice the link that Bion makes between 'learning from experience' and 'frustration'. He speculates that most groups' inability to learn arises from their intolerance of frustration.

These kinds of theories and conjectures illuminate some of the dynamics within the groups that make up NHS Change Day and also illuminate the dynamic processes through which other groups in the NHS interact with the NHS Change Day groups.

- **Groups as therapeutic communities**

Robert Rapaport[17] (basing his observations on the study of Maxwell Jones' Belmont Hospital Social Rehabilitation Unit in London in the 1950s) identified four factors that he considered to be crucial to the effective functioning of a democratic therapeutic community that have stood the test of time:

1. Communalism: a space for sharing and joint enterprise in all aspects of the work and 'living together'.
2. Democratisation: a flattening of traditional hierarchy that allows for meaningful participation of all in decision-making.
3. Permissiveness: a place where 'repetition' and 'acting-out' is to be expected and so provide an opportunity for 'learning from experience' and greater understanding rather than criticism, condemnation or blame.
4. Reality confrontation: a place where personal, interpersonal and social boundaries are respected so that when offence is given/taken it is taken seriously by the whole community and so 'the responsibility' is not left 'within' or 'between' individuals but faced up to by all.

This work has been revised and extended over the years, most recently in the context of healthcare by Penny Campling and John Ballatt in their work on 'intelligent kindness'[18], but Rapaport's work could be used to describe the basic principles of any organisation that claims to be 'democratic' and, as part of that, therapeutic.

Adam Phillips in *Equals*[19] discusses democracy and the implications of its value for community. He mentions that Chantal Mouffe in *The Democratic Paradox*[20] defines '…antagonism as the struggle between enemies, and agonism as the struggle between adversaries'.

If we apply these suggestions to NHS Change Day we can see it and its activities as in part democratic mechanisms, designed as an arena for conflict, for exploring difference. This is where the conflicts in how to meet need, how to deliver public services, how to care for each other, how to improve patient experience, can take place. In loose psychoanalytic talk, they are a 'container' but of a special kind, because the conflict will only last if, in some respects, it is between equals. Mouffe proposes we call this 'agonistic pluralism'.

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[17] Rapaport, R (1960) *Community as Doctor: New Perspectives on a Therapeutic Community* London: Tavistock.
[18] Ballatt, J & Campling, P (2011) *Intelligent Kindness: Reforming the Culture of Healthcare* London: Royal College of Psychiatrists.
[19] Phillips, A (2002) *Equals.* London: Faber & Faber.
[20] Mouffe, C (2000) *The Democratic Paradox.* London: Verso.

Philips goes on to speculate: 'The authoritarian order pre-empts conflict, which is in and of itself a primary value. And to value conflict – to prefer the openness of conflict to the closure of intimidation – necessitates some conflict of equality. Conflict that is not between equals ceases to be conflict very quickly.'

- **Communities of Practice**

Put simply, Communities of Practice can be defined as 'groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly'[21].

The Communities of Practice concept was created by anthropologist Jean Lave and Etienne Wenger when they were working on models of work-based learning. It has since become strongly associated with Wenger and has been taken up as a tool for organisational change. Creating or curating communities of practice is a way to capture and spread the tacit knowledge present in the organisation's staff. Notably, such groups can have range of statuses in an organisation, from being 'unrecognised (invisible to the organisation and sometimes even to the members themselves)' to 'institutionalised (given official status)'[22].

The resonances with NHS Change Day should be immediately apparent, with some kinds of Communities of Practice functioning as well-theorised micro social movements, but working from inside an organisation out. However the concept is far from simple and it has in it many of the attributes that we see in the principles of Re-Valuation: emergent, iterative, time-bound and replete with dilemmas. The concept originally came out of learning theory: Lave and Wenger evolved the concept of legitimate peripheral participation to describe a process of 'situated learning', which we might call 'action learning' or 'learning through doing'. As such, Communities of Practice are everywhere, whether the participants know it or not, and situated learning becomes a generalised 'social practice theory of learning'[23] in which all learning is shared and social and involves both factual and procedural knowledge, acquired through social interaction.

Meanwhile, the concept of legitimate peripheral participation emerged from Lave and Wenger's observation that people undertake situated learning in groups which do not comprise learners and teachers, but sets of practitioners who are equal in their focus on the practice (or set of practices) in question, but differentiated by their relative expertise in that practice. Thus a Communities of Practice is commonly made up of three groups: newcomers, old timers who actively support newcomers and old timers whose newcomers may have moved on or become old timers in the Communities of Practice. Learning thus happens over time, with learner-practitioners developing new identities as they learn. This is one sense in which Lave and Wenger's concept is intended to improve upon that of the traditional 'apprenticeship'. The concept is also dynamic and differentiated, such that each learner follows a different trajectory in relation to the practice of interest. In general, the assumption is that the energy in a Communities of Practice is 'centripetal', i.e. draws practitioners increasingly towards the centre of the practice, the kernel of the practice, at which point members agree it is being reproduced expertly. We may note this is a horizontal not vertical journey, as it does not need the acquisition of status, just recognised expertise in performance. Hence the learning journey of a newcomer is from 'peripheral participation' to 'full participation'. Finally, the duration of that trajectory can be called a career. This links Lave and Wenger's writing up with that of sociologists such as Howard Becker, whose influential work included studies of the careers of

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[21] Wenger, E & Trayner, B (2015) *Communities of Practice: a Brief Introduction* (Version 15th April 2015) [from *http://wenger-trayner.com/introduction-to-communities-of-practice/*]
[22] Wenger, E, McDermott, R & Snyder, WM (2002). *Cultivating Communities of Practice* Boston, MA: Harvard Business School Press.
[23] Lave, J & Wenger, E (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge: CUP.

'deviants', including jazz pianists and marijuana smokers[24]. Lave and Wenger's case study apprenticeships included 'midwives, tailors, quartermasters, butchers, nondrinking alcoholics'[25].

In Etienne Wenger's more recent work he has moved away from the idea of peripheral participation and formulated the Communities of Practice concept as a number of more manageable tools for bringing about organisational change. In the process he has identified three 'fundamental elements' which are always found in a Community of Practice, as follows[26]:

i)   Domain: The domain of knowledge creates the common ground and gives a sense of common identity; it inspires members to participate, guides their learning and gives meaning to their actions.

ii) Community: The notion of a community creates the social fabric for learning. A strong community fosters interactions based on mutual respect and trust and encourages a willingness to share ideas, expose one's ignorance, ask difficult questions, and listen carefully.

iii) Practice: The practice is a set of frameworks, ideas, tools, information, styles, language, stories and documents that community members share. Whereas the domain denotes the topic the community focuses on, the practice is the specific knowledge the community develops, shares and maintains.

Originally, Lave and Wenger appeared keen that their theory of learning remained hard to define, in keeping with their reading of the social world as iterative and emergent. Their analysis is instructive in terms of how to handle theory in general, as well as in its specifics: 'Until recently, the notion of a concept was viewed as something for which clarity, precision, simplicity, and maximum definition seemed commendable. We have tried, in reflective consonance with our theoretical perspective, to reconceive it in interconnected relational terms. Thus the concept of legitimate peripheral participation obtains its meaning, not in a concise definition of its boundaries, but in its multiple, theoretically generative interconnections with persons, activities, knowing, and the world.'[27]

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	Useful in illuminating the following aspects of NHS Change Day 2015: • Self-care, in the face of the austerity drive and 'neglect' from the body politic of the NHS • The crucial role of inclusivity in creating a community of equals • The tendency for groups to split themselves off and become exclusive • Specifically, we note the resemblance of the campaigns and other local systems affiliated to NHS Change Day to Communities of Practice. We can suggest that they may in fact be more like Communities of Practice than social movements: for instance, in the way they self-organise around a common set of practices (e.g. sepsis prevention) not against but from within the organisations they work in, and through their intertwining of learning and change (whereas social movements

[24] Becker, HS (1963) Outsiders: *Studies in the Sociology of Deviance*. New York, NY: The Free Press of Glencoe.
[25] Lave & Wenger (1991) op. cit.
[26] Wenger et al (2002) op. cit.
[27] Lave & Wenger (1991) op. cit.

	are single-mindedly focused on the change: when that change is achieved they can pack up and go home, 'demobilise'[28]). • Groups convene around shared practices, but they do not do so simply to acquire knowledge, but also to play out identities and to acquire emotional security. • The resemblance of the tighter social networks in NHS Change Day to therapeutic communities (e.g. the Hubbies or #MatExp platform users) involving combinations of coaching and support.
New and re-purposed phrases	Group process Communities / practices Careers

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[28] See e.g. Darnton, A and Kirk, M 2011. *Finding Frames: New ways to engage the UK public in global poverty*. London: BOND.

3. Dialogue

Theme

'Dialogue' is at the core of the narrative of NHS Change Day, both in 2015 and from its inception. The concept of 'dialogic' practice is discussed in the Sustainable Improvement Team White Paper[29]. As a theory it has a long history, from Plato and Socratic dialogue as the basis of enquiry, through the notion of dialogue between believers and their gods (if a bit one sided), via humanist teaching and the rise of rhetoric, to the 20th Century use of the idea in philosophy, ethics and sociology.

The Wikipedia[30] entry on dialogue provides a succinct summary of the work of Martin Buber, David Bohm, and Paulo Friere[31]. There are other major figures but it is these three who are of use to us,with their emphasis on relational, respect-based, non-adversarial exchange between people (in the form of dialogue in a group).

Commentary on theme

After Martin Buber, David Bohm is the most influential thinker and writer on dialogue; although the field is crowded with many original contributions, feeding into methods and approaches like 'appreciative inquiry[32]' and 'dialogic consulting'[33].

Bohm has scoped the concept of dialogue *'as a free flow of meaning between people in communication, in the sense of a stream that flows between banks'*[34]. These 'banks' are understood as representing the various points of view of the participants.

' ...it may turn out that such a form of free exchange of ideas and information is of fundamental relevance for transforming culture and freeing it of destructive misinformation, so that creativity can be liberated.'

A dialogue has no predefined purpose, no agenda, other than that of inquiring into the movement of thought and exploring the process of 'thinking together'. This activity can allow group participants to examine their preconceptions and prejudices, as well as to explore the more general movement of thought. Bohm's intention regarding the suggested minimum number of participants[35] was to replicate a social/cultural dynamic (rather than a family dynamic). He notes that dialogue does not mean two people in conversation.

Nor should dialogue be confused with discussion or debate, both of which, says Bohm, suggest working towards a goal or reaching a decision, rather than simply exploring and learning. Meeting without an agenda or fixed objective is done to create a 'free space' for something new to happen.

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[29] Bevan, H & Fairman, S (2014) *The new era of thinking and practice in change and transformation: a call to action for leaders of health and care* [The NHS iQ White Paper] NHS Improving Quality.
[30] https://en.wikipedia.org/wiki/Dialogue
[31] In his view that dialogue is the basis of a 'freed' up form of pedagogy between equals.
[32] https://appreciativeinquiry.case.edu/
[33] Pidgeon, H. (2006) Consulting from a Dialogic Orientation, in Critchley, B. & Higgins, J. (eds) *Field Research into the Practice of Relational Consulting*. Ashridge.
[34] Bohm, D (2006) *On Dialogue* Abingdon: Routledge.
[35] He recommends 20 -40 people facing each other in a circle See http://www.david-bohm.net/dialogue/dialogue_proposal.html

'Dialogue is really aimed at going into the whole thought process and changing the way the thought process occurs collectively. In their 2006 work *Taking Positions in Organisations*[36], David Campbell and Marianne Groenbaek provide a useful link between dialogue and dilemmas (a core concept in our Re-Valuation of NHS Change Day – see the next theme): 'Finally, the purpose of locating individuals in positions within the discourses (we can think of these as dilemmas) is to give these people a base from which to begin a dialogue. The position identifies them as belonging to and doing something for the larger organisation, but it also identifies them as individuals, free to choose their own positions yet constrained to be positioned by others. There are many perspectives, or subject positions, from which one person can begin to speak to another...

'Dialogue is a form of conversation in which dissidents attempt to acknowledge the differences and the 'otherness' between them. The philosopher Martin Buber[37] is one of many who have written about dialogue and according to him, 'genuine conversation, and therefore every actual fulfilment of relation between men (and women), means acceptance of otherness.'

They go on to mention a schema from Robyn Penman proposing four criteria that can be used to describe a dialogic conversation[38]:

- 'First the talk is responsive to the social realities of the moment ('constitutiveness');
- Second, the talk must be open to constant revision ('contextualness);
- Thirdly, the talk must recognise the right of the other's views to exist and to be taken 'seriously' ('diversity');
- Fourthly, neither the communication nor the meanings created through conversation can ever be complete ('incompleteness'), nor can they arrive at certain reality.'

Campbell and Groenbaek also mention McNamee and Gergen, who comment: 'Certitude walks hand-in-hand with the eradication of the other'[39]. Such a concept is critical to the approach to re-imagining of evaluation (Re-Valuation) that we have been doing. It also expresses part of the moving spirit of NHS Change Day.

Dialogue, therefore, is a particular attentive approach to social exploration of thought and value. It accepts that there have to be other points of view in order for there to be meaning and it assumes that meaning is socially constructed.

John Shotter[40] has worked on developing ways of understanding what is happening during ordinary, day-to-day conversations in organisations. These tools and concepts[41] are resources for description and analysis.

Shotter discusses the idea of joint action, which he points out always produces unintended and unpredictable outcomes[42]. People generate between themselves 'without conscious realisation

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[36] Campbell, D & Groenbaek, M (2006) *Taking Positions in Organisations* London: Karnac Books.

[37] See e.g. Buber, M (1937) *I and Thou* [reprinted 2004] London: Charles Scribner's Sons.

[38] Penman, R. (1992). Good theory and good practice: An argument in progress. *Communication Theory*, 2(3), 234-250.

[39] McNamee, S., & Gergen, K. J. (1998). *Relational responsibility: Resources for sustainable dialogue*. London: Sage Publications.

[40] http://www.johnshotter.com/

[41] The principal ones are:
• Developed and developing events.
• Joint action.
• Rational invisibility.
• Feelings of tendency.
• The non-picturable imaginary.

[42] Shotter, J (1992) *Conversational Realities: Constructing Life through Language* London: Sage.

of the fact, a changing sea of moral enablements and constraints, of privileges and entitlements, and obligations and sanctions – in short, an ethos'. Such evolving 'organised practical-moral settings' cannot be traced back to the intentions of any one of us and so it is as if this setting or situation that we co-create has, for us, a 'given' or 'externally caused' nature; so we are considering something closer to 'ethos' than to 'silo'. This concept of 'ethos' is very close to our use of the idea of 'settled account', being the final 'answer' generated through the social process of Re-Valuation.

Shotter's colleague Patricia Shaw applied his thinking to organisations[43]. She discusses the kinds of conversations she has, what they feel like and what they do: 'These discussions have an 'everyday quality' – they are messy, branching, meandering, associative and engaging. They are similar to the mode people value and recognise in many informal kinds of conversation. They include formulating and making reference to proposals, analyses and frameworks. They involve jargon, speculation, anecdotes and personal revelation. They are shot through with feeling tone and bodily sensation with which we are all resonating and responding to in different ways. It is a very active, searching, exploratory form of communication, in which the way the future is under perpetual construction is more than usually evident to us all'.

The kind of storytelling alluded to is not that of complete tales, but narrative-in-the-making. Rather than stating aims, objectives, outcomes, roles, as abstract generalities, people use a narrative mode. The starting point is often 'the story so far'. Someone recounts and at the same time accounts for or justifies, the way they make sense of events and their own participation. The point in the past which they choose to start their narrative and the path they construct to bring them to the present and to point towards the way the future may evolve, is not prescribed but nor can they say anything they like.

'As they speak into the responsiveness, verbal and non-verbal, of others present, the story evolves within enabling constraints that are themselves evolving in the telling and listening. As others associate and fill in an increasingly complex pattern, sense-making is co-created.'

Patricia Shaw's account here also serves as a thorough description of the kinds of conversations we had during the Re-Valuation to help make visible the value of NHS Change Day 2015.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	This theoretical material has informed our work in several respects. In relation, for example to: - socialising of value - iterating of accounts of value (in the local systems) - exploring dilemmas through thinking collectively about their nature - arriving at a 'settled account' - understanding the nature of social movements and their power to make change (persuade) - the use of models and method, in contrast to/alongside the role of dialogue.
New and re-purposed phrases	The term 'dialogue' is used widely in the world of NHS Change Day to mean conversation or a meeting, in which there is a loose agenda.

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[43] Shaw, P (2002) *Changing Conversations in Organisations (A Complexity Approach to Change)* Abingdon: Routledge.

	This selection of theory pushes the concept in a particular direction that stresses the 'social processes' involved and the benefits that may come from a more open-sided approach to dialogue.

4. Dilemmas

A dilemma is a problem offering two possibilities, neither of which is unambiguously acceptable or preferable. One in this position has been traditionally described as 'being on the horns of a dilemma'[44], neither horn being comfortable. There are many types of dilemma, but they have a characteristic in common: unlike other forms of problem or puzzle they do not go away, unless you change the nature of the context, game or situation you are in.

Commentary on theme

The idea of dilemmas can help in thinking about change and complexity. In their 1994 book, *Systems Thinking for Harassed Managers,* Nano McCaughan and Barry Palmer discuss the role of dilemmas in 'framing' problems, where issues are in opposition; where 'seeing' the problem that is being worked through in itself is a challenge[45]: *'To get things done, we have to imagine organisations as coherent systems with shared aims, objectives, and organisational assumptions. But from time to time we run up against problems...that can only be understood if we let go of our dream of a coherent organisation.*

'Instead we adopt the metaphor of the dilemma: that organisations are constructed out of an array of premises, held by the same and different people, and these premises are not necessarily mutually compatible'.

'If they are accorded the force of unquestionable principles, then the scene is set for oscillation between opposing configurations, and for debilitating conflict which rumbles on forever.'

In this short quotation there are some very helpful ideas regards thinking about change and complexity, including:

- the 'dream' of coherence
- the role of metaphor; in this case the metaphor of 'dilemma'
- the often mutual incompatibility of assumptions and purposes which we bring to the same organization
- that if these assumptions and purposes become 'fixed' (incapable of being examined or questioned, then the scene is set for perpetual conflict
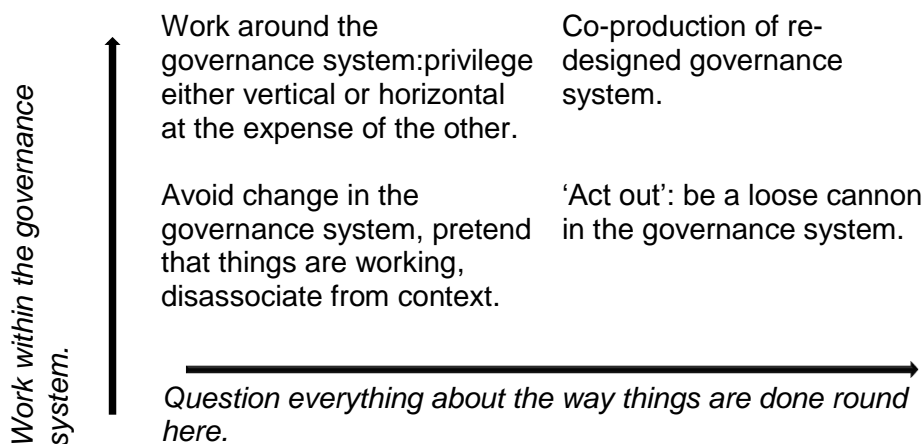- such conflict is debilitating to the organization.

McCaughan and Palmer have a simple way of describing dilemmas. The value lies in not presenting the dilemma as two positions in opposition to each other but as opposing positions in relation to one another. There is scope to describe different ways of behaving in relation to the two 'horns' of the dilemma.

Below is a way of expressing dilemma:

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[44] See https://en.wikipedia.org/wiki/Dilemma -
[45] McCaughan, N & Palmer, B (1994) *Systems Thinking for Harassed Managers* London: Karnac Books.

Work within governance systems versus question of how existing ways of working are part of what is problematic

	Work around the governance system:privilege either vertical or horizontal at the expense of the other.	Co-production of re-designed governance system.
Work within the governance system.	Avoid change in the governance system, pretend that things are working, disassociate from context.	'Act out': be a loose cannon in the governance system.

Question everything about the way things are done round here.

The idea of dilemmas is also used by David Campbell and Marianne Groenbaek to explore the idea that 'positions' are taken up by different interests in organisations as a way of socially constructing dilemmas; expressing the horns of a dilemma through the 'social polarities' within an organisation[46]. The authors provide the following illustration:

'We are more interested in changing positions than feelings because we believe that the feelings will follow. If an employee says 'I am very uncomfortable in this team', we would be likely to say: 'what is at the other end of this position?' 'What is a comfortable position in this team?' And eventually: 'what is the connection between these two positions feel like to you?' We hold the view (or take the position!) that the meanings of feelings and emotions can only be created by two positions.'

As such, the relationship between the positions (the dilemma) is the space in which dialogue can take place (see our preceding theme on Dialogue).

Use in NHS Change Day Re-Valuation

In the NHS Change Day Re-Valuation we made use of a range of dilemmas to explain problems as positions in relation to one another, including:

- movement vs programme
- programme vs platform
- individual vs collective
- visible vs invisible
- tangible vs intangible
- 'costs' vs self-actualisation
- inclusion vs exclusion
- local vs national
- micro vs meso vs macro
- engagement vs outsourcing
- emergence vs over-simplification
- bounded vs boundary crossing
- telling vs showing
- iterative vs prescribed

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[46] Campbell, D & Groenbaek, M (2006) *Taking Positions in Organisations* London: Karnac Books.

- disruption vs endorsement
- social complexity vs aggregation of view.

Relevance/ use/ what is made visible	This concept of a dilemma and the related use of it in theory and practice: - helps to make the complexity of NHS Change Day 2015 'visible' in a form which does not privilege one interpretation over another - demonstrates the central relevance of relationship between positions (or 'horns') rather than opposition - gives us a way of thinking about intractability of problems, yet shows the different ways in which they can be understood or illuminated.
New and re-purposed phrases	The use of the term 'dilemma' for a complex problem or 'wicked issue' is new. We would argue that NHS Change Day 2015 is centrally concerned with negotiating dilemmas rather than solving problems.

5. Disruption

Disruption as a change process starts from the premise that current dominant practices and norms are unhelpful to achieving better outcomes. Thus to enable different outcomes the status quo must be disrupted. Linked to this way of understanding change is a radical or maverick streak, which regards dominant practices as inherently inefficient or unjust. Revolution not evolution could be a strapline to sum up this approach, which infuses much of the writing on social movements. However, when we begin to look at well-constructed theories of disruption as a means of making and spreading change, we find that the assumption that the current system or dominant practice is flawed is often not part of the theory. In this context 'deviance' can just mean difference from the mainstream (one definition of innovation), as much as it means disobedience.

Commentary on theme

i)   Unfreeing/refreezing

In social-psychological literature, behaviour can inherently be defined in terms of its lack of change; for instance, Kurt Lewin describes habit as 'resistance to change'[47]. Unlike the concept of habit as a force in itself (automaticised behaviour as put forward by Triandis or Cialdini), Lewin identifies habit only in relation to its reaction to external stimuli. Thus for Lewin, habit is not measured by the consistency of behaviour over time but in terms of the consistency of behaviour in the face of changing circumstances. When measuring habit, Lewin is not counting the frequency of behaviour (as Triandis does) but its resistance to change. This resistance is not willfulness, but a sign of the resilience of a group or social organisation, which will adapt to keep its behaviour constant.

Lewin's work is fundamental to the discipline of social psychology; he is also described as the father of action research. For learning theorists Argyris and Schon, Lewin is 'the prototypical action researcher who remarked that nothing is so practical as good theory'[48]. The quotation is in itself an accurate expression of Field Theory, a method of enquiry (more than a theory) based on learning through doing which Lewin first developed and which has become central to social psychology. Lewin's ideas (not least from his 1947 paper on 'Group Dynamics'[49]) can be discerned in many of the theories of change which are brought together in this review. Change Day is about 'action learning' – learning about change by doing change in a community of practice.

For Lewin, resistance as a social dynamic is based on the smaller unit of the group. In writing which clears the way for the concepts of norms and identity theory, Lewin describes how group standards represent the source of individual resistance. Through adherence to group standards, the sense of a coherent group is maintained; individuals either adhere or get ousted. Lewin stresses that group standards must be altered if lasting individual change is to result. The process of change he describes has come to be called Lewin's Change Theory (although much of what he writes is essential to theories of change). Change Theory refers to Lewin's description of an unfreezing/refreezing process in changing behaviour, whereby habitual behaviour is exposed to scrutiny by the group, an agreement is reached on how it should be altered, before being allowed to fall back into position in day to day life, but based on the altered group standards. Lewin's metaphor of behaviour is that of the flow of a river.

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[47] Lewin, K 1951. *Field Theory in Social Science: Selected Theoretical Papers*. D Cartwright (ed.). New York, NY: Harper & Row.

[48] Argyris, C & Schon, D (1996). *Organizational Learning II*. Reading, Mass.: Addison Wesley.

[49] Lewin (1951) op. cit.

The notion of a constant flow of behaviour is central to Giddens' Structuration Theory[50] (as well as models of behaviour based on regulating feedback loops – see 'Systems' below). Giddens' duality of practical and discursive consciousness is particularly useful for expressing the unfreezing/refreezing process. Borrowing his terminology, 'less directly motivated' behaviours are lifted from practical to discursive consciousness, before being reconfigured and left to fall back into the routines of social activity. The dynamic of lifting and dropping is present in Lewin's account, with change being observed as a change in levels of attitude, conduct or output.

Lewin also brings psychological and affective dimensions of disruption to the fore. He gives an account of an experiment designed to encourage mothers to drink more fresh milk; as a result of the research he concludes that 'group decision' is better than 'a good lecture'. The group context can also supply the 'emotional stir-up' necessary to 'break out of the shell of complacency' and alter customary habits[51]. This injection of emotional force (e.g. shock) can be thought of as shifting the habit into the realm of discursive consciousness.

The MIT reflective practitioners follow squarely in this tradition. For instance, Peter Senge, one of the leading exponents of systems thinking in relation to organisational change, identifies 'policy resistance' as one of the underpinning principles of systems thinking[52]. Meanwhile Ed Schein explicitly references Lewin's phrase of 'creating disequilibrium': often through the use of 'disconfirming data', which are held up as a mirror to the organisation, revealing the underlying assumptions under which they are labouring[53]. Finally, we should note that the second loop in double-loop learning is 'paradigm breaking' and it is this sense of disruption which is essential for transformational change[54].

ii) Disruption in social movements

In looped theories like the above, it is the practitioners' own assumptions that need breaking in order to bring about lasting disruption to their current behaviours; a dynamic familiar to us all as 'breaking bad habits'. Change as disruption is present throughout social movement literature, but there it is the habits of the dominant system which need to be changed; breaking the status quo. Social movement writing thus imbues change agents with the force of marchers and sometimes rioters; as if being angry were a part of what makes a person an effective change agent (note 'anger', not 'passion and a thirst for change'[55]). This strand in social movement thinking can be traced back to the origins of that tradition itself; hence Alinsky's 'Rules for Radicals' (1971) are framed in terms of a pitched battle[56]. For example:

- 'Rule 1: Power is not only what you have but what the enemy thinks you have. Power through the senses: if you have power, parade it so your enemy can see it.
- 'Rule 3: Wherever possible, go beyond the experience of your enemy. Here you want to cause confusion, fear and retreat.'

[50] Giddens, A 1984. *The Constitution of Society – outline of the theory of structuration*. Berkeley and Los Angeles: University of California Press.
[51] Lewin (1951) op. cit.
[52] Senge, P (1990) *The Fifth Discipline*. London: Random House.
[53] Schein, E (2004) *Organizational Culture and Leadership* (3rd edition) San Francisco, Cal.: Jossey-Bass.
[54] Argyris, C and D Schon (1978) *Organizational Learning: A Theory of Action Perspective*. Reading, Mass.: Addison Wesley.
[55] Ballard, D and S Ballard (2005) *Warm Hearts and Cool Heads: The Leadership Potential for Climate Change Champions.* Alexander, Ballard & Associates for Hampshire County Council.
[56] Alinsky SD (1971) *Rules for Radicals: A Practical Primer for Realistic Radicals*. New York, NY: Random House.

It is notable that nearly 40 years on Marshall Ganz chose to park his tank on the same lawn, in using the metaphor of David and Goliath[57]. Furthermore, Ganz lists 'anger' as a catalyst of action, in opposition to apathy as a barrier; though he is careful to say this should be used constructively, coupled to appeals to injustice, not blind rage[58].

This strand in the literature is picked up by the NHS improvement specialists as they review the evidence on social movements. Their 2009 summary of the core features of a social movement (see the Theme below) emphasised that change agents in a movement are unwelcome by the prevailing system and will be seen as an 'unwelcome, subversive, or an oppositionary force'[59]. The guerrilla framing to creating change agents is noted.

iii)   Positive deviance

In sharp contrast to the social movement framing, theory which explicitly references deviance as a means of healthcare improvement is much less combative. The concept of positive deviance goes back to the late 1970s and work on child health in developing countries.

'Positive deviance is the observation that in most settings a few at risk individuals follow uncommon, beneficial practices and consequently experience better outcomes than their neighbours who share similar risks'.[60]

A good example is provided by work in Egypt, where, contrary to custom, parents of poor but well-nourished children were found to feed their children a diet that included eggs, beans and green vegetables. Child nutrition programmes were then developed that provided opportunities to parents of other malnourished, children to follow this and other new behaviours, such as hand washing and hygienic food preparation, which resulted in improvements in child growth.

Effectively, positive deviance is a managed (top-down) programme of change which builds on innovations already present,but non-normative and less visible,at the grassroots of communities. The advantages of such innovations are that they already demonstrably work in the context where they will be applied, they tend to be cheap to implement and they are self-sustaining once the bounded intervention is over. Positive deviance could be described as a means of both identifying and spreading innovations. A 2004 paper in the *British Medical Journal* reviewing the history of positive deviance projects concludes: 'The most efficient way to improve health is to use locally available, sustainable and effective approaches.'[61]

The review also set out the following stepped process for adopting a 'positive deviance' approach:

-   develop case definitions
-   identify four to six people who have achieved an unexpected good outcome despite high risk
-   interview and observe these people to discover uncommon behaviours or enabling factors that could explain the good outcome

[57] Ganz, M. (2009) *Why David Sometimes Wins: Leadership, Organization, and Strategy in the California Farm Worker Movement.* New York, NY: Oxford University Press.

[58] Ganz, M. (2010). Leading change: Leadership, organization, and social movements. *Handbook of leadership theory and practice*, *19*.

[59] Bibby J, Bevan H, Carter C, Bate P, Robert G (2009) *The power of one, the power of many: bringing social movement thinking to health and healthcare* NHS Institute for Innovation and Improvement.

[60] Berggren WL, Wray JD (2002) Positive deviant behavior and nutrition education. *Food Nutr Bull* 2002;23 (suppl 4):9-10.

[61] Marsh, D. R., Schroeder, D. G., Dearden, K. A., Sternin, J., & Sternin, M. (2004). The power of positive deviance. *BMJ: British Medical Journal*, *329*(7475), 1177.

- analyse the findings to confirm that the behaviours are uncommon and accessible to those who need to adopt them
- design behaviour change activities to encourage community adoption of the new behaviours
- monitor implementation and evaluate the results.

One of the few facilitating conditions for this approach follows straight from the early steps: 'It requires discovering positive examples, typically at a prevalence of one per cent to 10 per cent'. This in itself can be a costly, and sometimes an illusory, process. Moreover it is in the nature of diffusion of innovations that once they are taken up by a minority, if they have what Rogers calls 'competitive advantage' relative to alternative solutions, they will spread in due course in any case (with laggards taking them up last)[62]. This implies timing is everything and Positive Deviance approaches depend on finding the right moment before the demonstrably advantageous practice hits the 'tipping point'[63].

For the purposes of this discussion on deviance and innovation it is sufficient to note that in the original 1976 paper it is the mothers of the children in low income states who are first labelled 'positive deviants' and at the same time they are described as 'at risk'[64]. They are the change agents in this model of social innovation.

iv)   Constructive dis/comfort

The concept of 'constructive discomfort' arises in a paper by the current Chief Executive of NHS England, Simon Stevens, when he was advisor on health to No.10 Downing Street, following his time working in the US healthcare sector[65]. The concept seems to have achieved extra resonance through his status at the time and his subsequent rise.

In his paper, Stevens stood back to observe the trends in NHS improvement practice over the past five years (since the start of the Blair Government in 1997). He found that the twelve 'strategies' which have been adopted for driving improvement fell into three main types:

- one dimensional reform: support for providers (e.g. through spending)
- two dimensional reform: hierarchical challenge (e.g. through targets, standardisation)
- three dimensional reform: localist challenge (e.g. through patient choice).

Stevens describes how each of the three trajectories was going on at once (where ideally they might be sequenced) and he defends this, saying: 'Healthcare improvement requires a source of tension to overcome the inertia inherent in all human systems. The past five years have seen England searching for the right policy mix to generate constructive discomfort.'

The paper takes the concept no further, but we can infer that it is loosely informed by ideas of disruption. The NHS is sick, or afflicted by bad habit. In the language of Lewin, what is required is an 'emotional stir-up'[66]. Tension can no doubt be a source of energy (see for instance the theme on Dilemmas above), although whether the tension wrought on workers and patients in the NHS by the imposing of twelve strategies simultaneously, competing with each other in three phalanxes, felt constructive at the point of delivery is to be disputed.

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[62] Rogers, E (1995) *Diffusion of Innovation* (5th edition). New York, NY: Free Press.

[63] Gladwell, M (2000) *The Tipping Point: How Little Things Can Make a Big Difference*. New York, NY: Little, Brown & Company.

[64] Wishik SM, Van der Vynkt S (1976) The use of nutritional 'positive deviants' to identify approaches for modification of dietary practices. *Am J Pub Health* 66:38-42.

[65] Stevens, S. (2004). Reform strategies for the English NHS. *Health Affairs*, *23*(3), 37-44.

[66] Lewin (1951) op. cit.

A response came in 2015, in the shape of the Health Foundation's thinkpiece on Constructive Comfort[67]. Stevens of course is now chief executive of NHS England and instead of looking back over five years of someone else's policy making, he is looking ahead in his own Five Year Forward View[68]. The Health Foundation is responding to that prescription and adopts the premise that the course advocated for the next five years is broadly correct: the challenge is how to make the prescribed changes happen.

The thinkpiece responds by clustering the possible approaches to driving change in the NHS into three types, as follows:

Type 1: 'Prod organisations' This approach aims to direct, prod or nudge providers of care from the outside. Familiar tools here include legislation, targets, command and performance management, payment (currency and price) incentives, regulation and competition. This approach could be loosely termed a 'deficit management' or 'compliance' approach to improving performance reliant upon 'extrinsic motivation' for change.

Type 2: 'Proactive support'
This approach focuses on enabling organisations more directly to make the changes needed. **In the past, prods have been described as offering 'constructive discomfort' for change**. By contrast, proactive support efforts offer 'constructive comfort'. This could be loosely termed an 'asset management' or 'commitment' approach to improving performance, reliant upon 'intrinsic motivation' of staff to make the right changes.

Type 3: 'People-focused'
This approach includes both prods and proactive support, targeting NHS staff rather than organisations, as well as actions to inspire, engage and involve staff. Approaches include using policy mechanisms such as education and training, national contracts, professional regulation and clinical standards.

The Health Foundation repeats Simon Stevens's original question: is there the right balance in this mix of approaches to embed effective change quickly and widely? They explicitly say that the scale and urgency of the improvement challenge will require a mix of all three approaches. However, they also single out Type 2: proactive support as the one approach that holds the most potential and needs the most work. Given the definition for Type 2 explicitly argues back against Type 1, top down interventions, Simon Stevens is likely to suffer more of a stir-up at the prospect than will frontline staff.

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[67] Allcock, C, Dormon, F, Taunt, R & Dixon, J (2015) *Constructive Comfort: Accelerating Change in the NHS.* London: Health Foundation.
[68] NHS England (2014) *5 Year Forward View.*

v)   Disruptive Innovation

Disruptive innovation is a theory of change, as well as practical guidance for business managers, developed by Clayton Christensen at the Harvard Business School[69]. It occupies similar territory to other models of how innovations spread through markets, such as those by Everitt Rogers (see Diffusion of Innovations model, mentioned above on page 36 [70]) and Frank Geels in the field of socio-technical transitions[71] (see 'Transitions' theme below).

The system of interest for Christensen is the market and 'disruptive innovations' are those which 'enter from below'. He summarises the premise as follows: 'Dominant players in most markets focus on sustaining innovations – on improving their products and services to meet the needs of their profitable high-end customers. Soon, those improvements overshoot the needs of the vast majority of customers. That makes a market ripe for upstart companies seeking to introduce disruptive innovations – cheaper simpler, more convenient products or services aimed at the lower end of the market. Over time, those products improve to meet the needs of most of the market, a phenomenon that has caused many of history's best companies to plunge into crisis.'

It is possible to show this process as an adoption graph (sometimes an S-curve) as below, where the red dashed line is the level of performance that consumers want (and can handle), and which the incumbent technology (in blue) soon overshoots, leaving space for a disruptive technology (with much less functionality and much lower costs) to enter the market and over time challenge and ultimately displace.

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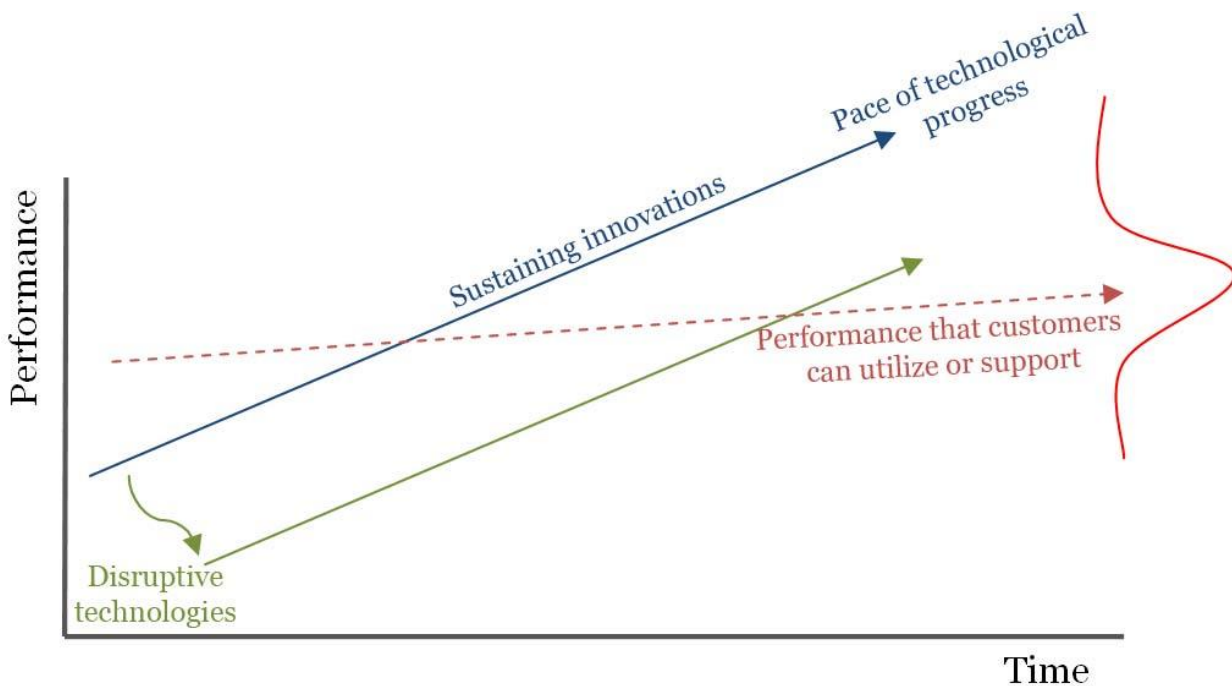
[69] Christensen, C (1997) *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.* Boston, Mass.: Harvard Business School Press.

[70] Rogers op. cit.

[71] Geels, F (2001) 'Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study'. Paper presented at DRUID Nelson and Winter Conference, Aalborg, Denmark, June 2001.

One great company now consigned to history which is cited by Christensen is Kodak Eastman. Digital photography effectively removed the need for specialist films and specialist developing laboratories. We can continue the story by observing that over time the smartphone has displaced the digital camera as the main medium for taking photographs, which are then 'processed' online, increasingly automatically by being uploaded to a cloud storage or file-sharing platform. This story has the attributes of a disruptive innovation by delivering lesser functionality which is more in line with what the consumer needs. In the process, the whole specialist system of support around film photography crumbles: the user/consumer takes and makes their own photographs, helped by technology. Though those who worked in Kodak Eastman and their supply chain might complain, few of the billions of smartphone users would ask to go back to the pre-digital age.

Christensen has applied the theory of disruptive innovation in many markets, including budget air travel, personal computing and stock and share trading (as in Geels' transitions, it is notable that the social and technical explicitly combine in most, if not all, of these stories, with a shift towards 'amateur' or 'do-it-yourself' means of exchange, enabled by ever faster and cheaper technological and processing power). Notably, in a 2000 paper he applied the concept to the US healthcare market, arguing that immense expense has been concentrated on high-end specialists treating relatively rare (and at the time intractable) conditions, in non-specialist settings (which require expensive adaptations). The time is right, Christensen argues, for disruptive innovations based on challenging the roles of healthcare professionals (e.g. train nurses to diagnose and treat specific conditions that currently would be handled by doctors, while doctors could address specific conditions or treatments currently reserved for consultants). Ultimately, this road leads to more prevention and self-care among patients (including socialised models of community care, we might argue). Christensen also calls for disruptive innovations in settings: instead of treating everything in general hospitals, more specialist units and centres could deliver high-end treatments, while less specialised but more numerous conditions could be treated in more local, non-hospital settings.

Looking back on his paper from 2000, some of this is now happening, with more of it on the way, in terms of the Models of Care in the Five Year Forward View and more mutualised models of care delivery (as discussed in the 'Commons' theme above). However, Christensen gives examples of disruptive innovations in healthcare that have failed, not because of 'competitive disadvantage' as Rogers might say (i.e. they perform worse than the incumbent technology) but because of the web of inter-related interests in the prevailing 'regime' which rejects them. He gives the example of a portable X-ray-style machine (using nanocrystal 'night sight' military technology) which could move around a hospital and give instant scanned images from which to make diagnoses. The technology clearly had the attributes to deliver better outcomes at lower cost but was resisted by diverse incumbent groups including X-ray manufacturers, radiologists, their professional association and training institutions, the medical standards institutions, and thus the private health insurers (the puzzle to Christensen is why venture capitalists, or indeed X-ray companies, didn't invest in it anyway and wait for it to supersede the incumbent technology over time).

Returning to our theme, it is clear that disruption of markets needs to be conceived and strategized as a deliberate ploy, to secure the resources sufficient to overturn the dominant technology in a market. The oppositional idiom feels more appropriate here than in social movements because market dynamics basically rest on competition (but shored up by rules and regulations, as we have seen above). It is for the business strategist here to rock the boat; innovators still need quietly to innovate, with their attention fully focussed on customer needs, not how to hit their competitors where it hurts.

Relevance/ use/ what is made visible	Making change can involve changing habits,but these are as much our own habits as change agents as they are the routines of the system we as agents are trying to change.
	Lasting change requires disrupting the everyday flow of activity, in order to question and overturn assumptions.
	Social movements are constructed in opposition to a system (hence the need for variant models for NHS Change Day as movement-from-within, including Wenger's Communities of Practice (see 'Communities'), Kotter's dual process (see Movements) and platform thinking (see Platforms).
	'Positive deviants' were originally mothers of at risk children; we might call them frontline carers.
	Diffusion models show how innovation can arise from marginal individuals ('niche innovators' in the language of Geels) and permeate markets. They underline the importance of system governance in identifying, measuring and spreading innovations, but also flag the instincts of the 'regime' and its incumbents to reject innovations which threaten their dominance.
New and re-purposed phrases	The focus on positive deviance as a formal change theory underlines that innovation is not (necessarily) a form of rebellion. The Sustainable Improvement Team's pre-occupation with being maverick (e.g. 'rocking the boat while staying in it', 'leading from the edge' and, to a lesser extent, 'speaking truth to power') draws on social movement thinking but may be more of a self-conscious identity (designed to convey the Sustainable Improvement Team's affiliation to the frontline staff who populate NHS Change Day, as opposed to the NHS England hierarchy with which The Sustainable Improvement Team connects) than prerequisite of effective organising for social change.

6. Emergence

Emergence is a commonly used term in organisational life, especially where experience is confusing and confused. Sometimes it has simply the connotation of 'disorganised' and 'unpredictable'. However, in both systems theory and mathematics it has precise meanings. In philosophy, systems theory, science and art emergence is a process whereby larger entities, patterns and regularities arise through interactions among smaller or simpler entities that themselves do not exhibit such properties. In systems thinking it is the interaction between the parts that gives the system its systemness: its emergent properties.

Commentary on theme

The idea of emergence and its use in thinking about complex social phenomenon and innovation was popularised in 2001 by Steve Johnson[72]. Drawing on work from a wide range of fields, Johnson illustrates five fundamental principles for building bottom-up systems, through the metaphor of ants:

i) More is different:
A critical mass of ants is necessary for useful statistical averages to emerge. One or two ants bumping against each other is not a colony.

ii) Ignorance is useful:
Simplicity of the individual components (i.e. the ants) is beneficial. There is no need for each ant to have imprinted a map of what is in the colony's best interests, and in fact such ideas would be a disadvantage to the colony as a whole.

iii) Encourage random encounters:
The author exemplifies how ants use the feedback from encountering the activities of other ants to usefully modify their behaviour. Much earlier work by Jane Jacobs shows how humans in urban areas positively affect the emergence of cities by their encounters in public areas[73].

iv) Look for patterns in the signs:
Ants follow trails of pheromones left by other ants. In the research field it is common that you study a significant number of papers and synthesise these thoughts to a newer and bigger one.

v) Pay attention to your neighbours:
'Local information leads to global wisdom.' When an ant notices a large number of his fellow ants are foraging, he will alter his behaviour to another activity. Likewise, in the development of a human embryo individual cells are able to get information from their neighbours that will guide them in their own formation, whether that be as skin cells, bone cells, muscle cells…

One can see how this describes many of the dynamics of NHS Change Day (whether viewed as a social movement or as a platform). The complex is often marked by emergence. Adapting to and dealing with emergence is perhaps the most important task facing managers and organizations today.

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[72] Johnson, S (2001) *Emergence: The Connected Lives of Ants, Brains, Cities, and Software* London: Allen Lane.
[73] Jacobs, J. (1961). *The Death and Life of great American cities*. New York, NY: Random House.

Human activity allows for the possibility of emergent behaviour. By emergence we mean an overall system behaviour that comes out of the interaction of many participants; behaviour that cannot be predicted or even envisioned from a knowledge of what each component of the system does in isolation. Emergent behaviour arises out of the interactions of entities. Such behaviour is the bulk of the activity that occurs within most organisations. What emerges is the potential for further action. In this respect, NHS Change Day 2015 emerged from the interactions of all of the actors who contributed. It did not otherwise exist.

There are two types of emergence: 'novel' and 'weak'[74]. Novel emergence is as one would find in the response of an immune system or the prevalence of a 'virus'; it 'just happens' and appears inexplicable. Weak emergence is always based on a relationship between the observer and the system being observed. It is when we might speak of a flock of birds acting 'as if' it had a mind of its own. Under the conditions of weak emergence one is often tempted to think: 'If only you knew more about the system, you could predict it.'

Under both versions of emergence, one is faced with the same reality: I cannot explain or predict (no matter what data I have) with my existing theories. A further way of defining emergence is not in the certainty that it has arisen through the interaction of components in a complex system, but in the uncertainty surrounding the effect which has been noticed (hence Johnson's rule about looking for patterns). When an effect has been noted, but its cause is invisible, emergence is the process which we are observing. By definition (at least, this definition) emergence stands in contrast, or even opposition to, linear models of causality. That realization blows open the assumptions of orthodox evaluation. For example, one can see how difficult it would be to conduct a conventional Return on Investment (RoI) exercise in an emergent system.

Measurement of emergence (or of complex systems with 'emergent properties'[75]) is a frequent conundrum: it is the measurement of what is not there, or rather what is not yet fully visible. It is informative to look to learning theory here and Vygotsky's concept of the 'Zone of Proximal Development' (ZPD)[76] (see also the 'Learning' theme below). The influential psychologist of the Russian School observed that most tests of learning assessed past achievements, which the students themselves had already surpassed by the time of testing. Vygotsky argued that what matters is their capacity to progress, not least as that is what the teacher will need to know to design appropriate teaching to help them realise that progress.

Vygotsky's Zone of Proximal concept focuses on capturing emergent properties in the learner, their capacity to learn not their past learning. 'The Zone of Proximal Development defines those functions that have not yet matured but are in the process of maturation, functions that will mature tomorrow but are currently in an embryonic state. These functions could be termed the 'buds' or 'flowers' of development rather than the 'fruits' of development. The Actual Developmental Level characterizes mental development retrospectively, while the Zone of Proximal Development characterizes mental development prospectively.'

In the context of our Re-Valuation, Vygotsky's image suggests that we look for the signs ('green shoots' so to speak) of change to come, rather than waiting to record changes that have evidently happened.

Another helpful feature of emergent systems for our Re-Valuation is their parallel with wicked issues. Rittel and Webber's 1973 formulation of wicked problems in social policy planning specified 10 characteristics:

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[74] Fromm, J. (2005). Types and forms of emergence. *arXiv preprint nlin/0506028*.

[75] See e.g. Checkland, P (1999) *Systems Thinking, Systems Practice (Updated Edition)*. Chichester: John Wiley & Sons.

[76] Vygotsky, LS (1978) *Mind in Society*. Cambridge, MA: Harvard University Press.

1. There is no definitive formulation of a wicked problem.
2. Wicked problems have no stopping rule.
3. Solutions to wicked problems are not true or false, but good or bad.
4. There is no immediate and no ultimate test of a solution to a wicked problem.
5. Every solution to a wicked problem is a 'one-shot operation'. Because there is no opportunity to learn by trial and error, every attempt counts significantly.
6. Wicked problems do not have an enumerable (or an exhaustively describable) set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into the plan.
7. Every wicked problem is essentially unique.
8. Every wicked problem can be considered to be a symptom of another problem.
9. The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice of explanation determines the nature of the problem's resolution.
10. The social planner has no right to be wrong (i.e. planners are liable for the consequences of the actions they generate).

We can use the idea of emergence, not only to describe the effects but also to make clear the 'development over time', in NHS Change Day. We can use emergence to help underpin the seeing of patterns (as much as, say, outputs) and as activists explain in their evidence 'make it look like we knew what we were doing all along'. This is the serious process of 'making it up as we go along' or, more evocatively, 'creating the road as we travel it'.

Emergence can also provide a way of understanding, from a fresh point of view, the challenges of planning NHS Change Day 2015. In an emergent system planning (and therefore measurement) has to take on a different role by, for instance, consisting of:

- taking periodic soundings rather than claim a full understanding of an end-to-end process
- accepting that the planner has no 'right to be wrong'; planning is close to dynamic improvising and can appear to observers as chaotic
- stressing the significance of 'sense making' as a process of measurement that inter-penetrates planning judgements (close to our notion of 'calibration', as discussed later in this paper)
- as planner (and 'measurer'), you have to act 'as if' you are right or 'as if' you know what you are doing
- your acts as a planner (and 'measurer') make a difference to the process of emergence and the particular situation in which this is happening.

As one can imagine, emergence has significant implications for how you 'see reality'. From some perspectives it is all that is happening when anything is being organised; from other points of view it is a complex exception to the much more stable, less fluid, norms of organisational life.

On balance, it illuminates much that is otherwise opaque and confusing about a complex adaptive system, like the NHS or NHS Change Day. It has major implications for the role of leaders and managers since it implies that it is the interactions in the system that lead to agency and decisions, rather than the actions of managers or leaders on the system.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	We have used the idea of emergence to help with: - understanding the notion of 'making visible' - 'seeing' the inter-relationships between the myriad actions in NHS Change Day 2015 and the 'whole' - devising a new approach to measuring the capacity of complex systems to produce change, now and in the future. Emergence by definition starts where orthodox, linear understandings of causality stop: it is what happens when causes of phenomena are (at first) invisible. Re-Valuation takes account of this. Its approach (especially to 'capacitating' value) is akin to looking for Vygotsky's 'buds' and 'flowers', rather than what has already fruited.
New and re-purposed phrases	The term 'emergent' is in use. Perhaps the distinctions between its loose, idiomatic meaning and its precise meanings need to be more widely understood, especially for their implications for leaders in complex systems.

7. Leadership

Leadership is widely debated and described, not least in the context of NHS Change Day where it has been given prominence as a means of driving change, as in the title of the previous 2013 research report on NHS Change Day: 'Leaders Everywhere'[77]. It is also a pre-occupation of the Sustainable Improvement Team 2014 White Paper, where models of relational and systems' leadership are discussed[78]. System leadership, in particular, is topical in the NHS, implying as it does the changing requirements for leadership operating in the vortex of multiple systems, as distinct from traditional models of leadership that have tended to focus on elite individual leaders in the most senior positions. The combined effects of volatility, uncertainty, complexity and ambiguity (VUCA) significantly influence leadership demands.

Specific to NHS Change Day, we have been using theories of leadership relevant to viable systems, platforms and emergent organisational realities, as responses to turbulence.

Commentary on theme

As they are wont, leadership theorists have developed acronyms for describing the turbulence in which leaders need to operate. One prevailing acronym is 'VUCA': volatility, uncertainty, complexity and ambiguity. Paparone and Topic, assistant professors at the US military training college in Fort Lee, carefully differentiate between the four elements[79]:

- **volatility** describes the degree of turbulence and the countless often conflicting dynamics at work in the situation
- **uncertainty** points to the fact that the past is no longer an accurate predictor of the future in this world and therefore there is less scope for confidence and certainty, especially in relation to the magnitude and scale of possible impact
- **complexity** arises from the number of interconnected events and apparent randomness of results, likening it to an anarchic system where cause and effect relationships are indiscernible
- **ambiguity** is experienced as the reality of the combined impact of volatility, uncertainty and complexity: a state in which even the experts are not able to make sense of what is happening and are unable to bring clarity.

This deep, interdependent and unstable view of reality demands different leadership approaches. Some of these are illuminating to our understanding of NHS Change Day. They stress the significance of:

- vision in response to volatility
- the need to develop clarity about 'what matters', what has 'bite'
- recognition of the need to seek out paradox (close to our use of dilemmas) and related conflicts over difference
- the use of experience as data, including emotional experience. In VUCA (volatility, uncertainty, complexity and ambiguity) data may not help decide either what to do or what is going on.

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[77] Hilton, KB, & Lawrence-Pietroni, C (2013) *Leaders Everywhere: the Story of NHS Change Day – A Learning Report 2013*. NHS Improving Quality.

[78] Bevan, H & Fairman, S (2014) *The new era of thinking and practice in change and transformation: a call to action for leaders of health and care* [The NHS iQ White Paper] NHS Improving Quality.

[79] Paparone, CR & Topic, GL (2011). SPECTRUM From the Swamp to the High Ground and Back. *Army Sustainment*, *43*(1), 50.

The volatility, uncertainty, complexity and ambiguity model (VUCA) is featured in a recent, extensive, literature review commissioned from the Cass Business School by the College for Virtual Leadership (in children's services, not the US Army)[80]. The review stresses the challenges of leading in a complex system, characterised by emergence (see the theme immediately before this):

> 'Chaos theory teaches us that it is the miniscule perturbations in the system that win out over the long-term, becoming amplified by the adaptive feedback mechanisms. Those elements, often too small to consider, have disproportionate impact over time. Leaders who have built resilience by engaging and empowering, in a framework where purpose and values have been clearly shared and formed the heart of trusting relationships, will be rewarded by an uncanny ability to converge on a new stability through self-organisation and adaptability. The problem for leaders is that they can't control what, and when, the reward will be; they can't determine whether they will still have power or influence or how well it will still align with the outcomes and purpose they have defined[81].

> 'Although coming from a radically different origin, this view offers a real parallel to Christensen's seminal work on 'disruptive innovation' (see the 'Disruption' theme below). At the same time, this analysis also demonstrates why social movements can become so powerful a force in shaping the leadership of the future[82]; the linkage to the purpose or cause is what strengthens the resilience against any challenge. Wheatley also makes the rather disconcerting point that terrorist cells have a great affinity with the complex adaptive nature of living systems with all their beneficial resilience[83].'

Again quoting from the Virtual Staff College literature review:

> "Grint offers a fascinating reflection on the fact that the very origin of leadership is rooted etymologically in the sacred[84]. He identifies three distinctive elements of leadership:
> - the separation between leader and the group
> - the sacrificial nature of the relationship; and,
> - the role of leaders to quell the anxieties of their followers and to be the sense makers.'

As Keith Grint explores the profound consequences of how deeply embedded such concepts are anthropologically, he suggests that the challenge of moving away from the concept of a heroic leader towards a more equally distributed form of leadership will be more difficult than most observers would suggest. Likewise, Deborah Frieze and Margaret Wheatley offer a picture of systems leadership in which the concept of hero is replaced with one of the leader as 'host', creating the space within which there is implicit permission for information and opinions to be shared and appropriate decisions to be taken[85].

The Virtual Staff College authors conclude: 'The literature has shown that leadership in whole systems requires different abilities to those where a person is seen to be in 'firm control' over the bounded domain of a single organisation. Over-reliance on (but not abandonment of) models, frameworks and tools in moving from that domain to take up a wider systems leadership role can be counterproductive. This is particularly the case where the anxiety a leader faces within the confines of a unitary organisation amplifies when they find themselves in a wider systems leadership role. In such cases it is not surprising that a person relies on what has worked for them before: more control, more targets, more and detailed policy etc. This would be a mistake; a new mind-set is required.'[86]

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[80] Welbourn, D, Ghate, D, & Lewis, J (2013) *Systems Leadership: Exceptional leadership for exceptional times.* The Colebrooke Centre and Cass Business School for the Virtual Staff College.

[82] Davis, GF, McAdam, D, Scott, WR & Zald, MN (2005) *Social Movements and Organisation Theory*. Cambridge: CUP.

[83] Frieze, D & Wheatley, MJ (2011) It's time for the heroes to go home. *Leader to Leader 2011*, 27–32.

[84] Grint, K. (2009) The Sacred in Leadership: Separation, Sacrifice and Silence. *Organization Studies* 31, 89–107.

[85] Wheatley, MJ (2010). *Leadership and the new science: Discovering order in a chaotic world*. ReadHowYouWant.com.

[86] Welbourn et al (2010) op.cit.

The literature suggests that the following inter-connected features are important. In no particularly order, these include an understanding and/or an ability to encompass:

- **Ambiguity:** an understanding of the shifting contexts in which one now works. For example, the ability to adapt and consider how to reconcile policy objectives with changing and sometimes contradictory events on the ground.
- **Power relations:** the ability to control does not lie with one individual; we are all bounded by complex threads of power relations that require acts of insightful followership and leadership.
- **An authorising environment:** we are all subject to an environment that legitimises our ability to act, but in conventional organisations the ordered and structured environment tends to convey such authority subconsciously. In complex systems leaders play a strong part in establishing a de facto authorising environment comprising formal and informal permissions and power structures.
- **Paradox:** essentially contradictory and opposing features are often arrayed around an irresolvable 'wicked problem'. Here, the importance lies in understanding the fluid nature of tension and an ability to work step by step to be aware of emergent opportunities and threats.
- **Managing conflict:** when working in complex systems there is considerable danger in reaching a superficial understanding, as the marginal effects can dominate over a prolonged period. The communal process in which a multi-disciplinary team 'wrestles' with the ambiguities and contradictions can lead to a greater depth of understanding, create new insight and generate superior solutions, working with the conflict and against the grain of simplistic compromises.
- **Reflexivity:** related to paradox, ambiguity and power relations. The ability of leaders to conscientiously consider their own practice and the practices of others in a way that can come to improve practice and further thought within their rich context, leading to further processes of reflexivity.
- **Distributed leadership:** of the many 'types' of leadership, descriptions of distributed leadership with an appreciation of the 'unheroic' leader, aware of the social processes of leading and following, offer a more helpful way in which a leader can positively influence the terrain that they have influence over and link emergent features with others in the networks of power.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	This selection of theory is useful in illuminating: - NHS Change Day as a complex system, presenting complex leadership challenges. Note that, across all the sources above, non-hierarchical approaches are a minimum requirement. - Complex systems also require multiple leaders: if we think of NHS Change Day as a system of systems we can identify many 'leaders', though it is notable they do not self-identify as such (see e.g. the local system stories). Instead they appear to have much more in common with Margaret Wheatley's hosts (or perhaps the 'old timers' in Wenger's Communities of Practice (see the 'Communities' theme)). - We can speculate that these sub-system 'leaders' emerge from their local systems or campaigns, through making visible the actions they and their connections undertake, e.g. through operating platforms. - At the national level, leadership for the Sustainable Improvement

	Team is further complicated by their need to engage with the NHS hierarchy; all the time presenting the illusion of leading from within NHS Change Day as a social movement. Seeing NHS Change Day as a platform may ease this tension and help to distinguish between the central co-ordination of thr Sustainable Improvement Team and the distributed 'hosting' of subsystem 'owner-activists'.
New and re-purposed phrases	Hierarchy Nested systems, recursiveness Emergence Distributed leaders, and distributed platforms

8. Learning

Learning is a vast theme and a theme cutting across many, if not all, of the other themes featured in this Guide. We can account for this principally in two ways: First, learning is a part of everything we do. It is the means by which we know how to go on in the world, and how we acquire factual and procedural knowledge ('know what' and 'know how'); Second, and an extension on the first, learning and change are intertwined; hence the themes here, which review theory relevant to social innovations, all have to deal with learning. It can be said that we cannot have sustained change without learning. This point underpins one of the critiques of nudging and 'choice architecture': that unless the person whose behaviour is to change is aware of the change they cannot reposition their motivational furniture (so to speak): they will find ways round the redesign of their environment.

In short, the theory presented here underlines that learning is a part of doing and that change requires learning somewhere in the system. Indeed, designing change interventions can be approached as designing learning systems. Furthermore, once we take a systems view of the world, based on loops not lines, learning is inevitable.

Commentary on theme

Where does Change Day stand in relation to different schools of theory on how people learn? For example:

Behaviourism	Based on the idea that we learn through a cycle of stimulus, response, reinforcement.
Constructivism	Based on the idea that we learn through individual construction of lessons, mainly through some kind of process of selection and interpretation.
Social constructivism	Similar to constructivism but stresses the role of 'others' in the construction and contributes the insight that we, with others, construct environments (or reality, as some put it).

What is the policy attitude in relation to the question of 'immediacy'? In all of these theories, learning is mediated (by culture, among other things) and this makes a difference to internalisation of learning. One of the theoretical rationales for experiential learning is that the experience of anxiety, fear or confusion are 'less mediated', and therefore there is more immediate internalisation.

Social constructivism is a variety of cognitive constructivism that emphasizes the collaborative nature of much learning. Social constructivism was developed by post-revolutionary Soviet psychologist Lev Vygotsky. Vygotsky was a cognitivist who argued that all cognitive functions originate in, and must therefore be explained as, products of social interactions and that learning was not simply the assimilation and accommodation of new knowledge by learners; it was the process by which learners were integrated into a knowledge community.

According to Vygotsky[87]: 'Every function in the child's cultural development appears twice: first, on the social level and, later on, on the individual level; first, between people

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[87] Vygotsky, LS (1978) *Mind in Society*. Cambridge, MA: Harvard University Press.

(interpsychological) and then inside the child (intrapsychological). This applies equally to voluntary attention, to logical memory and to the formation of concepts. All the higher functions originate as actual relationships between individuals.'

Vygotsky's theory of social learning has been expanded upon by numerous later theorists and researchers. Cognitivists such as Piaget and Perry see knowledge as actively constructed by learners in response to interactions with environmental stimuli[88]. Vygotsky accepted Piaget's claim that learners respond not to external stimuli but to their interpretation of those stimuli. However, he argued that cognitivists such as Piaget had overlooked the essentially social nature of language. As a result, he claimed they had failed to understand that learning is a collaborative process.

Vygotsky distinguished between two developmental levels[89]: 'The level of **actual** development is the level of development that the learner has already reached, and is the level at which the learner is capable of solving problems independently. The level of **potential** development (the 'zone of proximal development') is the level of development that the learner is capable of reaching under the guidance of teachers or in collaboration with peers. The learner is capable of solving problems and understanding material at this level that they are not capable of solving or understanding at their level of actual development; the level of potential development is the level at which learning takes place. It comprises cognitive structures that are still in the process of maturing, but which can only mature under the guidance of or in collaboration with others.'

Vygotsky emphasized the role of language and culture in cognitive development. According to Vygotsky, language and culture play essential roles both in human intellectual development and in how humans perceive the world. Humans' linguistic abilities enable them to overcome the natural limitations of their perceptual field by imposing culturally defined sense and meaning on the world. Language and culture are the frameworks through which humans experience, communicate and understand reality.

Language and the conceptual schemes that are transmitted by means of language are essentially social phenomena. As a result, human cognitive structures are, Vygotsky believed, essentially socially constructed. Knowledge is not simply constructed, it is co-constructed.

In behaviourism, motivation is essentially extrinsic: a reaction to positive and negative reinforcements. By contrast, cognitive motivation is essentially intrinsic: based on the learner's internal drive. Social constructivists see motivation as both extrinsic and intrinsic. Because learning is essentially a social phenomenon, learners are partially motivated by rewards provided by the knowledge community. However, because knowledge is actively constructed by the learner, learning also depends to a significant extent on the learner's internal drive to understand and promote the learning process. This in turn calls for a level of reflection, or reflexive capacity, on behalf of the learner: what we might call 'learning how to learn'[90].

Double loop learning, as proposed by Chris Argyris and Donald Schön, is a key concept in learning theory but is also fundamental to theories of change[91][92]. In developing the 'learning to learn' principles of learning theory put forward by Gregory Bateson (see below), Argyris and Schön drew a distinction between 'first-order' and 'second-order' (also called 'higher order')

[88] See e.g. Piaget, J (1954) *The Construction of Reality in the Child.* New York: Basic Books.
[89] Vygotsky, LS (1978) op. cit.
[90] Bateson, G (1973) *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution and Epistemology.* London: Paladin, Granada.
[91] Argyris, C and D Schon (1978) *Organizational Learning: A Theory of Action Perspective.* Reading, Mass.: Addison Wesley
[92] Argyris, C & Schon, D (1996) *Organizational Learning II.* Reading, Mass.: Addison Wesley

thinking. The theory is presented in diagrammatic form[93], where first order learning is 'single loop' and second order 'double loop' (see figure below).

Figure 2: Argyris and Schön's Double Loop Learning (1978)
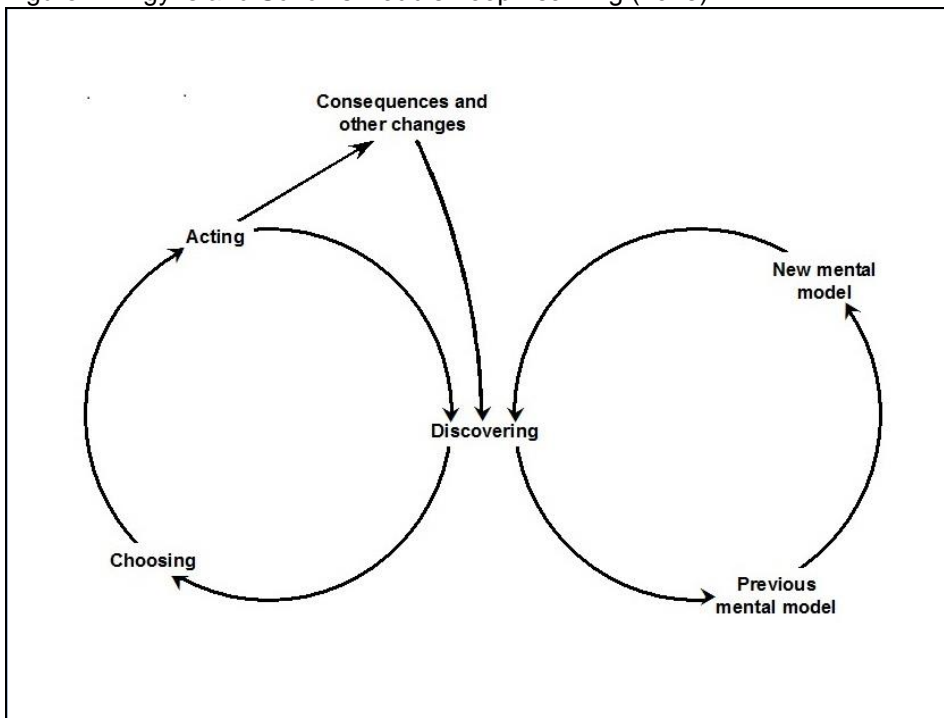
Double loop learning requires a questioning of existing assumptions as part of the process of learning. In the first (left-hand) loop 'instrumental learning' occurs, in which understanding is acquired through scrutinising the impacts of action taken. In the second (right-hand) loop 'process learning' occurs, in which inquiry is performed into the assumptions informing the acquiring of knowledge ('instrumental learning') in the first loop. Change in behaviour results as a by-product of learning; it is produced out of the first loop. Argyris and Schön state that they modelled their diagram on the homeostatic feedback loops of early systems thinker Ross Ashby (see 'Systems' below). Their model is thus consistent with non-linear conceptualisations of behaviour, based on feedback. It can be remarked in passing that Donald Schön worked at MIT, where much of the leading systems thinking work was developed.

The double loop model explicitly accounts for processes of learning and change. When process learning occurs in the second loop we learn how to do different things, which enable us to perform more effectively. Argyris and Schön describe learning in the first loop as 'paradigm constrained', while second loop learning is *'paradigm breaking'*. While single loop learning is sufficient to detect and correct errors in the way we operate, double loop learning is necessary if we are to change the fundamental basis on which we operate. The unspoken 'theories in use' which inform the instrumental learning processes are necessarily overthrown in 'double loop' learning, requiring as it does 'the restructuring of norms'. The link to Ross Ashby is clear in that Ashby described incremental change in systems as resulting from changing the variables (effectively single loop), whereas transformational change comes from changing the parameters (i.e. double loop)[94].

While appearing radical, this approach to learning as change can be traced back to thinking from the start of the twentieth century by John Dewey. Dewey's early work on the psychology of

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[93] reproduced from Stacey, R (2003) *Strategic Management and Organisational Dynamics: The Challenge of Complexity* (4th Edition) Harlow: Pearson Education.
[94] Ross Ashby, W (1956) *An Introduction to Cybernetics.* London: Chapman & Hall.

human behaviour showed action to be the result of intermediate processing; instead of a stimulus-response dynamic, Dewey proposed a stimulus-interpretation-response model[95]. In his later work on education Dewey described learning as a process of adapting to surprises which we experience on confronting a problematic situation. The surprise blocks our flow of spontaneous activity, giving rise to thought, then adapted action to re-establish the flow[96].

The learning practices which Argyris and Schön advocate go back to Dewey, who defined enquiry as 'exercising intelligence in the world, the intertwining of thought and action by which we move from doubt to doubt'[97]. Argyris and Schön see themselves as action researchers, in the tradition which they trace back to the psychologist Kurt Lewin as the 'father'[98]. Donald Schön developed his own definition of the action researcher as 'reflective practitioner'[99], an identity which encapsulates the procedure followed by someone engaged in double loop learning.

Argyris and Schön developed the theory of double loop learning in the context of organisational change, a discipline of which they were themselves founding fathers when first publishing 'Organisational Learning' in 1978. Argyris and Schön hold that the fundamental learning unit is the individual although, like Lewin, they situate those individuals in groups (here, organisations) for the learning process to take effect. The 'group standards' that guide organisations are 'theories in use', unspoken understandings shaping organisational behaviour ('theories in action' are their explicit, post-rationalised, equivalents). The only way to identify theories in use is through observation; the only way to change theories in use is through double loop learning. The dynamic for changing 'theories in use' is similar to Lewin's method of unfreezing/refreezing, and it is accompanied by similar emotional conflicts (or 'stir-ups'), here on an interpersonal level (see also 'Disruption').

In further developments to theories of action learning, a number of recent authors have begun to talk about a further type of reflective practice, using the term 'triple-loop' learning[100]. Typically, this is described as additional to, and at a 'higher' or 'deeper' level than, primary and secondary forms of learning. Yet, in spite of its perceived importance, conceptualisations of triple loop learning do not always make clear how it differs from, or relates to, primary or secondary forms, and nor are they clear about where the concept comes from. Scholars of organisational learning might look first to Argyris and Schön; significantly, though, a recent review of the field has established that while 'triple-loop learning' has been inspired by Argyris and Schön, the term does not appear anywhere in their published work[101].

Change involves loss as well as gain (what Ed Schein, a reflective practitioner also from MIT, called the 'inevitable pain of learning and change'[102]). It also echoes theories of learning and change from the psychotherapeutic tradition, which relies on creating a 'third position' (largely that of the observer or therapist) in order to see problems clearly.

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[95] Dewey, J. (1896). The reflex arc concept in psychology. *Psychological review*, *3*(4), 357.

[96] Dewey, J (1938) *Logic - The Theory of Inquiry*. New York, NY: Henry Holt And Company.

[97] ibid.

[98] See e.g. Lewin, K 1951. *Field Theory in Social Science: Selected Theoretical Papers*. D Cartwright (ed.). New York, NY: Harper & Row.

[99] Schon, D (1983) *The Reflective Practitioner: How professionals think in action*. London: Temple Smith.

[100] e.g. Swieringa, J and Wierdsma, A (1992) *Becoming a Learning Organization: Beyond the Learning Curve.* Wokingham: Addison-Wesley; Flood, RL and Romm, N (1996) Contours of diversity management and triple loop learning. *Kybernetes* 25(7/8):154-163; Snell, R and Chak, A (1998) The learning organization: Learning and empowerment for whom? *Management Learning* 29(3): 337-364.

[101] Tosey, P., Visser, M., & Saunders, M. N. (2011). The origins and conceptualizations of 'triple-loop' learning: A critical review. *Management Learning*.

[102] Schein, E 2004. *Organizational Culture and Leadership (*3rd edition) San Francisco, Cal.: Jossey-Bass.

The concept of the third position is widely used in different psychological interventions (transactional analysis, Neuro-Linguistic Programming (NLP), Cognitive Brief Therapy, amongst others) to describe a particular perceptual position. In 'NLP for Dummies', Kate Burton, summarises as follows:'Perceptual positions help you imagine what difficult situations look like when viewed with others' eyes. The term refers to the ability to imagine what others perceive by imagining that you are that other person. In Neuro-Linguistic Programming this links with the assumption that 'the map is not the territory' and offers a way to enrich an individual's map of the world.

- **First position** is your natural perspective, where you're fully aware of what you think and feel regardless of those around you. This is the place that clients find most familiar. They've come to coaching because they already have an awareness of their own perspective and the problems they face.
- **Second position** is about imagining what it's like to be another person. Some people are very good at considering others' needs and concerns; for a more self-focused client, imagining second position is a completely alien notion.
- **Third position** is an independent position where you act as a detached observer noticing what's happening in the relationship between two other people. Good coaches naturally step into this impartial role. In coaching, encourage the client to take this position in order to gain an impartial insight into a situation, particularly to view a relationship the client has with another person.

You can introduce perceptual positions to clients by having them physically move to different chairs or places in a room as you describe and discuss the three positions, asking them to notice what they experience while standing or sitting in each position. The real learning comes by stepping out of first position to explore second and third positions and see what light it sheds on a situation.'

In other fields of psychology, the third position is analagous to the 'reality principle', often represented by the 'father' figure, who stands outside (as 'sees' from outside) the 'dyad' in which a mother and child may be living.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	- Loops not lines. - Learning and change are intertwined. Transformational change requires reflective learning. It can also be argued that for change to last there must have been learning (otherwise, when you switch off the intervention (e.g. remove the incentive) behaviour 'reverts to type'). - Change agents are change learners. Having impact means being both an activist and a learner: reflecting on assumptions, values and value is inherent in doing change (re-valuation is not a bolt-on). - Change as loss (and gain). People risk a lot, especially their identity (everything they are), when getting involved in change activity, especially 'deep' or looped change. All knowledge is co-constructed. From a constructivist position all knowledge is socially constructed; we would say the same of value: that it is negotiated between groups with a shared interest in it, hence the Re-Valuation method of 'socialising value'. This also requires reflection, through iteration internally and with

	others.
New and re-purposed phrases	Iteration: In the Re-Valuation method, literally retelling the story of what happened and how it can be valued, repeatedly to others and back to yourself. Valuation, as what happens in the third loop (acting, reflecting, valuing). **Consequences and other changes** Acting **ACT** **REFLECT** Discovering New mental model Choosing What's the value of this? **REVALUE** Previous mental model What do I value?

9. Platforms

'Platforms' are places, spaces (virtual or real) of mutual exchange to the benefit of both (or multiple) parties.

One can think about them metaphorically: a soapbox, a table, a political position; one can think of them as 'types': change platforms, social platforms, market platforms. A useful distinction used in military strategy is that between a 'mobilisation platform' (in other words, the 'mission' or the sense of over-riding purpose around which the resolve to act militarily is formed) and a 'capability platform' (the combinations of systems, resources, intelligence etc. which enable the mobilisation).

Conceptually, platforms can be seen as a symptom of emergence (the mechanism or place where emergence becomes visible to participants in that which is emergent) and an 'organised response' to systemic complexity (a microcosm of the recursive reality of a system, expressed in one space). Both of these seem to illuminate aspects of NHS Change Day 2015.

Commentary on theme

The 2014 article by Gary Hamel on 'change platforms, not programmes' makes the case as follows[103]:

'Change platforms take advantage of social technologies that make large-scale collaboration easy and effective. But they are qualitatively different from the idea wikis and social networks commonly used today. The difference isn't primarily about specific features; rather, it's in the encouragement individuals are given to use the platform to drive deep change. Specifically, effective change platforms:

- encourage individuals to tackle significant organizational challenges; that is, those that are typically considered beyond an employee's 'pay grade' or sphere of influence
- foster honest and forthright discussion of root causes and, in the process, develop a shared view of the thorniest barriers
- elicit dozens (if not hundreds) of potential solutions rather than seeking to coalesce prematurely around a single approach; the goal is first to diverge, then to converge
- focus on generating a portfolio of experiments that can be conducted locally to help prove or disprove the components of a more general solution, as opposed to developing a single grand design
- encourage individuals to take personal responsibility for initiating the change they want to see and give them the resources and tools necessary to spur their thinking and imaginations.

Guiding a process of socially constructed change is neither quick nor easy, but it is possible and effective. The biggest obstacles to creating robust change platforms aren't technical. The challenge lies in shifting the role of the executive from change agent in chief to change enabler in chief. This means devoting leadership attention to the creation of an environment where deep, proactive change can happen anywhere, and at any time, and inspiring the entire organization to swarm the most pressing issues.'[104]

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[103] Hamel, G., & Zanini, M. (2014). 'Build a change platform, not a change program'. McKinsey & Company. at:
http://www.mckinsey.com/insights/organization/build_a_change_platform_not_a_change_program
[104] The image of swarming is one that Steven Johnson uses widely in *Emergence* (2001), as an illustration of the 'intelligence' of emergent systems [see 'Emergence' theme above].

Developments in theory and practice in platform enterprises are relevant to how we might think about 'value' and 'change' in the context of NHS Change Day.

Platform enterprises are a response to turbulent markets with many players, in which it is impossible for the 'Fordist' (or Taylorist) command and control view of the world to work. Many organisations, at their top, act *as* if they control the world they operate within (see the theme on 'Leadership' above). Yet, the actual complexity of operating (even of existing) in a highly turbulent environment means that those who are closer to the real environment (usually at the bottom of the hierarchy or the edge of the organisation) know that they are in control of almost nothing. It is in this setting that 'platform enterprises' make sense.

A symptom of the turbulence of the marketplace (which is facilitated by both globalisation and the internet) is uneven supply and demand (in platform jargon, 'multi sided demand'[105]). Conventional economics theorises that 'supply' and 'demand' should reach a 'point of indifference in which they are in dynamic balance'[106]. Some think that this is what a 'market' is (mainly) for. However, in turbulent markets demand, and therefore supply, is multi sided. In other words, it comes from all directions and cannot ever be predicted. The implications of this for value are profound, since the conventional picture of return on investment is based on the classic economic view of a market (where you can tell what is happening).

In a classic market understanding of value would concentrate on thinking about 'direct' benefits. 'Counting' the direct benefits is, in effect, the 'return' in thinking about value. However, economists theorise that under platform economics most of the value is created through 'indirect' benefits[107]. In other words, the designers of the platform enterprise themselves cannot predict what the benefits will be, only the users of the platform can know this, and their decisions to act will be based on realising the maximum 'direct' benefit to them. This is part of what drives the multi-party innovation that platforms help to facilitate.

Any one user can only know about this value in relation to their own 'context of use'. No one can know the aggregate value indirectly created through the platform.

The idea of indirect benefit (or return) is mirrored in relation to 'investment'. One of the unexpected features of platform return on investment is that the users of the platform will invest substantial amounts of their own 'resource' in creating the value that they are seeking, through benefits that are direct to them (but 'indirect' from the point of view of any observer or the designer of the platform). This is another way of thinking about the 'volunteer' effort in NHS Change Day, or any social movement: if I want to invest my time, my energy, my ideas, my emotions etc., it is not understood to be a cost except by me. In some circumstances, it may not even be felt to be a cost to me, since it is how I realise the benefits I am seeking.

This feature of platform economics starts to turn the assumptions about conventional return on investment on their head. Indirect benefits carry more value than direct benefits, as understood from the point of view of the platform designer. Therefore, the concepts of 'investment', 'return' and 'supply' are all different in this context.

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[105] Parker, GG, & Van Alstyne, MW (2005). Two-sided network effects: A theory of information product design. *Management Science*, *51*(10), 1494-1504.

[106] In the healthcare context, see the NHS National Confederation (June 2015) address by Professor Sir Muir Gray http://nhsconfed.org/blog/2015/05/the-triple-value-agenda-should-be-our-focus-for-this-century

[107] See e.g. Evans, D. S., Schmalensee, R., Noel, M. D., Chang, H. H., & Garcia-Swartz, D. D. eds. (2011). *Platform economics: Essays on multi-sided businesses.* Competition Policy International.

This further implies that we are interested in economies of scale *and* scope (variety, difference etc), which is a tricky, counter cultural idea in the context of the NHS where ideas of 'scale', 'standards', 'reliability', 'sanctioned procedure' are also significant representations of value.

If one thinks of an effective platform, such as AirBnB[108], some critical design features are evident, including:

- The sense of community, of personal encounter; it is through a combination of community and personal encounter that value gets created.
- The sense that the platform makes the participants on it 'visible' to each other, as human beings, not in any 'role'; all status is invisible.
- Needs and the resources to meet needs come from all directions on the platform. Indeed, it would not be misleading to see need as a type of resource to the platform.
- Some of the design features of the platform are designed to make the process of developing a relationship visible: you develop a profile, you introduce yourself, you are accepted/approved, you enter dialogue (in which all parties progressively disclose and learn).
- No one can anticipate what value will emerge or for whom.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	The idea of and theories around platforms have been critically important to the NHS Change Day Re-V aluation and are likely to be in thinking about 'change' in the NHS for the forthcoming period. The theories of platforms help to illuminate: - the significance of community as a way of creating value and generating innovations - the significance of indirect as well as direct benefits - the impossibility of predicting value (of what type and for whom), but the certainty that it will arise for all of the platform participants - the need for designers and initiators of platforms to see their core leadership contributions being 'design-related' - the recognition that active platforms generate multiple leaders; that a type of leadership emerges from the platform, rather than exists independent of it - that a core function of a platform is its capacity to make the participants visible to one another. It is as illuminating to see NHS Change Day as a platform as it is to see it as a social movement. Meanwhile, many of the contradictions inherent in NHS Change Day as a (managed from the inside) social movement dissipate when we switch to a platform perspective.
New and re-purposed phrases	Multi sided demand Indirect benefits Platform design Indirect benefits always exceed direct Invisible value always exceeds visible value.

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[108] See https://www.airbnb.co.uk/

10. Social Movements

Theme

Social movements can be understood as self-organising networks of people who come together to make change (in the realisation that they have common cause and they are stronger together). Their primary purpose is to achieve change, although the coming together is also an end in itself. It is not always clear what they define as success or when their work is completed. In part, this lack of explicit strategy can be inherent in their self-organising qualities: all members have a stake in the movement and leadership tends to be distributed to many people across the movement. The change that social movements generates tends to be more transformation that incremental, based on challenging the system from outside (with values which are the participants' own and often in opposition to those of the dominant system). Social movements are not new but they are certainly 'modern', reflecting principles of democracy, autonomy and equality, such as in the Suffragette movement of the late 19th/early 20th century. Theorising about social movements is, however, more recent (mostly since the 1990s). NHS Change Day was consciously constructed as a social movement, if social movements can be constructed (perhaps safer to say it was conceptualised as a movement). In either case, it was explicitly contrasted to 'change programmes': more orthodox, manageable and incremental interventions which tend to originate from within the hierarchy.

Commentary on theme

'Social movements emerge as a result of the efforts of purposeful actors (individuals, organizations) to assert new public values, form new relationships rooted in those values and mobilize the political, economic and cultural power to translate these values into action. They differ from fashions, styles or fads (viral or otherwise) in that they are collective, strategic and organized. They differ from interest groups in that they focus less on allocating goods, than on redefining them; not only winning the game but also changing the rules. Initiated in hopeful response to conditions adherents deem intolerable, social movement participants make moral claims based on renewed personal identities, collective identities and public action.'- Ganz 2010[109].

The three key elements in Ganz's formulation are shared values, shared identities and shared action, all facilitated by leaders (themselves multiple and distributed across the movement). Critically, the members are voluntary, which means (among other things) that leaders can only lead by consent not coercion, hence vertical power structures ('command and control') are not applicable. Such hierarchical structures tend to be the preserve of the dominant power whose status quo the movement has come together to challenge or overthrow (the David and Goliath narrative, of which Ganz is fond[110]). Ganz sees narrative as the fundamental device for binding a movement together, as it brings together identity community and action.

NHS improvement specialists have long been attracted to social movement theory as a means of bringing about transformation: change at the level of the whole system, not within the system. In 2004 a review by the NHS Modernisation Agency[111] (summarised in a subsequent NHS

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[109] Ganz, M. (2010). Leading change: Leadership, organization, and social movements. *Handbook of leadership theory and practice*, *19*.

[110] Ganz, M. (2009) *Why David Sometimes Wins: Leadership, Organization, and Strategy in the California Farm Worker Movement*. New York, NY: Oxford University Press.

[111] Bate P, Bevan H, Robert G (2004) *Towards a million change agents: a review of the social movements literature: implications for large scale change in the* NHS Modernisation Agency.

Innovation and Improvement review of 2009[112]) identified the eight core features of social movements:

1. Public protest and the use of radical and unconventional means of political persuasion is a fundamental feature of most movements, large and small; the purpose being either to foster or halt change. This is based on the belief that change cannot be achieved within the system and so aspects of the system itself have to be changed.
2. Social movements can be transformative events. Writers have argued that all major changes in the US have been brought about as the result of a social movement, never planned and certainly not as an incremental programme of change.
3. Collectivity and commonality define a movement; the whole basis of a movement being joint action, common outlooks, shared goals and collaboration.
4. People do not have to join a social movement: they join because of choice and some kind of commitment to join with others. 'Movements' are voluntary, not a 'programme' as such. They are spontaneous and self-organising.
5. Social movements are wonderful examples of organisation and disorganisation. They explode into life without being organised but if they are to stay in existence they need central co-ordination and resourcing.
6. Movements are contentious and movement participants are usually protestors or heretics of one kind or another.
7. Movements relate to the underlife of an organisation or society, often seeking to avoid detection. They are also seen as an unwelcome, subversive or forbidden oppositionary force.
8. Social movements are not fly-by-night phenomena that are here today and gone tomorrow. The kind of changes movements pursue, whatever their size, typically require some measure of sustained, organised activity.

Reflecting on this classification, it can be observed that there are a number of challenges inherent in the social movement concept for an organisation like the Sustainable Improvement Team, who would wish to attain the outcomes which social movements are associated with ('all the major changes in the US' etc.), while being a part of the dominant system which is to be changed. An ability to play visible/invisible is key to social movements' power (as is also discussed under the 'Systems' theme below).

The challenge for the Sustainable Improvement Team, having discovered the potential transformational power in social movements, is how to channel, direct and unleash it back at the system from which they too operate in. The 2009 report contains the central question: 'Can social movement dynamics be created within an organisation?' Within this there are two questions of interest: can social movements be created (with an answer that seems to be no; e.g. the Ganz quote above states that they 'emerge', usually out of opposition to, or through exasperation with, the dominant system) and can movements exist inside the organisation or system they aim to transform (possibly, depending on what level the system is construed).

NHS Change Day can be read as the Sustainable Improvement Team's answer to the 2009 question and if we do so we usefully see it as having social movement like qualities, or drawing on social movement theory, rather than being a genuine social movement in itself (for starters, the NHS improvement experts had clearly been on the look-out for a movement to launch since 2004). The tensions between the pure theory and NHS Change Day in reality may go some way to explain the contradictions in NHS Change Day as programme-movement.

The 2013 Learning Report[113] reviews NHS Change Day through a social movement lens and its coherence suggests that the social movement attributes of NHS Change Day are strong

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[112] Bibby J, Bevan H, Carter C, Bate P, Robert G (2009) *The power of one, the power of many: bringing social movement thinking to health and healthcare* NHS Institute for Innovation and Improvement.

enough to qualify it as an authentic movement. Among the movement-like characteristics which the Learning Report identifies as outcomes are:
- distributed leadership
- building relationships
- strong and weak ties
- shared values
- collective action
- social media
- a special kind of grasstops leadership
- a dual operating system.

The earlier outcomes listed here all conform to an authentic social movement, as it might be defined in the work of Marshall Ganz. By the end of the list though we are moving away from pure movement theory and noting that the governance of NHS Change Day is fusing improvement leadership structures with grassroots action. The Dual Operating System concept comes from John Kotter and is defined as 'a hierarchical system sitting alongside a 'network' built on volunteerism, enthusiasm and commitment'[114]. With two systems in one, one vertical and one horizontal, the 2009 question about a movement within the system which it has been constructed against is answered and the door is opened for a reading of NHS Change Day as a platform (see above).

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	Social movement thinking is core to what NHS Change Day is. Until this Re-Valuation, movement language was the best way of explaining how NHS Change Day works, for instance in terms of the following concepts: • **Visibility/Invisibility**: concealment as key to the (hidden) strength and safety of the networks. • **Governance and hierarchy**: the need for organising and deployment of resources, yet without power being accumulated at particular points. • **Leadership**: leading as facilitating relationships; 'leaders everywhere' throughout the movement. • **Stories**: the importance of individual and collective narratives as ways of developing shared identity and purpose, thus holding the movement together • **Values**: shared values providing the energy and the cohesion to the movement; the sense of people committing their whole selves to the change. Many of these concepts are so fundamental to NHS Change Day that they are picked up elsewhere in this theory guide. Many of them also fall into the category of dilemmas, which we also write about, where neither of the oppositions trumps its other. In turn, this makes sense of some of the apparent contradictions in NHS Change Day as a managed social movement from inside the system.

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[113] Hilton, KB, & Lawrence-Pietroni, C (2013) *Leaders Everywhere: the Story of NHS Change Day – A Learning Report 2013*. NHS Improving Quality.
[114] Kotter, J. (2012). How the most innovative companies capitalize on today's rapid-fire strategic challenges–and still make their numbers. *Harvard Business Review*, *90*(11), 43-58.

11. Stories

Theme

Stories are a part of everyday social life. They naturally have a central role to play in NHS Change Day and its Re-Valuation, or rather, multiple roles deriving from different theoretical approaches, including:
- manifestos for personal and collective action (in social movement theory)
- sense making devices (e.g. in psychotherapy, psychology, linguistics)
- ways of measuring (e.g. in qualitative research).

These different functions arise from stories' central characteristics of being shared and social, iterative and expressions of the self of the teller (or the shared identity of the multiple tellers).

Commentary on theme

There are many ways in which story and its theoretical shadow, narrative, can be mobilised to make and measure change, but for the purposes of this Guide we shall stick to three contexts:

i)   Social movement narratives

'Social movements ... are created by the stories people tell to themselves and one another. They reflect the deepest ways in which people understand who they are and to whom they are connected. Whatever they are, and whatever historical sources of their development, they are constructed from the inter-meaning of personal and social biographies, from the narratives people rehearse to themselves about the nature of their lives.' [115]

Social movement theorists are clear that sharing stories is essential for building movements. The process starts with an individual telling stories, thus making a coherent narrative of the self which ends by requiring action on the issue at hand. Sharing this personal story tests it out, refines it, builds the individual's commitment to it and invites listeners with whom it resonates to join the narrative; and in so doing a coherent social movement is born.

It can be argued that social movements are stories; it is certainly impossible to see them without telling stories to bring as much of the movement as possible (or as appropriate) into view. We might think of Make Poverty History, which was too large for one person to see it all at once (e.g. at Live8 in Wembley Stadium and on the rally in Edinburgh on the same day (2/7/05)[116]). Like Make Poverty History, we should note that social movements can support multiple stories or readings[117]. However, often it is true that movements begin with a single story, even if that story becomes written down in multiple different accounts; like, for example, the origin of NHS Change Day (see the 2013 Learning Report).

This evolution of narrative from self to group to movement is at the core of Marshall Ganz's vision of social movement organising, to the point where he can express a movement as three complementary narratives, summed up in the figure below:

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[115] Kling J. (1995) 'Narratives of possibility: social movements, collective stories and the dilemmas of practice.' Paper presented at the 'New Social Movement and Community Organising Conference', University of Washington School of Social Work, November 1-3, 1995
[116] http://www.makepovertyhistory.org/2005/
[117] Sireau, N 2009. *Make Poverty History: Political communication in action.* Houndmills: Palgrave Macmillan.

Figure 3: The Public Narrative (Ganz 2010)

Through the vehicle of narrative, Ganz identifies the three main elements required for a social movement: agency and a thirst for change, shared values and a shared strategy leading to co-ordinated action. For Ganz, social movements always start with narrative ('A social movement tells a new story'[118]) and he equates the act of leading a movement to the act of telling a story: finding a compelling narrative which takes people with you. Narrative is the means by which an individuals' values are expressed; without a story the values remain as an unfulfilled urge, whereas the shared story is what allows values to translate into action *('*a credible vision of how to get from here to there').

ii) Stories as data

In his writing on social movement organising, Ganz argues that there are two ways of making sense of the world: an analytical mode and a narrative mode. Analysis features careful rational calculation, while narrative features what we might call 'hot evaluations' based in the relative weighing of values and the sense of emotional import. Ganz cites psychologist Jerome Bruner in this regard ('Two modes of thought' 1986[119]), but more recent work in neuroscience could provide very similar proof, for instance the discovery of dual process cognition (System 1 / System 2[120]) which powers the 'nudge' thinking of behavioural economics (e.g. Danny Kahneman's 'Thinking Fast and Slow'[121]).

As neuroscience shows, the two modes of thinking are not in fact alternatives but partners (a 'dilemma' we might say). In this way, slow and steady System 2 checks in on the automatic but faulty processes of System 1 from time to time, when we make decisions deliberately. Similarly, we would argue that stories contain both analytical and emotional data and both can be used to make judgements about value ('calculations' and 'calibrations' in the language of Re-Valuation). (Behavioural economists would also now argue that emotional responses are part of the cognitive calculation: 'hot evaluations' featuring calculations inferred from emotional responses, the 'affect heuristic'[122].)

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[118] Ganz, M. (2010). Leading change: Leadership, organization, and social movements. *Handbook of leadership theory and practice*, *19.*
[119] Bruner, J (1986) 'Two Modes of Thought', Chapter 2 in *Actual Minds, Possible Worlds.* Cambridge, Mass.: Harvard University Press.
[120] Stanovich, K. E., & West, R. F. (2000). Advancing the rationality debate. *Behavioral and brain sciences*, *23*(05), 701-717.
[121] Kahneman, D. (2011). *Thinking Fast and Slow*. New York, NY: Allen Lane*.*
[122] Slovic, P., Finucane, M., Peters, E., & MacGregor, D. G. (2002). Rational actors or rational fools: Implications of the affect heuristic for behavioural economics. *The Journal of Socio-Economics*, *31*(4), 329-342.

Stories are necessarily shared and social, as are considerations of value, and 'storying' a series of events or states is a way of giving them social reality. It is for this reason that the main mode for socialising value in the Re-Valuation methodology is one of constructing shared 'local system stories' through cascading and iterating. As with the evaluation stories which look back on the actions and achievements of social movements (like the Make Poverty History example above), two stories will not always converge on the same valuation but, we would suggest, by re-iterating the stories together we can attempt to arrive at a 'settled account': one that all the tellers and hearers can live with, which contains enough that is true to themselves and something new that defines the movement.

iii)   Cognitive frames

Frames and framing appear in the social movement literature, and are granted a place of importance, as it is recognised that how a story is framed determines who (and what) will connect with it. For instance the NHS institute for Innovation and Improvement report says: 'Framing is generally seen to be the single most important principle of social movement thinking'[123]. In essence, stories must be framed so that they resonate with the intended audience; in this case the target participants for the movement. However, according to the NHS institute for Innovation and Improvement 'framing is fundamentally different from 'spin''. The difference they point to is one of authenticity, based on frames' ability to make a deep connection between speaker and listener. However, the literature on cognitive frames points to more fundamental differences, based on frames as physical structures in the brain, which entirely determine how we see the world, not merely how we describe it to others.

In a study on the use of frames and values in engaging the UK public in global poverty[124] this is described as 'chunks of factual and procedural knowledge: 'structuring structures' in the mind'. More than a picture frame (a common metaphor for a linguistic frame) a spectacle frame would be an appropriate image: something we look through in order to see the world. Of course, both images are frames in themselves and bring with them all sorts of associations and meanings, as well as shutting down others. Frames determine what we perceive. Evidence from neuroscience shows we think in frames.

By way of background it is worth appreciating where the frames concept originated from. Marvin Minsky is generally credited with being the first to use the term in his work on early computers at MIT. He seized upon the idea of 'frames' as a theoretical means of explaining the apparent power and speed of human thought processes which Artificial Intelligence (AI) systems would need to emulate. Minsky referred to 'chunks' of knowledge, human or artificial, as frames.

In 1974 Minsky introduced the frames concept as follows[125]: 'Here is the essence of the theory: When one encounters a new situation (or makes a substantial change in one's view of the present problem) one selects from memory a structure called a frame. This is a remembered framework to be adapted to fit reality by changing details as necessary. A frame is a data-structure for representing a stereotyped situation, like being in a certain kind of living room or going to a child's birthday party. Attached to each frame are several kinds of information…'

The information that is contained within the frame structure is both factual and procedural, in that it encapsulates both what to do and how to do it. The fact that these different kinds of knowledge are stored together in a chunk is key to providing our thoughts with speed and ease.

[123] Bibby J, Bevan H, Carter C, Bate P, Robert G (2009) *The power of one, the power of many: bringing social movement thinking to health and healthcare* NHS Institute for Innovation and Improvement.
[124] Darnton & Kirk (2011) op. cit.
[125] Minsky, M. (1974) 'A Framework for Representing Knowledge' (MIT-AI Laboratory Memo 306, June 1974) reprinted in *The Psychology of Computer Vision*, P. Winston (Ed.), McGraw-Hill, 1975.

The frame structure is described by Minsky as 'a network of nodes and relations'; a structure that can apply to brains just as well as to computers.

In Minsky's explanation we understand a scene or discourse by picking a pre-existing 'stereotype' frame. As we fill in the detail in the lower 'slots', we continue to adapt the pre-existing frame. In some cases there may come a point where the specific data no longer fits the top-level conditions for a particular frame, at which point a new frame is substituted in (and the observed facts effectively break out of the first frame (we could call this 'frame breaking'). This resonates with the second 'paradigm breaking' loop of double loop learning, also originating from MIT[126]).

Minsky's idea of frames made up of terminals, some of which are pre-set and some of which are empty, is central to Artificial Intelligence. It was further developed by other early thinkers in Artificial Intelligence, including Roger Schank and Robert Abelson, a pair of cognitive psychologists at MIT who wrote about the closely related concept of 'scripts' (1977[127]). Schank and Abelson's thesis follows Minsky's, except that the slots in the frame are patterned into a narrative or scenario which is also a part of the stereotypical situation, or 'script' as they call the frame structure.

In the 'restaurant script', for example, the slots include 'chef', 'waiter', 'diner', 'menu', 'main course' and 'bill', and these are formed into scenarios that arrange them into a narrative (e.g. we expect the bill to arrive towards the end of the script). All these elements and arrangements are co-located in the unconscious brain. They are activated when we encounter a restaurant or a discourse about restaurants. The script or frame brings with it not just the dictionary definition, but all we know factually and procedurally about the word or situation. This may include how we feel about it, and in this way frames can activate values.

Developments in the brain sciences have shed further light on frames as chunks of knowledge in the mind. In 1975 George Lakoff was one of a handful of pioneering academics establishing the foundations of cognitive linguistics, a discipline that brought an understanding of the brain to bear on theories of language and meaning. In cognitive linguistics, the meaning of a word is not just a simple dictionary definition but a cognitive frame associated with a particular word in a particular language community. Other mechanisms, such as metaphor and prototyping, can also be involved.

Cognitive frames, words and the association between them are stored in our long-term memories ('instantiated in the synapses of our brains', as Lakoff puts it[128]) then activated by the use of particular words. That activation does not just involve some abstract meaning of the word, it also involves the experiential context (the 'scene' as Fillmore or Goffman might put it), together with its physical and emotional components and any positive or negative valuations.

So meanings of words are not just abstract definitions in dictionaries. Access to the meaning of a word is gained through activating the whole frame, and the association between a word and its frame is built into the brain through a process of neural binding. 'Neurons that fire together wire together,' goes the phrase; and the more they fire the stronger the connection; and the more a particular frame is potentially referenced when activated by a particular word or experience.

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[126] Argyris, C & Schon, D (1996). *Organizational Learning II*. Reading, Mass.: Addison Wesley.
[127] Schank, R. C., & Abelson, R. P. (1977). *Scripts, plans, goals, and understanding: An inquiry into human knowledge structures*. Lawrence Erlbaum Associates.
[128] Lakoff, G (2004). *Don't Think of an Elephant: Know Your Values and Frame the Debate*. White River Junction, VT: Chelsea Green.

In this way frames bring with them what we might call analytical and emotional content, to the point that frames activate values. Returning to the question of spin, we can now see that frames are fundamentally different because they tap into our deep understandings of our selves relative to the world, rather than re-presenting (or deliberately distorting) those perceptions.

Lakoff explains the distinction by deploying the concept of deep and surface frames, as follows[129]: 'Surface frames are associated with phrases like 'war on terror' that both activate and depend critically on deep frames. These are the most basic frames that constitute a moral worldview or a political philosophy. Deep frames define one's overall 'common sense'. Without deep frames there is nothing for surface frames to hang onto. Slogans do not make sense without the appropriate deep frames in place.'

A surface frame sets the context for what a situation or discourse is about; effectively it names the subject matter and at the same time provides an angle for viewing it. 'Tax relief' and 'war on terror' are examples of surface frames. These surface frames can activate deep frames that are the evaluative context for the discourse and ground it within a worldview. Surface frames can be neutral (they are not necessarily charged with positive or negative associations) but deep frames are always loaded i.e. they are 'hidden' and used to drive behaviour in ways that people do not question. Deep frames are seldom made explicit but are usually taken for granted within the discourse or experience; it requires analysis to identify them. Deep frames are important as they can activate and reinforce particular values. They function at the level of values. For Lakoff, they are neural circuits in themselves.

One of Lakoff's favourite examples is the tax relief frame: the consistent use of the phrase 'tax relief' by those on the American right. Lakoff uses 'tax relief' both to explain the concept of a frame and to show its political application[130]: 'We think, mostly unconsciously, in terms of systems of structures called 'frames'. We use our systems of frame-circuitry to understand everything and we reason using frame-internal logics. Words activate that circuitry and the more we hear the words, the stronger their frame circuits get. Take the frame evoked by the phrase 'tax relief' as an example. The word 'relief' evokes a conceptual frame of some affliction and a reliever who performs the action of relieving. So taxes are an affliction, a reliever is a hero and anyone who wants to stop him from the relief is a villain. You have just two words, yet all of that is embedded. If you oppose reducing taxes and you use the phrase 'tax relief', you've already lost.'

Lakoff defines cognitive policy as 'the practice of getting an idea into normal public discourse'; an aim that can be achieved by the sustained use of particular frames[131]. As well as being an explanatory device, frames become a political tool in the work of Lakoff. This turns Lakoff from a cognitive linguist into a self-avowed 'cognitive activist' and underlines the power of frames for enabling social change.

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[129] Lakoff, G (2006). *Thinking Points - Communicating our American Values and Vision.* New York, NY: Farrar, Straus and Giroux.
[130] Lakoff, G (2010). 'We are the polar bears: what's wrong with the way that the environment is currently framed'. In *From Hot Air to Happy Endings: How to inspire public support for a low carbon society* (pp12-15). London: Green Alliance.
[131] Lakoff, G (2008). *The Political Mind.* New York, NY: Viking Books.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	- Narratives flowing from the self to incorporate others: shared stories becoming the basis of a movement. - The role for stories in sense making, including multiple stories to make sense of a movement retrospectively. - The importance of common language to the movement. - The deep significance of framing.
New and re-purposed phrases	- Re-Valuation as socialising value (through the mode of storytelling, and methods of iterating and cascading). - Calculation and calibration as ways of measuring value: both analytically and 'emotionally'. - Frames underlining the need for new language in order to bring new possibilities for valuing social change (not just surface framing or spin, but based on fundamentally different understandings of how change happens, and what matters).

12. Systems

Systems are collections of items, people or other components which are connected together to become 'more than the sum of their parts'. It is the relationships between the parts which gives them their 'systemness', their capacity to produce effects which the separate parts could not do (what we call 'emergence'). The systemness also includes resistance to change, caused by the tendency of the system to keep producing its effects whatever the changes in the external environment. For instance, if one part of the system is damaged, other parts will adapt to ensure the whole keeps working.

Systems thinking is a way of understanding behaviour, particularly organisational behaviour but also social behaviour. Institutions are systems and social groups can also be systems (not least if they have enough members and relationships to express group dynamics). Systems thinking can best be understood as a worldview or way of looking at behaviour, which reveals different things to more mainstream disciplines.

Systems thinking emphasises complexity, through its emphasis on relationships and attention to the whole system (not just focussing in on the parts). Because of this complexity, it can be difficult, not to say forbidding. It is also somewhat unorthodox: dominant approaches to understanding behaviour give prominence to linear relationships and cause and effect (orthodox evaluation would be a good example of such an approach). However, there are many advantages to working this way: a Health Foundation Evidence Scan looked at the potential for adopting systems thinking in healthcare settings and concluded that 'the main value of this way of thinking is its ability to see through taken for granted approaches and delve deeper into the way people and organisations interact'[132].

Systems thinking is a vast topic; more a subject than a theme. Outlined below are some of the most relevant points for those working on NHS Change Day'' or other forms of organising for social change.

Commentary on theme

Systems thinking is a theoretical approach to change (a field theory perhaps) derived from the network-based disciplines of cybernetics and 'servo-mechanism' engineering. The central premise is that systems have 'emergent properties'[133]; the components of systems interact to create effects (often unforeseen) which the components could not have generated singly. Thus systems are more than the sum of their parts. A thought leader on organisational change, Peter Senge, identifies five disciplines as necessary for a learning organisation, of which systems thinking is the 'fifth discipline' (also the title for his seminal work[134]). He defines this in the Greek 'metanoia', meaning 'an upward shift of the mind'; thus systems thinking is 'a discipline for seeing wholes'. The traditional Western analytical procedure is reductive, disassembling complex wholes into their parts to understand them. This method can be seen in scientific enquiry; a similar purpose is apparent in standard economic analysis in which the assumption of rationality is applied in order to simplify, and so model, complex behaviours. Systems thinking offers a distinctive approach: standing back to see the patterns at play across the whole. Jake Chapman, who works on organisational learning in the context of the UK government, describes

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[132] Health Foundation (2010) *Complex Adaptive Systems – An Evidence Scan.* London: Health Foundation.
[133] Checkland, P (1999) *Systems Thinking, Systems Practice (Updated Edition).* Chichester: John Wiley & Sons
[134] Senge, P (1990) *The Fifth Discipline.* London: Random House.

systems thinking as 'moving up a level of abstraction'[135]. Senge makes the distinction between 'detail complexity', which traditional analysis can deal with by disassembly and 'dynamic complexity', which involves systemic interactions over time and generates emergent properties.

The feedback loop is the central construct in systems thinking. Behaviour in systems thinking develops in continuous loops, similar to the ongoing cycles of action and reflection in Donald Schön's reflective practice (see the 'Learning' theme above[136]). Senge's Fifth Discipline is filled with looped diagrams showing progress via feedback, as each action reinforces or counterbalances another. As with looped learning, this is clearly at odds with multilinear, left to right models of behaviour. Senge comments that: 'reality is made up of circles, but we see straight lines'[137].

To illustrate behaviour as feedback, Senge presents a simple single loop demonstrating how filling a glass of water from a tap is a looped not a linear action, based on monitoring and feedback between our eye and our hand as the water reaches the desired level in the glass.
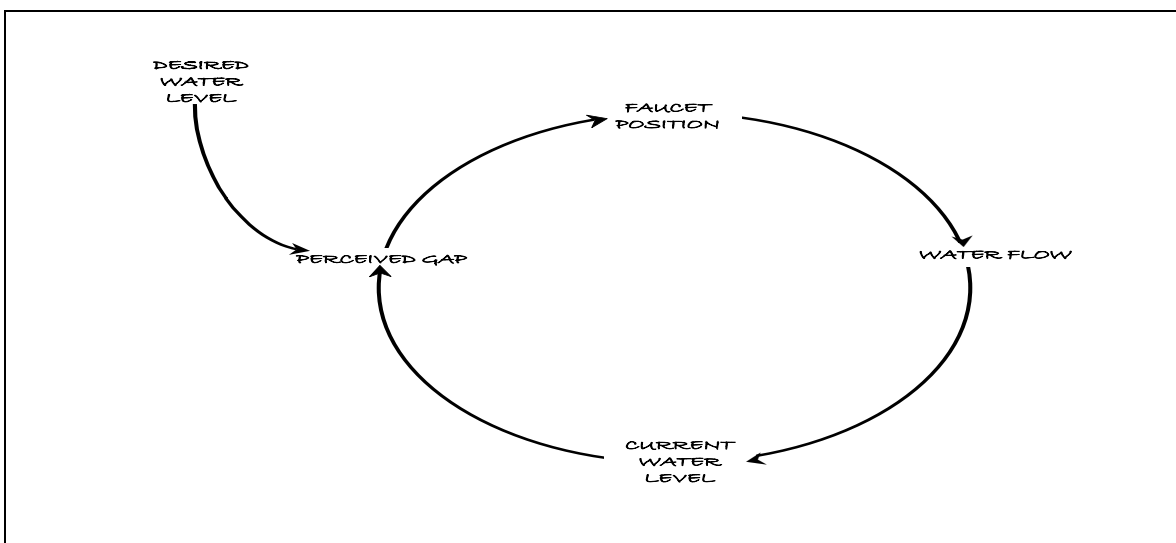

Figure 4: Senge's Diagram of filling a glass of water as feedback (1990)

The negative feedback loop is a variation on this figure, while positive feedback is diagrammed as two loops each reinforcing the behaviour of the other. The Cold War arms race is given as an example of positive feedback, with escalation in the number of warheads resulting in the unintended consequence of increased levels of fear, when the original aim of each superpower was to keep their population safe.

Senge demonstrates how diagrams are central to systems thinking; they offer an alternative to the linear analytical approaches of models and language. The act of drawing up the looped diagrams ('modelling') is essentially the discipline of systems thinking in practice. In calling for learning, Senge requires organisations to practice the discipline of systems thinking: '…practising a discipline is different from emulating a model; emulation is just piecemeal copying and playing catch-up.' Thus systems thinking delivers a direct challenge to traditional analytical approaches, effectively calling for reflective practice and Deweyan inquiry, not the implementing of models. This is also a clear challenge to traditional (policy) approaches to behaviour change, which use theory to identify what works in an intervention so it can be replicated elsewhere.

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[135] Chapman, J (2004) *System Failure (*2nd edition). London: Demos.
[136] Argyris, C and D Schon 1978. *Organizational Learning: A Theory of Action Perspective*. Reading, Mass.: Addison Wesley.
[137] Senge (1990) op.cit.

Moreover, systems thinking makes the distinction between transformational and incremental change ('playing catch-up' in Senge's phrase). Transformational change requires the kind of deep insight advocated by Schein, that can expose and reshape underlying assumptions, whereas incremental change works within the existing structure. In the language of Argyris and Schön, incremental change would be single loop learning, sufficient to detect and correct errors.

The notion that thought is sparked by encountering problems is fundamental to systems thinking and can be traced back to Dewey's definition of learning based on reacting to surprises. Systems thinking distinguishes between problems in two kinds, thus allowing for the production of transformational as well as incremental change. In 'System Failure' (in part, the failure of government to become a learning organisation) Chapman cites Roger Ackoff (1974) defining problems of two kinds:

- **'difficulties':** in which there is agreement about the problem and what constitutes a solution, and which are bounded by time and resources
- '**messes':** characterised by uncertainty: about what the problem is, how it might be deemed fixed and how long that might take.

Both types of problem can respond to systems approaches, although messes most require such approaches. Intervening in one mess tends to impact on other messes, so that addressing the issues is usually unbounded in scope, time, resources and people. In a policy context, reducing crime or raising school standards could be described as 'messes'; complex organisations can also be 'messes' and Chapman is not alone in saying the NHS is one.

Faced with such problems, systems thinking advocates two methods: **hard systems** approaches and **soft systems** approaches. Both methods are holistic (involving 'seeing wholes') but soft systems is also pluralistic, allowing for divergence in opinion on the nature of the system of interest (e.g. where its boundaries lie). Soft systems methods are particularly good for approaching messes and in problems where diverse stakeholders are involved. Soft systems methodology was developed for analysing human activity systems, whereas hard systems derived from engineering problems, in which the components of a system are fixed and known. Soft systems modelling (producing looped diagrams and 'rich pictures') is best undertaken by groups of stakeholders following cycles of action and reflection; at some point in the process a shift to a higher level of abstraction is required[138].

The understanding of action and reaction being in an ongoing relationship (such that A triggers B which in turn triggers A) is core to systems thinking and has been present from its origins in cybernetics ('the science of effective organisation'[139]). The simple homeostatic loop diagrammed above was an insight from Ross Ashby, a psychiatrist who worked on neuroscience and became one of the founders of cybernetics. It is Ashby who first introduced looped models. Cybernetic thinking requires two conditions to be in place for it to operate[140]: the first is that an organisation exists to fulfil a purpose, and the second is that it will use 'negative feedback' to gauge its impact on the environment and adjust its performance accordingly.

Cybernetics is particularly concerned with negative feedback and assumes that a state of equilibrium, where the system is in balance with the environment, is desirable. Other branches of systems thinking go on to include positive reinforcing loops, with the result that the system can be out of balance with the environment (and run increasingly so, e.g. in the case of the arms race and other 'vicious circles'). As well as his simple balancing loops, Ross Ashby

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[138] See e.g. Chapman (2004) op cit; Chapman, J (2007) *Learning Systems Thinking* [draft].
[139] Beer, S (1981) *Brain of the Firm* (2nd Edition). Chichester: John Wiley & Sons.
[140] See e.g. Stacey, R (2003) *Strategic Management and Organisational Dynamics: The Challenge of Complexity* (4th Edition) Harlow: Pearson Education.

encapsulated the principles of equilibrium in 'Ashby's Law of Requisite Variety' which states that the complexity and speed of a system's (e.g. a firm's) response must match the complexity and speed of change of the environment[141]. In fast-moving complex environments the system must respond to many potential changes, in order that the regulator can keep the system stable, while there is disruption all around it. The number of potential responses must match the number of potential disturbances so they cancel each other out to produce the desired (system) outcome.

Stafford Beer, a follower of Ross Ashby, applied the early thinking in cybernetics to challenges of organisational management (he began working in United Steel in Sheffield, though his consulting work led him to advise the Allende administration in Chile). Beer adopts the systems approach of inferring from natural systems, particularly the human body, to reveal understandings for how built systems operate. His methods have become incorporated into a way of working called Viable Systems Modelling (VSM)[142].

The Viable Systems Modelling is firmly grounded in systems theory and is inspired by the way the brain co-ordinates the muscles and organs. Its theoretical basis is Ashby's work, particularly the Law of Requisite Variety, Weiner's development of cybernetics, the mathematics of recursive systems and McCulloch's theories of neural networks. What emerges from all of this is a body of knowledge which describes the way that all viable systems work. Beer identified the invariances which apply universally, regardless of the size or nature of the viable system. It has been applied at all scales from small work-groups to nation states.

An understanding of the theory begins with the observation that operational units must be as autonomous as possible, and thus Beer's model sees any organisation as a cluster of autonomous operational parts which bind together in symbiotic interactions to create a new, larger whole system. Thus the job of management is to provide the 'glue' which enables this to happen. Beer named this function the Meta-system, which is defined as *'A collection of sub-systems which looks after the operational elements so that they cohere in that totality called the Viable System'*.

Systems 2, 3, 4 and 5, between them, make up the Meta-system. Their roles are summarised by Jon Walker (one of the panel of expert advisors on this Re-Valuation project) as follows[143]:

- System 2 deals with the inevitable problems which emerge as a number of autonomous, self-organising operational parts interact. There will be conflicts of interest which must be resolved. System 2 is there to harmonise the interactions, to keep the peace, to deal with the problems.
  Without a System 2, the system would shake itself to pieces.

- System 3 is concerned with synergy. It looks at the entire interacting cluster of operational units from its meta-systemic perspective and considers ways to maximise its effectiveness through collaboration. System 3 ensures the whole system works better than the operational parts working in isolation. Beer talks about an 'explosion of potential' which emerges from collaboration and symbiotic relationships.
  Without a System 3 this could not happen.

- System 4 ensures the whole system can adapt to a rapidly changing and sometimes hostile environment. It scans the outside world in which it operates, looks for threats and opportunities, undertakes research and simulations and proposes plans to guide the system through the various possible pathways it could follow.

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[141] Ross Ashby, W (1956) *An Introduction to Cybernetics*. London: Chapman & Hall.
[142] Beer (1981) op. cit.
[143] Walker, J (2015) The VSM in 996 Words [working draft]

Without a System 4, the system would be unable to cope with the slings and arrows of outrageous fortune.

- System 5 provides closure to the whole system. It defines and develops the vision and values of the system through policies. System 5 creates the identity, the ethos, the ground rules under which everyone operates. It aligns the tasks of everyone in the organisation. In Beer's words: 'Rules come from System 5: not so much by stating them firmly, as by creating a corporate ethos: an atmosphere.'
Without a System 5, fragmentation would be inevitable.

The interactions between these five sub-systems and the way they respond to and affect the external environment define the Viable Systems Modelling.

It is notable that the sub-systems are nested within the meta-system of the organisation and yet are systems within themselves. This demonstrates the principle of recursion, which adds a further layer of complexity to systems thinking. Not only are relationships two-way and characterised by feedback (hence 'recursive' on one level), there are also two-way relationships between levels (as shown between the subsystems on Beer's figure). It is a central premise that all systems are subsystems, when looked at from a different level of scale, and this 'nesting' capacity adds to their complexity. As Beer writes: 'Any system turns out to be embedded in a larger system and is never completely isolated, completely autonomous or completely free.'[144] One example comes from his work in Chile: 'Recursively speaking, the Chilean nation is embedded in a world of nations and the government is embedded in the nation.'

While this aspect of systems adds complexity, it can also lend clarity to our understanding. For instance, if we study the system at micro-level we should be able to make inferences about the bigger system within which it is embedded. The attributes of the macro may be visible in the attributes of the micro. Second, the system is only closed off if we set boundaries around it or define the scope of our enquiry. In Jake Chapman's language, it is always possible to go 'up a level'.

Thus in Beer's *Brain of the Firm*, once he has set out the workings of System 5 he then moves on to describe meta-systems within which the system of interest could sit: 'We have come to the end of the hierarchy of systems we undertook to consider. Why should this be "the end"?'

Use in NHS Change Day Re-Valuation

| Relevance/ use/ what is made visible | The various branches of systems thinking give us extensive and fundamental terminology for understanding both social movements as systems and the system within which NHS Change Day functions: the NHS. Some of these terms appear in the phrasebook which opens this guide; key aspects include:

- Emergence, being the tendency for systems to produce unanticipated outcomes. In our Re-Valuation, this is linked to the potential of networks, campaigns and platforms to deliver change in future.
- Complexity, which is not the same as being complicated but is based on relationships between parts which constantly change. These relationships also exist between parts on different levels (see Recursion below).
- Attribution: systems thinking makes the linear assumptions of |

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[144] Beer (1981) op. cit.

	orthodox evaluation visible and betters them. The relationship becomes as (or more) interesting as each of the parts, and the instinct to allocate cause and effect to different parts is exposed.
	• Management is put to the foreground in systems thinking, especially as it applies to organisations. This is a very different account of organising than that given in, say, social movement theory: both are organic (in the sense of derived from nature) but in systems thinking is thoroughly planned. (It is interesting to remark that NHS improvement experts report that half of all social movements in a US sample 'failed partially or completely'[145], whereas Jon Walker comments that 'no one has been able to find a case study in which the Viable Systems Modelling has failed'[146]).
New and re-purposed phrases	• **Visible/Invisible:** Derived from the recognition that social movements draw strength from playing visible/invisible, but given further methodological clarity in our method thanks to taking a systems approach (standing back to see wholes, in order to make systems visible).
	• **Capacitate:** The idea that the potential value in a movement/platform can be measured, based on the quality of the relationships in the network. This would not be possible without a systems perspective.
	• **Fractal:** The nesting of systems within systems (as sub-systems) opens the possibility that the shape of bigger systems can be inferred from the shape of smaller, more micro, systems (which are easier to see, e.g. being in one place).
	• **Recursion:** Recursion gives us a new way to talk about causality, as a two-way relationship or flow. It also allows for the nesting of systems within systems (as we find in NHS Change Day, also expressed as 'a platform of platforms')
	• **Openendedness:** It follows from recursion that when we have modelled one system we can move on to model the next (in line or up or down a level). Modelling is never done and we might say the same about reaching a 'full valuation'. The only limits on the enquiry are those the evaluator sets (e.g. time and money) and these are not inherent in the system, which if viable will live on.

13. Transitions

Theme

The literature on transitions tends to approach change from a practice perspective. In everyday language it observes that 'change is the only constant' and that seeing things as static is an illusion. This way of viewing change is consistent with sociological understandings of human conduct as social practices: rather than behaviours being the choice of the individual (and initiated by them) practices are always 'out there' in society, being undertaken by various

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[145] Gamson, W. A. (2004). Bystanders, public opinion, and the media. In DA Snow, SA Soule & H Kriesi (eds.) *The Blackwell companion to social movements*, 242-261; reported in Bibby et al (2009) op. cit.
[146] Walker (2015) op. cit

actors. In this view the individual becomes the 'carrier of practice' and is of secondary importance; the proper focus of enquiry is the practice itself. It follows that change does not flow from the choice of individuals but is always happening, as each practice is performed and 'reproduced', but always slightly differently. The task for the would-be intervener or 'programme manager' is to modulate the rate of change (slow it, accelerate it, redirect it one way or another); the pursuit of 'behaviour change' is deemed illusory. From this perspective the task for the would-be intervenor is to understand the forces that drive the change and intervene in them, building on one, holding another back. Critically, we cannot predict what the precise change (or its effects) and this position argues against 'command and control' models of policy making and behaviour change (see 'Systems' above – e.g. Jake Chapman)[147].

Commentary on theme

Thinking on socio-technical transitions has been developed over the last decade in order to understand, and latterly to intervene in, processes of change in socio-technical systems. This body of theory descends directly from systems thinking; these transitions chart the co-evolution of the social and the technical in complex systems. The concept of a transition however ties into theories of practice. Being emergent, practices cannot be managed from the outside or driven with factors. As practices are constantly evolving as they emerge, change is inherent in them, not something that is done to them, hence the use of 'transition' to describe the process of co-evolution they undergo.

However, the immediate antecedent of work on socio-technical transitions in Science and Technology Studies and Innovation Studies, has a strong focus on how innovations diffuse through society. The most comprehensive model of a socio-technical transition in action is that provided by Frank Geels[148]. The model depicts society in three levels; these are taken directly from Rip and Kemp's seminal model of 1998, which described them as micro ('niche'), meso ('regime') and macro ('landscape'). The prevailing socio-technical system is the regime. Geels' main contribution was to identify seven strands in regimes. Like the elements in a practice the strands in the regime together form a '*mosaic of heterogeneous elements*'. The seven elements of a sociotechnical regime are defined as:

- *technology*
- *user practice and application domains (markets)*
- *symbolic meaning of technology*
- *infrastructure*
- *industry structure (supply chains)*
- *policy*
- *scientific knowledge.*

As Geels' term 'mosaic' implies, while each element interlinks they remain distinct; and as they evolve over time tensions can open up between them. Overall change in sociotechnical practices arises from these tensions, leading to 'technological transition'. Technological transition is the central focus of Geels' work and while his original study in 2001 focused on the transition from sailing ships to steamships, he has applied the theory in numerous areas of practice, including land transport (carts to cars), washing (pumped to piped water) and popular music (from crooning to rock 'n' roll). Technological transition involves reconfiguration of the elements in the socio-technical regime, with new technologies being drawn up into the regime from 'niches' of innovation. In Geels' diagrammatic representation these niches sit below the

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[147] Chapman, J (2004) *System Failure (*2nd edition). London: Demos.
[148] Geels, F (2001) 'Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study'. Paper presented at DRUID Nelson and Winter Conference, Aalborg, Denmark, June 2001.

level of regimes; they are both 'safe spaces' away from the prevailing regime in which innovations can be developed, and sites for learning, both for those in the niche itself and those looking on from the regime (the links between systems thinking, experiential learning and now socio-technical transitions have been raised above, under 'Learning'). 'Niche-innovations' are drawn in as gaps open up in the regime, representing opportunities for them to break through into normal practice. At the same time the 'mosaic' of elements in the regime is also in dialogue with the wider macrosocietal landscape (which is diagrammed as spreading above the regime); as ever, this is a recursive relationship, as the wider societal factors are influenced by socio-technical practice.

Figure 5: A dynamic multi-level perspective on technological transitions (Geels 2001)
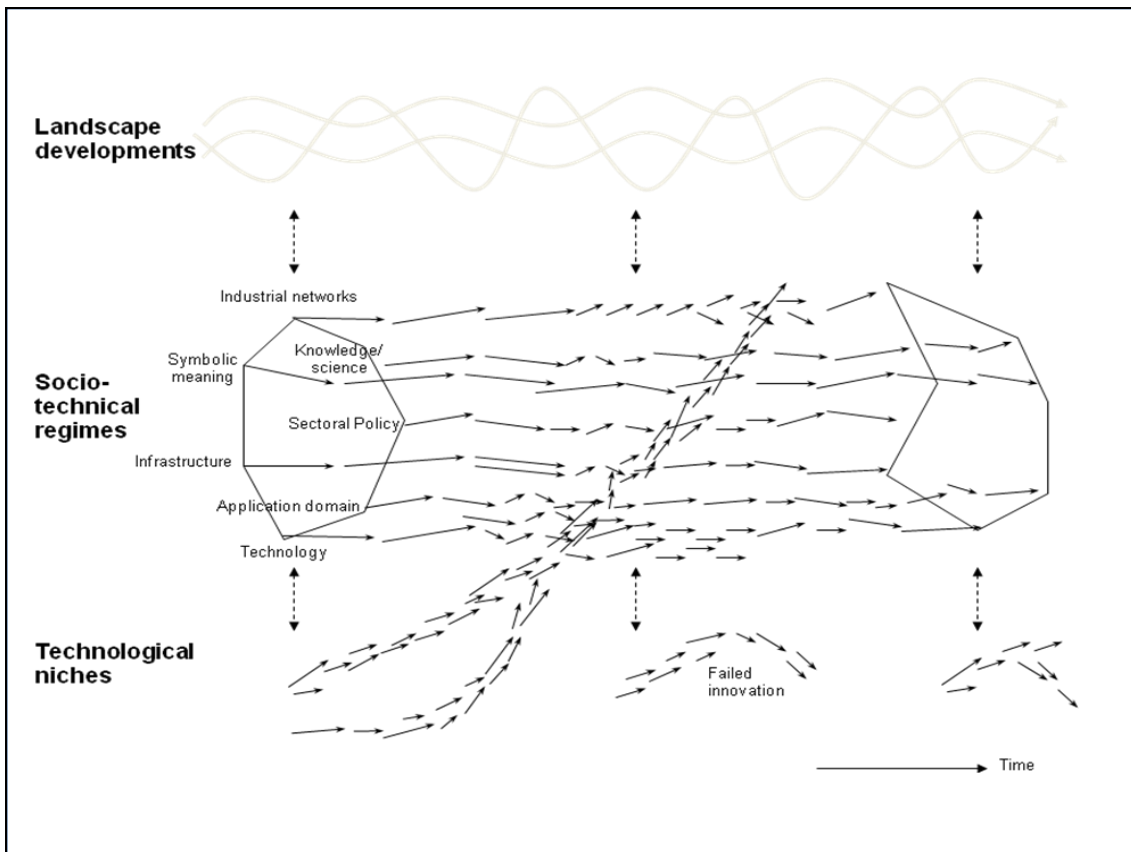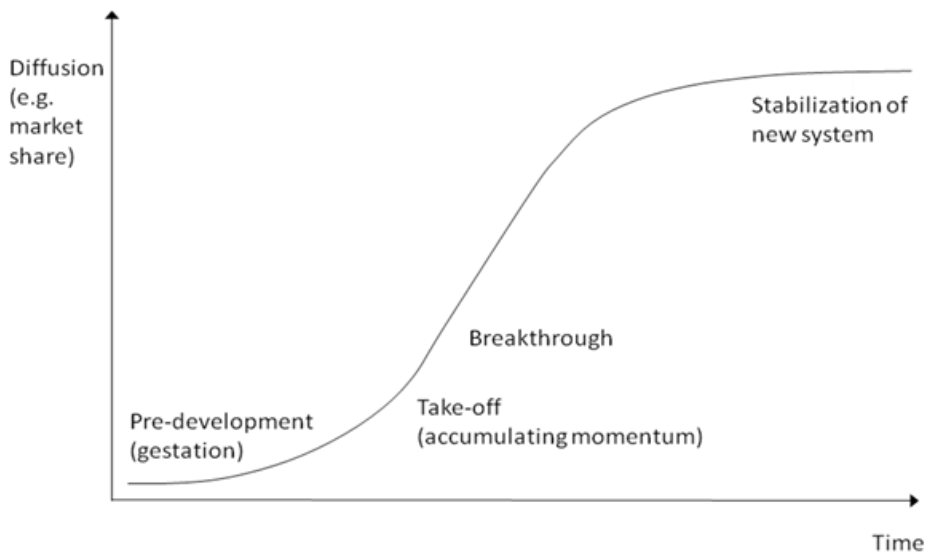

While the debt to Rip and Kemp is clear, in turn their building upon Roger's Diffusion of Innovations model (Rogers 1995; originally 1962[149]) is still observed by Geels, although it is less transparent. On closer inspection, the upward trajectory of the niche-innovations (in the flurry of arrows) follows the course of Rogers' S-curve:

Figure 6: Stylized shape of transitions (based on Geels et al 2008[150])

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[149] Rogers, E (1995) *Diffusion of Innovation* (5th edition). New York, NY: Free Press.

[150] Geels, F.W., Monaghan, A., Eames, M. and Steward, F. (2008) *The feasibility of systems thinking in sustainable consumption and production policy: A report to Defra.* Brunel University. Defra, London.

Diffusion
(e.g.
market
share)

Stabilization of
new system

Breakthrough

Pre-development
(gestation)

Take-off
(accumulating momentum)

Time

In common with Rogers' model, Geels' rendition of socio-technical transitions is all about the innovation. As in Rogers, the innovation itself is presumed to be a good thing: the work on socio-technical transitions is about how to speed and cement diffusion rather than avert it. There are a few downward arrows in the version of Geels' model above, signifying failed innovations that crash to earth; but these are peripheral to the theory (and often omitted from later renditions of the model). However, where Rogers depicts the innovation as being uniform and unchanged by the process of diffusion, Geels' multiple arrows show that innovations come in batches and change trajectories as they fall into (or out of) mainstream practice. Rogers similarly paid no attention to the changing selection environment in which the innovation was adopted, a trend followed by Rip and Kemp. Geels' classifying of the regime into seven strands filled this gap, although it is noticeable that an element of standardisation is preserved as the same seven strands are specified no matter what transition is under examination. Geels also notes that the 'simple S curve' is insufficient in suggesting a smooth rate of take-up, whereas socio-technical transitions tend to patchy across different populations and places. Rogers, by contrast, simply stigmatises those who fail to see the utility of his innovations, labelling these late adopters as 'laggards'.

Despite being a well-evolved framework, socio-technical transitions work remains in large part conceptual. However it has been operationalised in the process of Transition Management. Elizabeth Shove's principal objections to Transition Management are set out in a paper called 'CAUTION! Transitions Ahead'[151]. The fundamental flaw in Transition Management is the idea that transitions can be managed; by definition, they cannot be as they are emergent. Then there is the procedural issue of how one would do it, knowing when and where to press in order to shunt the transition onto a new and desired trajectory. There are also ethical and political questions of who 'we' are to decide to set about intervening in transitions at all. Finally, there is the objection that innovations seem to be owned by innovators, whereas practice theory argues that all practitioners are involved in reconfiguring the elements of practice. Socio-technical transitions thinking works best for technological innovations ('*bounded bits of kit*' as Shove has called them) and it is therefore very helpful to explore shifts in practice, such as the change from bathing to showering[152]. However, it does not appear to offer an answer to how we might now move back from daily shower to weekly bath. Many of the changes in everyday practices that are identified as part of the pro-environmental agenda are similarly 'retrograde' in nature, while others can be thought of as 'avoidance' behaviours which entail averting environmentally-

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[151] Shove, E & Walker, G (2007) Caution! Transitions ahead: politics, practice and sustainable transition management, *Environment and Planning A*, 39(4) 763 – 770.
[152] Shove, E & Pantzar, M & Watson, M (2012). *The Dynamics of Social Practice.* London: Sage.

harmful niche practices before they become mainstream. Models focused on innovation seem of limited value in both instances.

It is notable that when Frank Geels and colleagues recently wrote a paper for Defra looking at the potential applicability of socio-technical transitions thinking to UK environment policy, they chose to entitle it 'the feasibility of systems thinking' and not to reference Transition Management upfront[153]. The review was commissioned to explore whether the time had come for socio-technical transitions to be operationalised in UK policy. It opens by making the case that a move towards systems-based policy making is the natural next step for Defra. The review cites a four-phase model of environmental policymaking since the 1960s, developed by the UN Programme on Global Environmental Change (1999). The four phases, in sequence, are:

1) end-of-pipe solutions
2) process efficiency measures and industrial ecology (closing of material loops)
3) product life cycle approaches (supply chains, product road mapping)
4) system changes.

According to Shove and Walker the key task for Transition Management is at the level of system change: *'to figure out how currently dominant sociotechnical regimes might be dislodged and replaced and how new configurations might become mainstream'*[154]. When worked out on the ground this means a dual focus: supporting niche innovations, while at the same time putting pressure on the existing regime. Geels et al's Defra review opens up by stating: *'Transition policy must ultimately take effect at regime level but must simultaneously cover the landscape and niche levels so that change can come about at all at regime level'*. Given that transformational social change is the aim, it can be argued that the regime should take priority over the niche.

In closing, it is worth returning to the work of Arie Rip whose work in Science and Technology Studies set us off modelling socio-technical transitions. Instead of the idea of Transition Management, transitions in practice favours the concept of intervention as 'modulation'. The postmodern actor, writes Rip: *'recognises that being part of the evolving patterns, s/he can at best modulate them, just as all other actors are modulating the patterns through their actions and interactions, intentionally or unintentionally'*[155] (Rip 2006:83). The recognition that practice cannot be manipulated in line with actors' intentions leaves would-be managers to perform a 'reflective/reactive' role, in which the task is to examine practices, learn and adapt their future practice accordingly: change will necessarily result, although the actor should expect unintended consequences as the most part of that change. (The parallels to double loop learning, as described above, are clear, and Rip makes explicit references to Donald Schön's concept of reflective practice). Rip calls such an intervention process 'non-modern steering' and concludes that it is '*the preferred approach*' to policy making for social change. It can be observed that his idea of transitions has carried him a long distance from Transition Management, but it can also be remarked that non-modern steering has yet to become big business.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	In our Re-Valuation of NHS Change Day we have chosen to put forward Geels' multi-level model as our overarching Theory of Change (an output required in the terms of the research

[153] Geels et al (2008) op. cit.
[154] Shove & Walker (2007) op. cit.
[155] Rip, A 2006. 'A co-evolutionary approach to reflexive governance and its ironies', in J-P Voss, D Bauknecht & R Kemp (eds.), *Reflexive Governance for Sustainable Development* pp 82-100. Cheltenham: Edward Elgar.

	specification). There are many other models and theories which can be brought to bear on an analysis of NHS Change Day and the referenced theories are discussed in the themes in this Guide. One approach to social change, is to use theories as fragments, picked up and deployed wherever they make processes visible and lend coherence to the analysis. However, they do not add up to an integrated model of how change works, and it is that which Geels' multi-level model supplies. The implications of adopting Geels' model are many, including: - System change becomes the overarching objective for NHS Change Day. - System change requires changes at all levels: of niche, regime and landscape. - Knowing this, NHS Change Day activists can better direct their efforts (thus answering one of the starting questions for the Re-Valuation: *'…so I can explain to people what NHS Change Day has done and how'* – see Exhibits*).* For instance, those on the frontline (i.e. in the niches) might concentrate on generating new innovations and sharing their best practice with their peers; local managers (i.e. in the regime) can develop cultures which are on the look out for and accepting of 'niche innovations', giving them the best chance to be trialled effectively; NHS Leaders (i.e. in the landscape) can do likewise, celebrating both ends of the niche/landscape relationship and exploring how they can write policies and strategies to enable transition to more sustainable systems. - Finally, NHS improvement experts should adopt the model as their own theory of change and expound it to all those they work with. It is their role, as Geels suggests, to harmonise changes across niche regime and landscape to ensure that innovations become mainstreamed and their impacts understood.
New and re-purposed phrases	Niche, regime, landscape

14. Value & Values

Theme

At the end of our guide to relevant theories of change, we reach value. Value is at the centre of our approach to NHS Change Day: both as formal 'evaluation' by us as a research team and informal valuations made by all those who have taken action during NHS Change Day. In a reading of NHS Change Day as a social movement, it is the activists who debate the value of their actions. From the platform perspective, value is determined by their use of the platform (the more users, the more value). It is our contention that all value is shared and social; our re-valuation methodology makes that process of socialising value visible. In the process of conversing about change with others, there will be disputes over value: whether something is worthwhile, for whom and to what extent. These disputes are inevitable in a system: the method makes them explicit, such that they can be set out and aggregated by the group, to reach a 'settled account'. Where differences still pertain, these may well be caused not by disputes over extent (20,000 or 25,000?) but over inherent worth, e.g. what is the value of skin to skin contact in maternity settings? Such disputes between individuals are often over values: in psychology, the underlying principles which determine our intentions and thus our behaviour. This final theme considers the psychological literature on values, alongside some economic thinking on value and the process of valuation.

Commentary on value

This Guide includes three views of value, all of which offer practical advice on how value is or should be measured. All are relatively new and to varying degrees innovative, but all take as their starting point the orthodox measure of value: £s . All involve setting costs against benefits, and some divide one by the other to produce a 'Return on Investment' ratio or single number. Necessarily, all these approaches involve calculations, but each one of them identifies limitations to current mainstream methods of calculating value.

i)   Value in healthcare

'Value is neither an abstract ideal nor a code word for cost reduction, but value should define the framework for performance improvement in health care. Rigorous, disciplined measurement and improvement of value is the best way to drive system progress. Yet value in health care remains largely misunderstood.'[156]

Michael E Porter is a consultant and management guru who has applied his thinking on value to diverse sectors of the economy. Since 2006 this has included healthcare[157]. Porter's assumption, as set out at the beginning of his 2010 paper above, is that value is expressed in £s (or $s, to be more accurate). While he observes that value has been largely 'misunderstood' in healthcare, he is not interested in some 'abstract' re-definitions. Porter's contention is that healthcare evaluations measure the wrong thing, namely process measures not outcomes (this is a regular complaint in orthodox evaluations in all kinds of sector). In arguing for measurement against outcomes, Porter is contributing to an agenda for patient-centred health.

There are three principles in his prescription for evaluation of health services[158]:

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[156] Porter, M. E. (2010). What is value in health care?. – Framework Paper (Appendix 1) *New England Journal of Medicine*, *363*(26) *Supplement*.
[157] Porter ME, Teisberg EO (2006) *Redefining health care.* Boston, MA: Harvard Business School Press.
[158] Porter (2010) op. cit.

- *In any field, value should be defined around the customer, not the supplier. In health care value is defined as patient health outcomes achieved relative to the costs of care. It is value for the patient that is the central goal, not value for other actors per se. In a well-functioning health care system the creation of value for patients will determine rewards for all system actors.*

- *Value is measured by outputs, not inputs. Hence value in health care depends on the actual patient health outcomes, not the volume of services delivered. More care is not always better care, and shifting focus from volume to value is a central challenge. Nor is value measured by the process of care utilized; process measurement and improvements are important tactics but no substitutes for measuring outcomes and costs.*

- *Value is based on the results achieved relative to the inputs (or cost) required, and as such it encompasses efficiency. Setting the goal as cost containment rather than value improvement has been devastating to health care reform efforts. Cost reduction without regard to the outcomes achieved, is dangerous and self-defeating, leading to false 'savings' and potentially limiting effective care. A focus on value, not just costs, avoids the fallacy of limiting treatments that are discretionary or expensive but truly effective.*

Value for Porter is effectively shorthand for value for money. What has obstructed the measurement of value in healthcare, he argues, is a focus on quality. He does not however set value and quality in opposition: the dichotomy is between outcome measures and intermediate measures. The problem with the quality agenda is that it too (perhaps inadvertently) has measured processes not outcomes.

'The concept of quality has itself become a source of confusion. In practice, quality usually means adherence to evidence based guidelines, and quality measurement focuses overwhelmingly on care processes. For example, of the 78 Healthcare Effectiveness Data and Information Set (HEDIS) measures for 2010, the most widely used quality measurement system, all but five are clearly process measures and none are true outcomes. Process measurement, though a useful internal strategy for health care institutions, is not a substitute for measuring outcomes.'[159]

In terms of the patient-centred outcomes to be measured, Porter identifies three tiers, by descending level of medical gravity:

- *Tier 1: health status achieved/regained (e.g. survival; recovery)*
- *Tier 2: process of recovery (e.g. time taken to recover/return; 'disutility' of treatment e.g. harms)*
- *Tier 3: sustainability of health (e.g. recurrences, relapses, long-term side effects).*

One of the implications of these measurements which Porter raises is the need to measure outcomes over time (especially in Tier 3). He notes this seldom happens, as monitoring and measurement systems to do this do not tend to be in place and are costly to implement.

A further implication which he does not address is that many of these outcome measures come in different 'currencies'. How they can be set in an equation in which outcomes are the 'numerator' and costs are the 'denominator' is not explored, nor does he demonstrate how the answer to this calculation should be expressed.

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[159] Porter ME. (2010) What is value in health care? *N Engl J Med* 363:2477-81.

A final reflection, made in the full-length Appendix to the paper, is that outcome data should be collected direct from the patient via surveys, as well as from '*around*' the patient, in terms of treatment outcome metrics (see the figure below[160]). Again, Porter complains that much patient survey data is in danger of measuring intermediate outcomes, like experience of care and satisfaction, rather than self-reports of subjective outcomes (like time of recovery, freedom from side-effects). However, he concludes by noting that: *'there is an encouraging trend toward incorporating regular patient-outcome surveys into measurement systems. Many leading providers are now integrating such surveys directly into the care process, a crucial step not only in improving measurement but in using measurement to drive continuous improvement.'*

Measuring Value in Health Care
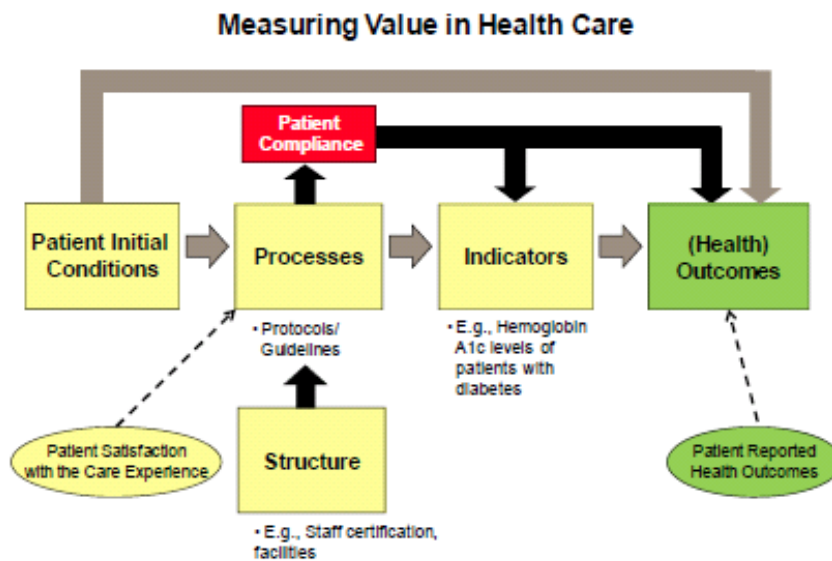
ii)   Social Return on Investment

Social Return on Investment is born out of dissatisfaction with conventional Return on Investment calculations, which appear to throw away a lot of data which is of 'value' to those who work on the activities under investigation. The Cabinet Office Guide to Social Return on Investment (2009) [161]introduces Social Return on Investment as follows:

'Every day our actions and activities create and destroy value; they change the world around us. Although the value we create goes far beyond what can be captured in financial terms, this is, for the most part, the only type of value that is measured and accounted for. As a result, things that can be bought and sold take on a greater significance and many important things get left out. Decisions made like this may not be as good as they could be as they are based on incomplete information about full impacts.'

Social Return on Investment is described as '*a framework for measuring and accounting for this much broader concept of value*'. The Guide, written by a 'network' of government, public and third sector partners (notably lead authored by Jeremy Nicholls from the New Economic Foundation), is particularly framed in the context of sustainability accounting and reporting on the 'triple bottom line'. It is an explicit attempt to feed social and environmental benefits into calculations of economic value.

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[160] Porter (2010) Appendix op.cit.
[161] Cabinet Office / SRoI Network (2009) *Guide to Social Return on Investment*. London: Cabinet Office.

In order to do so, Social Return on Investment has to embrace the monetising tendencies it expresses discontent with:

'Social Return on Investment measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated. For example, a ratio of 3:1 indicates that an investment of £1 delivers £3 of social value.'

There is clearly a tension here, or in our Re-Valuation language a dilemma, between what the Guide calls '*social accounting and the cost benefit analysis*'. The method set out in the Guide includes elements of both, in a six step method:

1. *establishing scope and identifying key stakeholders*
2. *mapping outcomes*
3. *evidencing outcomes and giving them a value*
4. *establishing impact*
5. *calculating the Social Return on Investment*
6. *reporting, using and embedding.*

The stage of most interest in the context of this theme is Step 4, which includes a stage called 'Valuation'. This is where the two approaches meet and the translation between them occurs.

'This process of valuation is often referred to as monetisation because we assign a monetary value to things that do not have a market price. All the prices that we use in our day-to-day lives are approximations, 'proxies', for the value that the buyer and the seller gain and lose in the transaction. The value that we get will be different for different people in different situations.'

In this way, Social Return on Investment observes that all valuations are subjective, but that the process must involve socialising those valuations to arrive at a fuller account. The Guide notes how everyday transactions in marketplaces are social negotiations of value (with the example of buying a house), the economic term for an agreement over value being a 'price discovery'. In the Social Return on Investment method this is mimicked by the key stakeholders convening and discussing the ways in which they value the outcomes achieved (and identifying potential proxies for monetising them). The Guide helpfully points out that this is not unorthodox economic behaviour and points to the stock market as a paradigm.

Finally, it is important to note that when it comes to reporting the Social Return on Investment Guide recommends that although a simple 'Return on Investment' ratio will have been generated from the analysis, this is reported along with all the other outcomes that have been identified and their subjective valuations. In this way, the rich multi-dimensional data (and 'full value') of the activity is not lost.

'There is a risk, and perhaps a temptation, to focus on the social return ratio. However, the number by itself does not have much meaning: it is merely a shorthand way of expressing all of the value that you have calculated so far. In the same way, financial investors need more than the ratio; it would be an unwise investor who based their investment decisions purely on one number. Therefore, the ratio should be presented alongside the other information, such as the story of how change is being created and case studies from participants.'

iii)   Value in decision making

Developments in neuroscience have adapted traditional economic models of behaviour, accounting for the mental shortcuts ('heuristics') we use when making decisions where there is an element of uncertainty, a lack of adequate information or under time pressure[162].

A recent paper by Ivo Vlaev and Nick Chater, two UK-based behavioural economists, asks the simple question: 'does the brain calculate value?', and in order to answer it, the paper marshalls numerous studies from across the field of economics and neuroscience[163]. The papers it reviews run a diverse selection of models of mental decision making, from which they deduce a spectrum of decision making processes in play, arrayed across a spectrum of three types, as follows:

- **Type 1: value-first decision making:** This type of theory holds that the brain computes the value of each option. Most of these theories find that the brain converts values into real numbers, between which it selects the optimal choice (in simpler decisions it 'picks the winner'). This type of theory assumes that objects and their attributes are scored on some kind of internal scale, and that the valuations have internal stability (a banana will always be preferred to an apple in a straight choice).

- **Type 2: comparison-based decision making with value computation:** This type represents a hybrid between the two poles on the spectrum. In these theories, the brain creates scales, but also draws on contextual attributes, including what other alternatives are available. Values are assigned to each option, but the final judgment may involve an element of comparison.

- **Type 3: comparison-based decision making:** Here, there is no calculation of values but decisions are made purely by referring across the decision set and picking the option which is most valued, without that value ever being calculated. In this process '*the perceptual system might be like a pan balance, which responds by tipping to the right or left, depending on which of the two items is the heavier, but provides no read-out of the absolute weight of either item*'.

The paper's conclusion is that there are more papers which adopt models in Types 2 and 3 than those in Type 1, even though that is the starting point for orthodox economic assumptions of how the brain makes decisions. Furthermore, these 'purely comparison-based or scale-free approaches' seem to have greater empirical validity than Type 1 theories in the experiments in which they are applied.

This conclusion further extends the case for less rational understandings of behaviour in economics, going back to Herbert Simon[164] (and before the cyberneticians – see 'Systems' above). In the context of this Re-Valuation of NHS Change Day, it also supports our shift in emphasis from calculation towards calibration.

Commentary on values

Psychology is the discipline most concerned with understanding the origins of human behaviour. Psychology holds values to be the underpinning foundations of human motivation, describing them as the '*guiding principles'* that individuals use to judge situations and determine

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[162] Following in the behavioural economic tradition pioneered by Prospect Theory: see Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124-1131.

[163] Vlaev, I., Chater, N., Stewart, N., & Brown, G. D. (2011). Does the brain calculate value?. *Trends in cognitive sciences*, *15*(11), 546-554.

[164] Simon, H (1957) 'A Behavioral Model of Rational Choice', in *Models of Man, Social and Rational: Mathematical Essays on Rational Human Behavior in a Social Setting*. New York, NY: Wiley.

their courses of action[165]. Empirical research shows that values correlate strongly with different patterns of behaviour.

There is an extensive body of psychological research studying the role of values, and this work has been validated in many countries worldwide[166]. Shalom Schwartz's values system is at the centre of this research; the findings indicate that there are relatively few human values (56 in fact) and that these can be clustered into ten types. They are all inter-related, such that changes in one value affect others. Values types can be plotted in a circle of compatible and conflicting values known as a circumplex (see the figure below[167]). If you reinforce values on one side of this circumplex, you will suppress values on the other side.

Figure 7: Schwartz's Values Circumplex
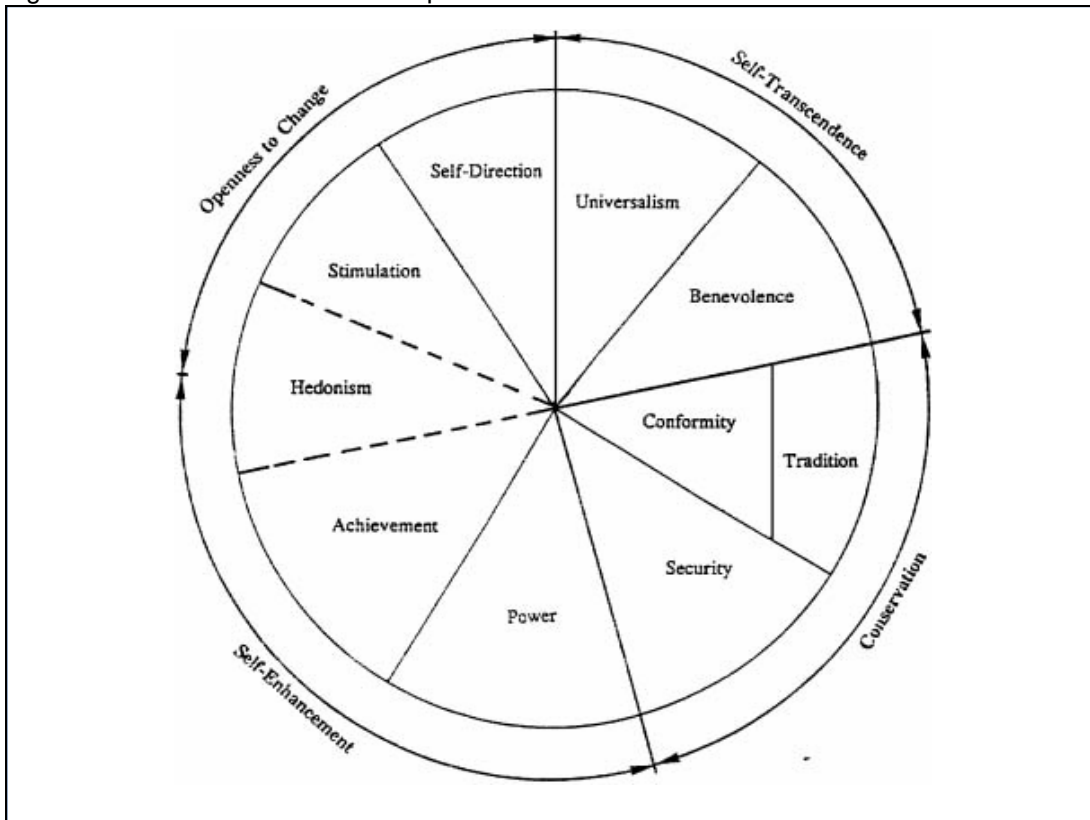
The compatibilities and conflicts can be summed up at the level of the 'higher order' values, into which Schwartz clusters the ten values types. Thus, self-transcendent values (those of universalism and benevolence) are in conflict with those on the opposite side of the circumplex, based on self-enhancement (those of achievement and power). Effectively, this shows an opposition between doing things for their inherent merit ('intrinsic motivation') and doing things for external reward and praise ('extrinsic motivation').

The main tenet of values theory is that people find it difficult to hold conflicting values at the same time; for example, people who rate wealth and status as important tend not to rate social justice and living in a world at peace as equally important. This line of thinking is consistent with work in psychology on 'cognitive dissonance', which reveals how difficult it is to hold two

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[165] Schwartz, S & Boehnke, K 2004. 'Evaluating the structure of human values with confirmatory factor analysis'. *Journal of Research in Personality* 38, 230-255.

[166] See e.g. ibid.
[167] Ibid.

conflicting attitudes, or to pursue two courses of action motivated by conflicting values, at the same time[168] (see e.g. Festinger 1957).

It must also be emphasised that all people hold all the values on Schwartz's circumplex all the time, to some extent, but the balance between these values varies from individual to individual. It follows from this that when we talk about 'changing values', in the context of behaviour change, we do not mean creating new values and introducing them into the system in place of old values. What we do mean is changing the level of importance accorded to a particular value relative to others. It is in this context that frames, particularly Lakoff's deep frames[169], can be used to activate and reinforce particular values, thus contributing to wide spectrum behaviour change (see the 'Stories' theme above).

The values normally identified as playing a positive role in social change are largely of the self-transcendent or intrinsic type. The existing research shows how these values support a range of pro-social behaviours, including helping others, volunteering, giving to charity and even recycling[170]. Within this body of evidence is experimental work, which not only shows correlations between intrinsic values and pro-social behaviours but also causal effects. These experiments tend to involve 'priming', in which certain values are activated within the participant in order to test how they influence behaviour. One widely reported class of experiments involved priming people with the term 'money' and then finding that they were less willing either to help the researcher with some subsequent task or to donate part of their research fee to charity[171]. The psychologist Greg Maio has conducted a series of such priming experiments and has found that *'priming a set of values increases behaviour that affirms those values and decreases behaviour affirming opposing values'*[172]. He concludes that '*changes in either set of values have reciprocal effects on the opposing values*'.

Use in NHS Change Day Re-Valuation

Relevance/ use/ what is made visible	• Orthodoxies of value as £ value and how hard they are to resist (e.g. in the Social Return on Investment process). • The nature of value as both subjective and social; requiring an active process to agree upon valuations if they are to be externalised. • The importance of measuring what we value (and the inference that what we measure is what we value). • The need for more patient experience data, collected from patients (and ultimately, we would suggest, for patients to be included as stakeholders in social processes of valuation). • How values can be influenced (e.g. through the use of frames) not just to build social movements, but as an inherent part in bringing about social change (in which 'reframing' is a fundamental task).
New and re-purposed phrases	• Re-Valuation: cf. valuation in Social Return on Investment • socialising value: cf. social accounting approaches, including

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[168] See e.g. Festinger, L 1957. *A Theory of Cognitive Dissonance*. Evanston, Il.: Row, Peterson.

[169] See e.g. Lakoff, G (2006). *Thinking Points - Communicating our American Values and Vision.* New York, NY: Farrar, Straus and Giroux.

[170] Kasser, T et al 2004. 'Materialistic values: their causes and consequences'. Chapter 2 in T Kasser and AD Kanner (eds.) *Psychology and Consumer Culture*. Washington, DC: APA.

[171] Vohs, KD, Mead, NL & Goode, MR 2006. 'The psychological consequences of money'. *Science* 314, 1154-1156.

[172] Maio, GR, Pakizeh, A, Cheung, W & Rees, KJ 2009. 'Changing, priming, and acting on values: effects via motivational relations in a circular model'. *Journal of Personality and Social Psychology, 97,* 699-715.

| | Social Return on Investment
• calibration: a comparison-only means of measuring value (Type 3, in the terms of Vlaev and Chater). |

Part 2: Re-Valuation Phrasebook

Phrase	Definition
Aggregate	In evaluation or measurement, the aim of scaling up outcomes or impacts, such that what can be established in part can be extrapolated at the level of the whole. In the process aggregation often involves reducing multiple outcomes on/or different scales to a single output or number.
Attribute	As a verb, to associate a particular effect with a particular cause and draw a linear connection between the two, such that the extent to which the cause brings about the effect can be quantified.
Calculate	One of three dimensions to measuring full value. Based on summing numbers to arrive at a single figure, usually in £. The dominant (often sole) method in orthodox evaluation.
Calibrate	One of three dimensions to measuring full value. Involves judgements about the relative merits (or cost/benefits) of different actions and outcomes. Based on how activists decide where to direct their efforts (and how much effort to make), both as individual decision making and socialised in groups.
Capacitate	One of three dimensions to measuring full value. Literally means measuring the capacity of a movement or network, plus the potential of that network to increase its capacity in future, and thus the value it can generate (i.e. its emergent qualities).
Cascade	One of the two methods in Re-Valuation for socialising value. Cascading means reaching out across the different levels in a system to gather views from a variety of perspectives (e.g. at different geographies, from national to local, and across different audience groups, e.g. managers, clinicians, support staff, carers, patients).
Complexity	The quality which things or systems can take on when their components interact with one another in multiple ways. Were you to disassemble something complex it would be impossible to re-assemble in the same relation to itself. In this respect, 'complex' contrasts with 'complicated': were you to disassemble something complicated it could be re-assembled exactly. So complexity is not just a consequence of a system's size or diversity, but of the dynamic interactions between its component parts.

Phrase	Definition
Dilemma	A dilemma is a problem offering two possibilities, neither of which is unambiguously acceptable or preferable. One in this position has been traditionally described as 'being on the horns of a dilemma', neither horn being comfortable. Unlike other forms of problem or puzzle dilemmas do not go away, unless you change the nature of the context, game or situation you are in. The value for creating change lies in not presenting the dilemma as alternatives from which just one must be chosen, but as opposing positions whose strength arises from their being in relation with one another ('in tension'). This tension can be a source of power for social movements, if governed constructively.
Direct/indirect	In identifying benefits, direct are those which match the aims or inputs of the organisation owning or funding the activity or intervention in question. By contrast, indirect benefits are those which are unintended and/or arise at a tangent from the main aims of the activity. In Re-Valuation, the value of indirect benefits tends to exceed (if not always exceeds) that of direct benefits.
Emergence	The ability of a system to throw up new outcomes, which cannot be predicted in advance, often because they are the result of an interaction between two or more components (e.g. people) within the system. In philosophy, systems theory, science and art, emergence is a process whereby larger entities, patterns and regularities arise through interactions among smaller or simpler entities that themselves do not exhibit such properties. In Re-Valuation emergence is the aspect of value which is measured through capacitation, specifically the potential for the system to grow itself, again arising from its interactions. As such, emergence can be thought of as potential to generate change (and is almost the inverse of attribution of past effects).
Federate	In Re-Valuation the equivalent of aggregation: scaling up impacts in order to report at the national/macro level, but retaining the multiple measures that the value was found to have offered at sub-system levels. It is a process of 'summing up' in which different measures are related to one another without one of them (e.g. money) being presumed to be of greatest value. Borrowing language from multinational governance structures (e.g. the EU), a federated calculation is one which sets outcomes in multiple currencies or dimensions alongside one another, to give a fuller read-out of value (e.g. on a 'dashboard' of different meters).
Fractal	In Quantum Physics (and Chaos Theory) the tendency for the same pattern to appear throughout a system at every level of scale. In the context of NHS Change Day the tendency for the platform features to be the same at national regional and local levels; hence seeing the shape of a local system brings the shape of the national system into view.

Phrase	Definition
Iterate	One of the two methods in Re-Valuation for socialising value. Iterating involves going out and back in repeated cycles of reflection, in order to arrive at a fuller appreciation of the value of an activity. Iterating is always social, whether involving just one participant and one partner or researcher (in a process of 'guided reflection'), or among groups of participants in a dialogue. It is often helpful to convene this dialogue around a shared account of value, like a report or story, which can then be put through a number of re-iterations by the group (see e.g. the Exhibits, or Systems Stories, or this Phrasebook).
Landscape	In the overarching Theory of Change for the Re-Valuation (Geels' multi-level model of socio-technical transitions) the landscape is the macro level in the system, which comprises the top tier of the model. This can be interpreted as the level of top management in the NHS at national level. More conceptually, the landscape sets the prevailing conditions under which the rest of the system operates, and thus the landscape embodies the dominant framings and understandings of appropriate and effective conduct at all levels. In this way, the landscape 'puts pressure' on sub-systems ('regimes' – qv.) to behave in certain ways.
Multi-sided	In platform economics, multi-sided demand is that which can come from any part of the market. Under these conditions consumers can become producers, for example, leading to user-generated content. A further characteristic of multi-sided demand is that it cannot be predicted: it is determined by the usefulness of the platform (i.e. the platform's value to users themselves).
Niche	In the overarching Theory of Change for the Re-Valuation (Geels' multi-level model of socio-technical transitions), 'niches' appear as micro-systems (possibly even nano-systems of one or two individuals) which generate innovations. In innovation theory, niches are safe spaces where innovations can take shape and be tested, away from the pressures of the regime. In NHS Change Day, the niche innovators are the activists and hubbies who develop the actions and campaigns which will improve patient outcomes and be taken up by their local systems (or will fail to do so).
Parallel process	This is a concept used in group dynamics derived from the psychotherapeutic theory of transference, a phenomenon characterized by unconscious redirection of feelings from one person to another. Under such conditions, a therapist might use their awareness of unusual feelings that they are experiencing as the basis for feelings that a patient is experiencing but unable to communicate: it theorises a 'parallel' experience of emotions. In group dynamics, the same process theorises such a parallel between groups in a system. So, the Sustainable Improvement Team's experience of NHS Change Day is parallel to that of any other group involved, even if it feels distinct. This concept opens up a new source of data that supports calibration and capacitation.

Phrase	Definition
Platform	A space or medium across which people can interact, engage in dialogue or trade. Platforms have become increasingly common as forms of online enterprises. Platform economics shows how the platform is of no inherent value until it is used, at which point value arises from or across the platform, and is determined by both users in combination. Platforms have since been introduced into change theory, in which change platforms are contrasted with change programmes; the latter being pre-conceived by an agency or third party with the aim of achieving pre-set goals, while the former are spaces designed by or for users themselves to pursue their own agendas and goals.
Recursion	In systems thinking, recursion is the standard way in which two components interact, via a pair of feedback loops (rather than a linear flow of influence from one to the other). Action is thus the result of a dynamic interaction between two parties, not one party's intentions. Recursion (i.e. having loops) is what gives systems their emergent properties (qv.). To be more specific, in Viable Systems Modelling systems are nested within each other and are thus deemed 'recursive', such that sub-systems arise from and feed back into the system as a whole (qv. fractal).
Reflexivity	In social theory, reflexivity refers to circular relationships between cause and effect (qv. recursion). A reflexive relationship is bidirectional with both the cause and the effect affecting one another in an interchange in which neither can be assigned as causes or effects. The process of iterating is 'reflexive', as is the third loop in 'triple loop' learning. This idea is one of the ways of understanding so-called attribution in NHS Change Day.
Regime	In the overarching Theory of Change for the Re-Valuation, the 'regime' is the meso level of the system, effectively the governance body (the senior management in an acute trust, say). The regime determines what happens in the system over which it has authority; in turn it is composed of a number of strands which contribute to and 'lock in' current practice. In systems transformation, innovations are drawn from the niches into the regime, in response to cracks in the regime opening up under pressure from the environment in which it operates (e.g. financial pressures). Thus innovation becomes mainstreamed, with the regime representing the mainstream.
Re-Valuation	An innovative methodology for measuring the full value of a social movement/platform, through a social process. This measures value in three dimensions, by calculating, calibrating and capacitating (qv.).
Settled account	In ethics, different people take up different positions in a dialogue based on their diverse and potentially conflicting convictions. A productive dialogue can result in their developing a 'settled account' in which a single answer is agreed that still accommodates their different positions. Re-Valuation methodology can reach a similar endpoint, through the process of socialising value (which likewise can result in a shared 'system story').

Phrase	Definition
Socialise	Simply, to do something with someone else or as part of a group. Socialising is the core process in Re-Valuation, by which evidence is iterated and calibrated in order to arrive at a shared account of the full value of an activity or campaign. This is particularly applicable to social movement evaluation, where the research method mirrors the way in which collective action is arrived at. It is the opposite of the process of 'out-sourcing' evaluation to a third-party expert, as practised in conventional evaluation methodologies.
System	A system is a collection of items and the connections that join them together. However, systems are more than just groups of things because once connected the components interact and become more than the sum of their parts (they have systemness, also described as having emergent properties – qv.). It is notable that one of the things that can be connected together in a system are systems: hence we arrive at a 'system of systems' (which is one definition of the structure of NHS Change Day) (see also fractal and recursion).
Value	The value of something is the extent to which it is judged worthwhile or matters. The dominant currency for value is money ('£ value') and indeed the two concepts are so intertwined as to be only separable with careful thought (or, for example, through a process of iteration – qv.). Orthodox evaluation tends to calculate value in £s or on other numerical scales; Re-Valuation brings out other dimensions which involve calibrating what matters to people and capacitating the reach and potential of a system to generate value in the future (qv. emergence). All value involves social calculations; it is just that in most of these judgements the underlying assumptions are concealed (and in line with dominant ideas in the 'landscape' (qv.); e.g. £ value is premised on the implicit assumption that economic growth is the primary objective of a contemporary society and everything that matters can be costed in £s).
Values	Values underpin judgements over value and account for disagreements over the net value of a thing or activity. Values are defined in psychology as the 'guiding principles' in a person's motivational system. We all have the same structure of values (psychologists have found there are 56 values in all cultures, internationally) but we each place a different balance of importance on each value. Where data is visible, but differences in opinion persist, these can often be explained by differences between individuals' dominant values (i.e. we see the same thing, but differ in how we value it – qv. 'settled account').

Phrase	Definition
Vertical/horizontal	In thinking about the capacity of a network, it is possible to identify the directions in which its principal connections are aligned. Vertical ties connect the network to its superior bodies and structures, and in turn link its sub-structures to it. This understanding of structure brings with it a raft of assumptions about hierarchy (e.g. that higher is better, that higher items have achieved this higher status for a reason etc.). Horizontal connections are differently concerned with status and lend themselves to measurement in terms of spread (as opposed to, say, control). Defined in this way, effective social movements can be seen as requiring both attributes: being able to speak to the hierarchy, whilst drawing their strength simply from the flat convening of their members. This is one of the dilemmas which characterises NHS Change Day as a social movement. The interface between the 'vertical' and the 'horizontal' is charged: either very attractive to activists or felt to be the point of inflection around which change must happen (as in 'speaking truth to power').
Visible/invisible	One characteristic of social movements is that they are hard to see in their entirety: much of the activity at any one point in time is deliberately not opened up to the public or other non-participants. In addition, it can be argued that social movements draw strength from their invisibility, and then achieve system change by becoming highly visible in order to exert the strength they have gathered. Research efforts to establish the full value of a social movement need to account for their invisible attributes as well as their visible effects.

Acknowledgements

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