New development: Eight and a half propositions to stimulate frugal innovation

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This article distills some key ideas and practices which research indicates can stimulate innovation in public services in thrifty ways. Some propositions may be surprising, given the conventional wisdom about innovation. The propositions are intended to provoke policy-makers, public managers and academics, challenging thinking and encouraging new approaches to innovation.

In this article I aim to distill some of the key ideas and practices which research has revealed can stimulate or support the development of innovation in public service organizations. Some of the propositions may be surprising to readers, given the conventional wisdom, and sometimes frankly wishful thinking, about innovation. There has also been an over-reliance on the private sector (still) for the understanding of innovation. So, these propositions may act as provocations to policy-makers and public managers, stimulating debate and challenging thinking. The article originally consisted of 10 propositions, but the current UK climate of austerity has led to cuts in academic writing along with public services!

Before presenting the propositions, it is worth addressing one myth about the public sector—that it is not very innovative (something often seen as reserved for the private sector). This is an ill-founded view (Hartley *et al.*, 2013). We are surrounded by innovations created by the public sector, not least the internet, but also a range of information technologies such as GPS, the touch-screen and Apple's 'Siri', as noted by Mazzucato (2013), as well as innovations in human services. We may wish for more or different types of innovation by public organizations, but there is a great deal already happening. However, innovation is increasingly frugal, given the financial context of public services. One way to be frugal is to reduce the costs of creating, developing and trialling innovations, and the propositions here will offer some opportunities in this respect.

To set the scene, there is a need to define what is meant by 'innovation'. First, innovation is more than ideas or invention—rather, it is about new ideas and new practices which are actually *implemented* (Bessant, 2005). Second, innovation is not the same as change; it is a particular form of change. Many scholars argue that it is disruptive change, or 'step-change' (Lynn, 1997). So innovation is different from continuous improvement because it is not about gradually increasing efficiency and making things better—rather, it is about doing things differently. This may involve a different mindset, a different set of practices, something that is disruptive for the organization. Third, innovation should not be conflated with improvement, or better performance, or success. Some very interesting innovations are not successful. Fourth, innovation is not necessarily an entirely new idea—it is innovative if it is new to the organization or group which adopts the innovation.

In order to examine the propositions carefully, it is helpful to draw on three analytical phases of innovation: invention, implementation, and diffusion. *Invention* relates to the processes of finding or creating the ideas which will be worked up into an innovation, it includes creativity, and initial experimentation. *Implementation* is about turning an idea into an actual product or service. It might include piloting and trialling, so it is about embedding the innovation. *Diffusion* refers to the spreading of a particular innovation outwards across different organizations. This is, admittedly, a very simplified view of innovation as there are many different models of the stages or phases (Hartley, 2013). In addition, the phases may be more emergent than planned—Bason (2010) describes innovation as more like a half-wound ball of yarn. While simplified, the three phases are useful for the analysis in this article because they suggest different processes at different phases. Some of the propositions relate to some stages and not others, or have different effects on phases.

Having briefly outlined the characteristics of innovation, I now turn to consider the

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propositions.

Proposition 1: Market competition does not necessarily stimulate innovation

Market competition can, but does not always or inevitably, stimulate innovation. Indeed, sometimes it can hamper innovation. This sounds a little counter-intuitive, especially in an era when there have been strong policy reforms designed to make public organizations more competitive and/or create quasi-markets, and therefore (so the logic goes) increasing pressures to be more innovative. The market competition linked to innovation argument has a long pedigree, going back to Schumpeter (1950) and echoed since then in economic arguments about 'creative destruction'—that firms are under continual pressure to innovate or else they die. This notion has often been imported into public services with attempts to bring about or simulate market competition. But does market change really help innovation?

Analysis by Hartley *et al.* (2013) shows that private sector markets can produce both too much and too little innovation (for example Teece, 1992). Markets produce too much innovation in the sense that competition often encourages firms to innovate at the invention stage—they put a lot of effort into creativity and protecting their prototypes through patents and design rights—but that many firms deplete their resources at that stage and so are not able to capitalize on the benefits to be gained at the implementation stage. Markets also produce too little innovation where the level and scale of competition leads firms to believe that they will not be able to corral the benefits of the innovation to their own firm but rather that other firms are going to snatch the benefits. This degree of competition reduces innovation. For the public sector, Walker (2008) found that competition was associated with marketization as a form of innovation but did not affect other types of innovation.

It is also known that market competition reduces the diffusion phase of innovation, which involves spreading good (or promising) practices because it reduces the sharing of knowledge and ideas across boundaries. Diffusion is a key element of innovation for public services. So, in increasing competition between public services, is there a risk of damaging the willingness to share and spread innovations?

From this first proposition comes the need to think carefully about the role of market competition or quasi-markets in public services. Market competition may increase innovation, or it may hamper it depending on the conditions.

There is a need for a more contingent view of markets in public services—when do they stimulate and when do they hamper innovation?

Proposition 2: Bureaucracy can be both a help and a hindrance to innovation

Whether an organization is in the private, public or voluntary sector, bureaucracy can have contradictory effects (rather like competition but for different reasons). By 'bureaucracy' is meant a particular form of organizing characterized by job descriptions, tasks, offices, and division of labour (du Gay, 2000) rather than a pejorative term.

Research suggests that bureaucracy generally makes it more difficult for employees to be creative and for organizations to foster the early stages of innovation which require imagination, experimentation and risk. Bureaucratic organizational processes exist to reduce uncertainty, and enhance predictability, efficiencies in mass production, stability and routine. So it is not surprising that the more that organizational processes and cultures are ordered, routinized and standardized, the harder it is to experiment with innovation in the invention stage. Research shows that the private sector can be just as bureaucratic as the public sector (Rainey and Chun, 2005) so government institutions are not particularly afflicted in that sense. One of the key challenges for many organizations wanting to foster innovation is how to become ambidextrous (Utterback, 1996). This means being able to run business as usual—serving clients and citizens—but to foster creativity and innovation at the same time. There are different strategies to try to achieve this, not always successful because it is a tough ask.

So far, so conventional: bureaucracies make innovation more difficult. However, research also shows that bureaucracy can aid innovation (Hartley *et al.*, 2013). This is perhaps surprising, but bureaucratic organizations find it easier to *implement* innovation. Although the invention stage is more difficult, once ideas have been trialled, developed and accepted, then bureaucracy helps in embedding innovations. For example, the processes of order and routinization mean that the new procedures and standards get written down, and line management can be used to help implement the changes. By contrast, less bureaucratic organizations can be creative at the trial stage, but find it harder to ensure that the new procedures or practices are embedded. Research also shows that larger organizations are more effective at implementing innovation, and larger organizations tend to be more bureaucratic.

Finally, there is some evidence that larger organizations are better at diffusing the innovations they have implemented, as was found in a study of UK local government (Rashman *et al.*, 2005). Overall, the concepts of 'innovation' and 'bureaucracy' are not as inimical to each other as is sometimes supposed.

Proposition 3: The key resource in organizations isn't primarily finance but human energy

In a period of substantial fiscal constraint, discussion about change and innovation in public service organizations is often dominated by finance. As a result, innovation is either the saviour technique to do more with less, or else it cannot be undertaken because there are insufficient funds.

However, while the focus is on finance and budgets, it can be argued that the key resource is people, and the energy that they have as individuals, as groups, as teams, as departments, as the whole organization. Creating a positive climate for innovation can really help in the creation and development of new ideas and new practices, and their implementation (West *et al.*, 2003).

The NHS (Land *et al.*, 2013) has been exploring five types of energy relevant to organizational performance:

• *Social energy* (the energy that happens in teams, *esprit de corps*, energy created through working with others).
• *Spiritual energy* (a sense of a higher purpose and direction that people have about the organization; it is not defined as faith-based).
• *Psychological energy* (courage, trust in other people, a sense of psychological safety in taking risk).
• *Physical energy* (to do things and make things happen).
• *Intellectual energy* (curiosity, horizon scanning, strategic analysis, planning).

This is a promising approach to thinking about how organizations are less or more effective. Some of the types of energy have counterparts in existing concepts (morale, commitment, trust), but the originality lies in thinking of organization in energy terms. Energy can spread or fizzle out. The metaphor has intuitive appeal in that any manager can recognize a team or department which has energy, buzz, initiative, proactivity, compared with one which is flat, demoralized, lacking in energy. This is initial research which deserves further attention.

It is worth considering which of these energies are particularly present in our organizations, and which are much lower or absent. The NHS study found considerable intellectual and physical energy (very bright people engaged in strategic planning and healthcare analysis; as well as people doing things, performing operations and caring for people). However, social, spiritual and psychological energy levels were much lower.

Neuroscience provides valuable metaphors for conceptualizing energy in organizations. Chemical and electrical energy constantly flows between synapses in the neural system, continually creating new pathways and neural networks. The network is dynamic as it responds to stimuli. Transferring these ideas into an organizational or partnership context raises some interesting diagnostic questions: Where does the energy move around in organizations and partnerships? What are the conduits for it? Who are the people that act like synapses, helping to translate energy from one nerve to another?

Innovation is something which alters the status quo, and supplants or modifies existing ways of planning or providing public services. Arguably, therefore, human energy is at the heart of the process.

Proposition 4: Harvesting ideas and practices from others can save time and money

The stereotype of innovation is that it starts with lots of people encouraged to be creative within the organization, perhaps working in an R&D department or in a policy unit, or in a workshop. In other words, the assumption has been that invention happens within the organization.

This was a dominant model of innovation in the private sector for a number of years but, interestingly, that model is radically changing across all sectors. It isn't always necessary to invent and create things from scratch, because a number of promising products and practices already exist somewhere and may be ripe for use in a different organization or in a different context. This represents a shift from creating to harvesting as an approach to innovation.

Sometimes this can be 'recombinant' innovation—taking something from somewhere else, and using it in a different way (Hargadon, 2003). An illustration of this process comes from Great Ormond Street Hospital's use of ideas and practices from Formula 1 racing. Doctors were concerned about the transfer of sick children from surgery to intensive care, which involved a change of team and potential loss of key information in the transfer. Watching Formula 1 on television one day, some doctors were struck that a pit stop represented an important concept that could be modified and applied in

the hospital. The transferable concepts were a team-based approach, with each team member having a clear and specific role; the clear communication of the current state of the car through a set procedure; rehearsal of the pit stop so that everyone is clear about the tasks and has had practice in what to do; one person in charge who makes the decision about whether the car is ready and safe to go back out on the track. As a team, they used these basic practices, modifying and adapting them for the different context and task. There are many opportunities to harvest ideas from different (or similar) contexts, with careful thought about how to apply those ideas in a different setting.

Another approach to harvesting ideas comes from open innovation (Chesbrough, 2003). This is innovation which draws on the ideas and contributions of users, clients, members of the public, and citizens. Some of these groups are really interested in public services. Many of them are experts in particular public services, as users or as professionals who come into contact with that service. For example, children are helping to design hospital environments to make them child-friendly. Hilgers and Ihl (2010) call this 'citizensourcing' (the public counterpart to crowdsourcing), and argue that it is an important source of ideas and practices for public organizations. It is different from public consultation (where courses of action have already been decided on). However, unlike open innovation in the private sector, where a firm can harvest ideas from anyone, public service organizations need to take care to think through who contributes on what basis so that certain groups in society are not disadvantaged through the innovation process.

Harvesting ideas rather than (or as well as) inventing them in-house is a radically different model of innovation. It requires looking outwards not inwards, because the innovation may be a novel application of a product or practice in an entirely different setting. It still depends on a positive innovation climate—energy and curiosity to engage with ideas from the external world beyond the service or organization.

Proposition 5: Diffusion of innovation is the public sector's secret weapon

Not enough attention is paid to diffusion as a phase of innovation in public service organizations. This may occur for a number of reasons. The public services innovation literature has, until quite recently, been over-reliant on the understanding of innovation derived from the private sector (Hartley, 2013), where diffusion is often the last thing that firms wish to engage in,

especially where there is stiff market competition. Consequently, the literature on diffusion is still somewhat sparse compared with the other phases of innovation. There can also be a culture of ambivalence about using ideas from elsewhere—it is sometimes called 'stealing' ideas from another organization, rather than sharing.

Yet, for public services, diffusion can be a really effective way of undertaking innovation. It reduces the costs of invention—instead of reinventing the wheel, the already-existing wheel can be used, avoiding development costs and mistakes. It reduces the operational and political risks of the innovation because the innovation has been tried and tested in another context. Snags have hopefully been smoothed out, improvements in design or operation can be made, and the political risk of working with an unknown product or service reduced. The argument that risk is a problem for public service innovation is mitigated by drawing on others' experience. Furthermore, in public services, those who have innovated are sometimes keen to share their experience (Rashman *et al.*, 2005). Finally, many public organizations have a duty to share their innovations, as society needs innovation to be spread beyond the initial innovator. There is little value in having an effective innovation in, for example, cancer care if it is limited to a single hospital. Despite these arguments about the value of innovation, how much in the way of resources and organizational procedures goes into sharing good practice, compared with inventing and implementing innovation for many public organizations?

There are some important examples of diffusion, for example in health and in local government. Diffusion is not simply replication or 'copy and paste' from the innovator. In a large study of sharing innovation in UK local government (Rashman *et al.*, 2005; Hartley and Benington, 2006), diffusion was found to be widespread but also to involve critical processes of adaptation to local context and conditions. The UK's Beacon Scheme was a national programme operating over a decade in the early 21st century, which aimed to celebrate high performance and innovation and spread good practice from the 'innovators' to the 'learner' organizations. Among the learner organizations in 2004 which had used ideas from the innovator, there were varying patterns in the way that diffusion was implemented. 63% reported that they had adapted the idea that they had seen from the innovator. This shows that adjustment takes place as the innovation moves from one organization to another. *Adaptation* happened

more than *adoption*. In addition, 29% reported that they *accelerated* an idea that they already had. From interviews, it was possible to ascertain that this gave the learner greater confidence in using the innovation and also that it reduced risk and build political support. Finally, only 8% said they based their change *closely* on the innovator.

Diffusion doesn't need to cost much. The innovations are already there, being used, and with some known properties. Why is diffusion not more widespread? And why is there not more research on diffusion as a critical stage of innovation for public services?

Proposition 6: Knowledge creation and learning is central to innovation

It is easy to get fascinated with innovative technologies—the ICTs, the new equipment and so on—and treat them as though they are the innovation. But this is rarely the case—the innovation is likely to be not just the technology but also the practicalities of making it work—and that requires new knowledge being learnt by human beings (Nonaka, 1994; Hargadon, 2003). Knowledge and learning is also critical for service innovations, where the key elements of the innovation may lie in the altered relationships in the production of services (whether those relationships are between service user and professional, between professionals, or between managers and subcontractors).

Learning may involve new concepts, new procedures, and how the innovation fits with existing practices and procedures. Some adjustments may occur as plans are adjusted after 'teething problems'. Sometimes an innovation will create unanticipated problems (and benefits) in areas not directly connected with the innovation. So observation, reflection, discussion and learning as the innovation moves from invention to implementation or from diffusion to implementation is advisable. It is generally not possible to innovate without people (whether managers, staff, clients, or politicians) having to learn new ways of doing things, to make mistakes, to give up particular ways of doing things, and to adopt new ways. This is essential, but often goes unremarked.

Innovation is rarely a primrose path—it is full of all sorts of obstacles, cul-de-sacs, and frustrations. People need time to learn from that and time to put that learning into practice. Learners want to learn as much about the frustrations, barriers and problems in innovation as they do about the successes (Rashman *et al.*, 2005).

Proposition 7: Public innovation can benefit from the contributions of elected politicians

This might sound like an obvious proposition, but whether explicitly or under their breath, certain managers feel that they could innovate much better without politicians. In addition, relatively few academics have studied the role of politicians in innovation. This may be a legacy of over-reliance on private sector thinking about innovation.

Some research shows that elected politicians, whether national, devolved or local, are important in all sorts of ways (Hartley, 2005). They can build public support for innovation before it occurs, help to deal with sceptics, listen to the views of doubters and bring them round to support, can mobilize various stakeholders, including collaborators across sectors and services. They can provide the right climate to enable managers and staff to experiment, and they can challenge technical thinking, combining it with political astuteness. They can help unblock problems and build coalitions to support the innovation. They can be a key part of the leadership of innovation (Hartley, 2013).

Proposition 8: 'Innovation and improvement' is not a single concept

'Innovation and improvement' is often used as a single policy phrase as though innovation was so naturally and inevitably beneficial that it always leads to improvements (for example in service scope or quality, in efficiency, in value for money). However, not all innovations lead to improvement and not all improvements require innovation.

An innovation, by virtue of its newness to the organization or partnership, inevitably carries some risk of failure or partial failure. Tidd *et al.* (2001) estimated that in the private sector approximately a third of innovations fail, or are inappropriate for the particular time or context. In the public sector, the percentage may well be higher because there is a more critical and transparent environment within which innovations occur.

Private and public organizations can suffer from having too much innovation. Moran (2003) argues that the UK state is characterized by 'hyper-innovation', with too many innovations being initiated. He questions the extent to which the impact has been beneficial. From a different perspective, Jennings (2006) argues that hyper-innovation within an organization can be a sign of ethical collapse.

Conversely, not all improvement involves innovation. Improvement can occur through continuous improvement methodologies, which are based on doing things *better*, rather than

innovation which is based on doing things *differently.*

Buy eight, get one free: building a robust evidence base

The final (half) proposition is concerned with creating a robust evidence base about public innovation. I have noted several times that the public sector and public management academics are still overly reliant on ideas about innovation from the private sector. It is important for public management scholars, policy-makers and practitioners to construct and use a systematic evidence base about what works for innovation in public services and in collaborative innovation across sectors and services. There is unlikely to be 'one best way' to innovate—it depends on the context, the political climate, the purpose of the innovation. So what works, for whom, in what circumstances, and why still needs addressing in detail. There is a need to learn from failures as well as successes (not quietly sidelining innovations which don't work) and to monitor and evaluate innovation initiatives—across all phases including implementation and diffusion, not just the early buzzy invention phase. Bringing together the learning from academics, policy-makers and practitioners will create rich data about innovation for public service organizations.

I have presented eight and a half propositions about innovation to stimulate debate, reflection and action. I hope I have provoked you.

Acknowledgement

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