Learning about public service co-production when real quality is that which lies beyond language and number

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Introduction

In the outline paper which Bob Behn circulated in order to invite contributions to this panel, he writes that tacit knowledge is, by definition, knowledge that cannot be codified in words or other explicit ways, building on Polanyi’s dictum that “we can know more than we can tell.” This concept has deep roots in philosophy and, more recently, in management. Indeed, Robert Persig (1974), in one of the most influential modern books on quality management, argues that ‘quality’ is a phenomenon that lies beyond language and number, so that, although everyone is capable of identifying quality, it is not possible to define or measure or describe it to others precisely – later, Pirsig (1991) goes on to argue: “Quality is a direct experience independent of and prior to intellectual abstractions” (p. 64).

While Bob Behn’s paper focuses on the question of what it might mean for public sector managers and policy makers to make tacit knowledge explicit, this paper explores the role of that knowledge that cannot be made explicit which is held by service users and other citizens who are involved in co-production of public services and publicly-desired outcomes. It distinguishes two types of non-explicit knowledge – first, non-explicit knowledge about the effective practices known to service users and members of their communities and networks, whereby they can ensure that their own actions bring about desired results in relation to a give service or outcome (‘technical non-explicit knowledge’); and, second, non-explicit knowledge about how to influence and change the other stakeholders with whom they interact, e.g. in the service system or in the social network which supports the behavior changes they seek (‘social relationship non-explicit knowledge’).

The paper argues that the greatest challenge for professional public services is to get access to the ‘technical’ non-explicit knowledge held by service users and their communities, since this knowledge is most accessible by sharing in the life experience of those people, which is highly demanding of time and emotional capital. Consequently, where this ‘technical’ non-explicit knowledge on the part of citizens is high, co-production is likely to entail that power over decisions should lie more with the service users and communities, who have most direct access to this knowledge. Non-explicit ‘social relationship’ knowledge, on the other hand, is an area where exchange between service
professionals and citizens (including service users) is likely to be easier, so more joint decision making may be relevant.

Finally, the conclusions in the paper illustrate the force of the forecast by Smith (2001: 319): “The strong desire many people have to use and share their tacit knowledge will further increase the momentum and direction of the knowledge revolution.”

**The spectrum of non-explicit knowledge**

The concept of tacit knowledge is widely associated with Michael Polanyi (1966), who focused on the ‘tacit coefficient’ of scientific reasoning, which he conceptualized as the ‘intuitive’ grasp of ‘reality’ grounded in the power of a ‘potential discovery’ to ‘attract the mind’ and ‘impart intimations’ so that it may eventually ‘emerge into reality’. In other words, it is not only ‘tacit’ as in unspoken, but ‘tacit’ as in unsplicable (Schmidt, 2012: 21). Schmidt (2012: 2) concludes that, from its inception, Polanyi’s notion of tacit knowledge was “devised as a deflective device meant to protect ‘pure science’ from inspection and intrusion by external parties” – in other words, to protect the autonomy of pure science from bureaucratic intrusion and, even worse, planning. However, it established the understanding that some kinds of ‘knowledge’ are beyond explanation through language.

In fact, Polanyi was not the first author to explore such concepts. Gilbert Ryle (1946; 1949) highlighted that we distinguish, in our everyday language, between knowing how to do certain things from knowing that something is the case. The expression ‘knowing that …’ generally requires completion by a proposition specifying what the person knows, while ‘knowing how …’ generally requires completion by an infinitive specifying an activity (Bechtel, 2009). In cognitive psychology, the notion of ‘procedural knowledge’ partly corresponds to Ryle’s notion of ‘knowing how’ but models of procedural knowledge have typically employed rule systems in which the information needed to execute a procedure is encoded symbolically – this ignores the radical character of Ryle’s suggestion that a form of knowledge which does not employ symbolic representation might be more basic (Bechtel, 2009). A debate has raged ever since as to whether ‘knowing how …’ and ‘knowing that …’, or propositional versus procedural knowledge, are essentially different kinds of knowledge or whether they are simply knowledge about different kinds of things (Smith, 2012). However, in either case, Ryle demonstrated that we could recognize the presence of knowledge without being able to describe it in language.

Later the term ‘tacit knowledge’ was appropriated by managerialists, in an effort to subject ordinary skilled practices to external inspection, control, and annexation, a complete reversal of Polanyi’s purpose. Schmidt (2012) suggests that the term is now generally being used “as a way of vaguely talking about practical knowledge (insights, heuristics, procedures, etc.) that is not under managerial control and therefore somehow offers resistance to corporate annexation”. A major impetus to this programme has come from the work of Noneka (1991: 98), who says: “Tacit knowledge is highly personal. It is hard to formalize and therefore difficult to communicate to others”. Yet, for Nonaka, the knowledge-creating company can – and, to be successful, must – find ways to tap this tacit knowledge: “Making personal knowledge available to others is the central activity of the knowledge-
creating company” (p. 98). In the knowledge management literature, there often an ambiguity, with some authors suggesting that tacit knowledge is uncodifiable ("tacit aspects of knowledge are those that cannot be codified"), while others suggest it is, at least sometimes, codifiable ("transforming tacit knowledge into explicit knowledge is known as codification"). Schmidt (2012: 39) characterizes Nonaka’s approach as “extracting the ‘knowledge’ of experienced workers ... in order to construct ‘expert systems’ and similar, ... not for constructing computational models of expert reasoning, but for the purpose of annexation, or expropriation, of the ‘jewels of knowledge’ of employees: their experiences, insights, recipes, heuristics, rules of thumb, tricks of the trade, ‘best practices’, ‘knowhow’, etc.”. Whatever the purpose, the central tenet in Nonaka’s work is that tacit knowledge, although highly personal, can indeed be communicated to others.

Behind these distinctions is a fundamental division in the literature on the meaning of ‘tacit’ knowledge. Jonathan Adams (2006) puts this very clearly: “‘Tacit’ knowledge can be understood in several ways: as knowledge that might be expressed (perhaps laboriously) in propositional form but for various reasons (illiteracy, innumeracy, efficiency) has not been so expressed. Alternatively, a stronger version claims that tacit knowledge is that type of knowledge which cannot be expressed in propositional form, no matter how exhaustive the description.”

Perhaps more helpful than a simple tacit-explicit dichotomy is to conceptualise a spectrum of states of knowledge, as in Figure 1.

**Figure 1. The spectrum from non-explicit to explicit knowledge**

*Unknowable* (JBS Haldane: “The universe is not only queerer than we suppose, it may be queerer than we can suppose”. More than that, the process of knowledge creation may be partially destructive: “When analytic thought, the knife, is applied to experience, something is always killed in the process”: Pirsig, 1974).

*Unconscious* (known, but not known to be known)

*Inexpressible* (known, but not able to be signalled)

**Difficult to express**

- *Tacit* (known, but not able to be clearly made explicit)
- *Untranslatable* (spoken but only understandable in one context)

*Unrevealed* (able to be revealed, but deliberately hidden),

*Unspoken* (but assumed to have been revealed)

*Misinterpreted* (revealed but not understood)

*Shared* (explicit)
In this paper, we focus particularly on the higher end of this spectrum – from ‘unknowable’ to ‘difficult to express’. In the case of ‘unknowable’ and ‘unconscious’ knowledge, the key problem is to raise awareness of the extent and implications of what is not known – for example, to warn against over-confidence about the validity of current ‘knowns’ or to justify funding for research into current ‘unknowns’, by demonstrating that they do NOT belong in the category of ‘unknowable’. In the case of ‘inexpressible’ or ‘difficult to express’ knowledge, the key problem is finding a mechanism for transfer of meaning from the ‘knower’ to the ‘unknowing’. In the lower end of this spectrum, the key problem is designing a set of relationships (and corresponding incentives) to ensure that knowledge not only can be but also is transferred between the relevant actors, so that it eventually becomes shared.

A further question is WHO knows? In Table 1 we illustrate the importance of this question in relation to the question: who knows about ‘quality’? Where quality is simple to specify and privately experienced, then the users of a service know about quality. Where it is socially or collectively experienced, then a representative of the collective must judge it – this is traditionally the role of elected politicians. However, there is a very different set of issues where quality is not easy to specify. Where it is privately experienced, the users still have a role but it is essential that their perception is complemented by experts who are aware of the extra dimensions which are not manifest to the users – this is traditionally the role of the service professional. Finally, we have a real problem where quality is complex to specify and socially or collectively experienced. Here, no-one is in a fully legitimate position to claim that they understand what quality is – in a democracy, politicians are likely to be appealed to as the final arbiter, but their decision is likely to be regarded as legitimate only if they show that they understand the complex dimensions of the choice which they have to make.

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<th>Table 1. Who knows about quality?</th>
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<td>Quality is privately experienced</td>
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<td>Quality is simple to specify</td>
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Source: Bovaird and Loeffler (2015), adapted from Kieron Walsh (1991)

While this is a relatively simple example, in which we distinguish only two positions on the spectrum of types of knowledge (‘simple to specify’ and ‘complex to specify’, which corresponds essentially to ‘difficult to express’), it demonstrates that knowledge is not something disembodied – WHAT is known depends on WHO knows it. Ambrosini (2003) suggests that tacit knowledge held by individuals should be labelled ‘tacit skills’, while tacit knowledge held by groups in organisations should be labelled ‘tacit routines’ (a distinction of more interest in competitive organisations, since they are more concerned that their tacit knowledge is not captured by rivals, as is more easily the case with tacit individual skills than with tacit organisational routines).

A more thorough taxonomy is suggested in Figure 2, which presents the Cynefin framework (Snowden and Boone, 2007). This envisages five domains of knowledge in which theorising can take place:

- **Simple domain**, in which the relationship between cause and effect is widely believed to be obvious, or at least is derived from solid data that allows for predictable outcomes – in this
domain, we are dealing with ‘knowns’ and we can expect to apply best practice – in this domain, we are dealing unambiguously with explicit knowledge.

- **Complicated domain**, in which there is a general understanding of the problem to be tackled but the specific relationship between cause and effect in relation to any given decision, although ‘knowable’ in principle, requires tailored analysis and/or the application of expert knowledge. With sufficient data, appropriate techniques, e.g. regression analysis, can be used to identify patterns which can then be used to predict likely outcomes. In this domain, we can expect to apply good practice but may often be dealing with unrevealed, unspoken, or misinterpreted knowledge. However, some difficult to express knowledge may also be appropriately classified within this domain – and the teasing out of this knowledge into more explicit knowledge may be key to turning this from ‘complicated’ to ‘simple’ knowledge.

- **Complex domain**, in which the relationship between cause and effect can only be perceived in retrospect, but not in advance. In this quadrant decisions are generally based on use of qualitative data, only occasionally backup by quantitative data. This qualitative analysis helps experts to suggest tentative ways forward. The analysis involved largely relies on informal qualitative modelling (‘soft modelling’) or structured problem-solving methods. Here, the best we can do is to sense emergent practice. This analysis can inform decision makers but only at quite a broad level of decision and with no prediction of the details. This much more exploratory approach to modelling can only point to potential ways forward, which will need to be tested, often based on emergent practices which are already evident but whose outcomes cannot yet be predicted with any confidence. Often the qualitative analysis will override the recommendations suggested by quantitative analysis – decisions will be based on expert insight, rather than on quantitative evidence, because the latter is unreliable, incomplete or difficult to interpret. Here we are likely to be often dealing with inexpressible knowledge, where the ‘insight’ of the experts is based on experience and may not be codifiable or may simply not yet have been codified. However, this domain also covers systems where the parameters of the system are indeed known - and seen to fit the criteria for complex adaptive systems.

- **Chaotic domain**, in which we can discern no relationship between cause and effect at systems level, so that we cannot predict the events in which we are most interested. Here, the best we can do is to explore novel practice. Here, we are in the unknowable part of the knowledge spectrum, as far as outcomes are concerned (although the inputs to the system may be very well documented).

- **Disorder**, where we accept that we do not know what type of causality exists, i.e. we are not sure in which, if any, of the four other domains we are currently operating as we make our decisions. Snowden and Boone (2007) suggest that people who find themselves in this domain will naturally revert to their own comfort zone in making a decision – that might, of course, be in any one of the other domains. Here we are wholly unsure about the status of the knowledge which we have – or might have – about this system.
The lesson from Figure 2 is that understanding the role of knowledge in improving public services involves more than simply tapping tacit knowledge – in each of the four knowledge domains, there are different and difficult tasks for the policy maker and the public service deliverer. However, the capture of tacit knowledge, even it only really features in the complicated and complex knowledge domains does indeed appear important.

**Language and number are not everything!**

Karen Barad (2003: 801) has put it rather well: “Language has been granted too much power. The linguistic turn, the semiotic turn, the interpretative turn, the cultural turn: it seems that at every turn lately, every ‘thing’ … is turned into a matter of language … it seems to be symptomatic of the
extent to which matters of “fact” ... have been replaced with matters of signification. Language matters. Discourse matters. Culture matters. There is an important sense in which the only thing that does not seem to matter anymore is matter.”

The dimension of this over-dominance of language with which this paper is most concerned is the fixation in public management with knowledge transmission through language. (Similar arguments around use of number to transmit knowledge will be covered briefly later in this section). The case against treating language as the only way of transmitting knowledge takes two main forms – first, highlighting the alternative ways of conveying meaning which do not involve language and, second, focusing on the meanings that language cannot embody.

There is a paradox here. In practice, we are perfectly conscious of how many different sources exist by which we make sense of our environment – and, indeed, there has been research on their relative importance – and we know that language does not dominate these. On the contrary, the importance of non-linguistic communication is highlighted by the oft-cited research of Mehrabian (1972) which found that 55% of communication is body language, 38% is the tone of voice, and 7% is the actual words spoken. Of course, this formula was created for a specific context, namely where the nonverbal channel and the verbal channel are incongruent (that is, their messages do not match). It is therefore not be applied to general situations, since a full analysis of what is occurring at the moment of communication needs to consider what the person’s current emotions are, the environment in which the communication is taking place in, the history between those communicating, and other factors such as each person’s role (Thompson, 2011). Consequently, no single gesture or movement is definitive in determining what is communicated. However, the very powerful message from this research is that a verbal analysis alone will misrepresent the communication which has occurred – even though this is standard practice in public management research, from documentary analysis through to computerised qualitative analysis of interviews, focus group discussions, etc. The paradox is that we know that many non-linguistic sources characterize how we abstract meanings from our environment but we persist in believing that language is the most important way in which we should seek to transfer information to others, whether in the process of managing them, influencing them through our research results or creating other relationships with them.

So what are the other methods of communicating important phenomena, besides language? This is not a mystery – we all know that people can absorb knowledge about the world through the five senses, each of which can be triggered to convey messages. In specific circumstances, very profound messages can be transmitted between people through sounds (e.g. music or laughter), sight (e.g. body language or an outburst of tears or the use of high impact graphic image), touch (e.g. a consoling hug to a person who has lost a loved one or a warm handshake to a new member of staff), smell (e.g. through giving a bouquet of flowers or allowing public office reception areas to smell of greasy food) or taste (e.g. through a meal cooked for a friend or sharing an excellent bottle of wine or whisky – or even whiskey). Language, of course, is a special case of the use of two of these senses – hearing of the spoken word, and sight of the written word. Powerful though language may be, it is not dominant, in the sense that each of these senses can, in particular circumstances, be more effective in transmitting highly important messages. Moreover, the meanings of language can be hugely altered by how the five senses are used in context – a spoken message may be undermined
or reinforced by the tone of voice, the presence of a smile, or the awkwardness of body language of
the person speaking.

The other non-linguistic mechanism for transmitting meanings is observation or demonstration –
usually relying on sight (e.g. when someone illustrates how to swing a tennis racket or golf club) but
sometimes also using some of the other senses (e.g. demonstrating breathing exercises, with
emphasized sound effects, or providing arm support for a patient as they learn to walk again after a
hip operation). Indeed, one of the most commonly discussed ways of passing on tacit knowledge to
others is conveyed by the phrase ‘sitting with Nellie’, implying careful watching of how an expert
undertakes a tricky procedure which cannot easily be explained in words. While demonstration is an
example of explicit knowledge, the problem lies in the lack of clarity by means of which it was
carried out – the attempt to overcome this is usually either by language (but movement is not easy
to convey by words) or by pictures (e.g. the infamous instructions from do-it-yourself stores on self-
assembly of furniture) or by breaking the movement into smaller, shorter steps (which often reveal
that the real skill is in how these separate sequences are put together). In all cases, the transference
of meaning is likely only to be completed by experimentation on the part of the learner, ideally with
cooperation on the part of the demonstrator.

The deficiencies of language in coping with the communication of important phenomena have been
long remarked. A sample of quotes will illustrate this:

Stendhal: “To describe happiness is to diminish it”.

Wagner to August Roekel in a letter: “It is wrong of you to challenge me to explain in words:
you must feel something that is being enacted that cannot be expressed in mere words”.
Cited by Vernon Bogdanor in review of Verdi and/or Wagner: Two Men, Two Worlds, Two
Centuries in New Statesman, 5 December 2011, p. 50.

Wittgenstein in Tractatus: “All the most important things in life cannot be said”.

“Love is probably the only thing in the world that does not need to be explained and whose
reasons need not be discovered”: Sheikh Ahmed Naruddin in Meša Selimović (1966), Death

“Everything and nothing spoken,
Our eyebeams threaded laser-fast, no transport
Ever like it until then, in the sunlit cold
Of a Sunday morning ambulance …”
Seamus Heaney, ‘Chanson d’Aventure’ in Human Chain, Faber and Faber, London, 2010

Jason Cowley, New Statesman (1-7 July 2016: p. 7): “Laughter I have pronounced holy”
wrote Nietzsche in Thus Spake Zarathustra. “You higher men, learn to laugh!” Laughter
captures the essence of a truth that cannot be communicated. The alternative is tears.

BBC reporting Donald Trump comment that Ghazala Khan was possibly not allowed to speak
at the Democratic National Convention in 2016: “Mrs Khan also told the BBC she did not
have to speak in order for the audience to understand her pain”.

Italo Calvino (1974), *Invisible Cities*. London: Secker and Warburg (p. 38-39 in Vintage edition, 1997): Newly arrived and quite ignorant of the languages of the Levant, Marco Polo could express himself only by drawing objects from his baggage ... and pointing to them with gestures, leaps, cries of wonder or of horror, imitating the bay of the jackal, the hoot of the owl. ... But what enhanced for Kublai every event or piece of news reported by his inarticulate informer was the space that remained around it, a void not filled with words. The descriptions of cities Marco Polo visited had this virtue: you could wander through them in thought, become lost, stop and enjoy the cool air, or run off.

As time went by, words began to replace objects and gestures in Marco’s tales ... The foreigner had learnt to speak the emperor’s language ... But you would have said that communication between them was less happy than in the past: to be sure, words were more useful than objects and gestures in listing the most important things in every province and city ... and yet when Polo began to talk about how life must be in those places, day after day, evening after evening, words failed him, and little by little, he went back to relying on gestures, grimaces, glances.

So, for each city, after the fundamental information given in precise words, he followed with a mute commentary, holding up his hands ... A new kind of dialogue was established: the Great Khan’s white hands ... answered with stately movements the sinewy, agile hands of the merchant. ... And as the vocabulary of things was renewed with new samples of merchandise, the repertory of mute comment began to become closed, stable. The pleasure of falling back on it also diminished in both: in their conversations, most of the time, they remained silent and immobile.

Of course, social sciences do not simply use language to communicate their findings. Another central medium of communication is quantitative analysis. Indeed, mathematics is sometimes seen as the most ‘rational’ of all approaches to the scientific analysis. This specific claim and the general role of quantitative analysis in communicating meaning in the social sciences is not a central theme in this article. However, it is important to make clear that, just as non-explicit knowledge is more than simply “knowledge which is not spoken”, it is also more than simply “knowledge which is not quantified”. There are some concepts which are simply not quantifiable. To ask: “How much do you love your current partner, on a scale from 0 to 10?” says a lot about the person asking the question, more than any answer would ever tell about the respondent. As Pirsig (1974) comments, the process of knowledge creation may even be partially destructive: “When analytic thought, the knife, is applied to experience, something is always killed in the process”. (Of course, this applies to all analytic thought, not simply quantitative analysis). The inability to recognize this has probably been one of the key reasons why many systems of performance management were doomed from the outset.
Transferring tacit knowledge

We noted earlier the divide in the literature as to whether ‘tacit’ knowledge should be understood as knowledge that can be expressed (however laboriously) in propositional form or is rather that type of knowledge which cannot be expressed in propositional form, no matter how exhaustively described. For the purposes of this article, we will side with the former interpretation, using the label ‘inexpressible’ knowledge for the latter type of knowledge.

By its very nature, inexpressible knowledge cannot be transferred between people. However, this does not mean that it cannot be learnt. This is the point of Polanyi’s account of the master and apprentice, where the apprentice learns by assimilation in the presence of the master, but the master does not expedite this learning by his/her conscious interference. (Indeed, what the apprentice learns may be something which the master is unconscious of knowing). Polanyi persists in claiming that behind the practices of the master are some ‘hidden rules’, even though the master cannot express them and may not even know of some of them. From this assumption, Polanyi goes on to suggest: “These hidden rules can be assimilated only by a person who surrenders himself to that extent uncritically to the imitation of another” (2002 [1958]: 53). Finally, consequent upon this is a sociological rider about generational relations: “A society which wants to preserve a fund of personal knowledge must submit to tradition” (2002 [1958]: 53)."

At this point, it may be objected that imitation through observation is making use of ‘explicit’ knowledge, since the performance of a particular task, however impossible it may to be describe, is an explicit act of signification, just as would be drafting a production plan, specifying an equation or constructing an engineering drawing. This objection has force in theory but is awkward in practice (i.e. we tacitly shy away from such distinctions!), since it seems unconvincing to describe an observable performance as an example of ‘knowledge’. Perhaps the simplest way to get round this problem is to suggest that by ‘explicit knowledge’ we mean analytic knowledge which can be signified clearly. A performance is a holistically constructed synthesis, rather than a ‘deconstructed’ analysis, so is not ‘explicit’ knowledge in this sense, even though it is very definitely explicit.

Nonaka (1991) suggests that there are four basic patterns for creating knowledge in organizations, three of which involve tacit or ‘difficult to express’ knowledge:

1. From tacit to tacit - learning by observing, imitating and practicing, or by becoming ‘socialized’ into a specific way of doing things like one’s mentors. Here, knowledge does become explicit.
2. From explicit to explicit, combining separate pieces of explicit knowledge into a new whole.
3. From tacit to explicit, e.g. preparing a manual by recording discussions, descriptions and innovations and then using it to create a new product.
4. From explicit to tacit, reframing or interpreting explicit knowledge using a person’s frame of reference so that knowledge can be understood and then internalized or accepted by others. A person’s unique tacit knowledge can be applied in creative ways to broaden, extend or reframe a specific idea. Tacit knowledge does not become part of a person’s knowledge base until it is articulated and internalized.
Eraut (2000) distinguishes generalized knowledge, gained through experiential learning, from tacit knowledge, gained through implicit learning. Typically, tacit knowledge is ready to use while generalized knowledge is too abstract to be used without considerable further learning. So if a situation demands rapid action or is too complex to be fully analysed, tacit knowledge is the only available solution.

Following Molander (1992), Ernaut argues that no knowledge is totally tacit and all has at least some tacit aspect. Researchers must therefore reach as far as possible down into the continuum from explicit to tacit knowledge. He suggests two possible approaches to knowledge elicitation; to facilitate the ‘telling’ or to elucidate sufficient information to infer the nature of the knowledge being discussed, usually requiring, in both cases verification from ‘witnesses’ involved. However, even the most complete, explicit account of expertise from an ideal witness will still lack aspects of tacit knowledge which remain unrecalled and undisclosed.

Moreover, although codification is generally agreed to be a key route to making tacit knowledge explicit, there are some unresolved questions about its scope and nature. After all, equations, graphic illustrations and videos are explicit embodiments of knowledge – do they also count as ‘codified’ knowledge? The problem here is ‘codified’ knowledge is generally assumed to be sufficiently clear that it allows emulation. However, these artifacts often do not lead to the ‘instructed’ being able to emulate the ‘instructor’, so while they clearly exemplify the existence of knowledge, they do not necessarily allow implicit learning of how that knowledge can be acquired, never mind put to use.

Furthermore, Adam (2006: 9) explores the difference between “working according to the rules” and being made to work in a particular way by the rules: “… if you don’t have conscious control over the action, it’s unclear if you are ‘doing the action’ or if the action is ‘doing’ you”.

More generally, we have to ask how this ‘reaching down into the continuum from explicit to tacit knowledge’ can be undertaken in practice? There are many suggestions in the literature as to specific mechanisms which might be used but few general frameworks. Smith (2000: 317), for example, suggests: “Tacit knowledge is acquired, taught and shared through knowledge fairs, learning communities, study missions, tours, advisory boards, job rotation, stories, myths and task forces. … Experienced people teach tacit knowledge directly to less experienced people by ‘showing them the ropes’.” However, most of these transfer mechanisms are also used for explicit knowledge, and it is now clear how implicit learning, if any, takes place through these mechanisms.

The literature is stronger on some of the conditions for tacit knowledge to occur. In particular, the role of emotions in influencing tacit knowledge has been widely marked: “Emotions affect one’s thinking. … much of the connections from the emotional systems to the cognitive systems are stronger than [vice versa]. The implication is that we feel emotions … then find an explanation… … much of the opinions and assessments that we have concerning risk may be the simple result of emotion” (Tayeb, 2004: 203).

Again, Baggini (2016: 33) argues that the ‘automatic prime movers’ of persuasion are ethos (character), and pathos (emotion) (corresponding to Kahneman’s System One for brain functioning,
which is fast, automatic, emotional, subconscious and ‘hot’) – although he goes on to argue that logos (reason) (corresponding to Kahneman’s System Two, which is slow, painstaking, calculating, conscious and’ cold’) is valuable in allowing us to pause and examine arguments and to reject them if they stand up, no matter how much we may side with their proponents or want to agree with them.

This opens up the issue of how influence and persuasion can be exercised through non-verbal means (Bovaird and Loeffler, 2016), including sources of influence which can be political, moral, professional, social, personal, organisational, inter-organisational or network, etc. These sources of influence often work through symbols (‘the flag’ or the lapel badge) or symbolic acts (attending the party conference or joining the march) and reinforce (or even create) values which then mould beliefs and may eventually become part of the ‘knowledge’ held tacitly. This suggests that tacit knowledge may be formed over quite long periods of time (and may therefore take quite periods of time to change, where it appears to be mistaken or dysfunctional).

There is also widespread agreement that tacit knowledge is often created through experimentation or ‘trial and error’. Adam (2006: 5) suggests: “Like the blind man who eventually finds what he is looking for by bumping and touching, so too is much (and maybe all) human discovery a product of the integration of conscious knowing and unconscious knowing. At all times, the point is that our knowledge is not composed only of declarative sentences and logical propositions, but rather that it is also (and substantially) composed of “personal knowledge“ which evades explicit formulation but contributes to the production the final product of our endeavours, be they knowledge claims or technologies.” Clearly, this experimentation may be collectively pursued, as well as individually experienced. Co-creation might therefore be seen as a particularly potent way to ensure that tacit knowledge is shared.

Finally, there is an argument that analysis may be antithetical to uncovering tacit knowledge – or even to its continued existence. Laurie Anderson (director of the film Heart of a Dog) suggests that the telling of a story can erode its truth: “Every time you tell a story, you forget it more” Ryan Gilbey (2016: 53), ‘Love after death’, New Statesman, 20-26 May 2016 (p. 53). Again, Miss Smilla tells us: “There is one way to understand another culture. Living it. Move into it, ask to be tolerated as a guest, learn the language. At some point understanding may come. It will always be wordless. The moment you grasp what is foreign, you will lose the urge to explain it. To explain a phenomenon is to distance yourself from it. (Hoeg, 1993: 169).

Perhaps this process is most vividly instanced in Calvino (1974):

Similarly, Marco Polo was reluctant to talk of Venice to Kublai Khan: “Memory’s images, once they are fixed in words, are erased”, Polo said. “Perhaps I am afraid of losing Venice all at once. Or perhaps, speaking of other cities, I have already lost it, little by little”. (Calvino, 1974: 86-87).

... 

Newly arrived and quite ignorant of the languages of the Levant, Marco Polo could express himself only by drawing objects from his baggage … and pointing to them with gestures, leaps, cries of wonder or of horror, imitating the bay of the jackal, the hoot of the owl.
The connections between one element of the story and another were not always evident to the emperor; the objects could have various meanings …

But what enhanced for Kublai every event or piece of news reported by his inarticulate informer was the space that remained around it, a void not filled with words. The descriptions of cities Marco Polo visited had this virtue: you could wander through them in thought, become lost, stop and enjoy the cool air, or run off.

As time went by, words began to replace objects and gestures in Marco’s tales … The foreigner had learnt to speak the emperor’s language or the emperor to understand the language of the foreigner. But you would have said that communication between them was less happy than in the past: to be sure, words were more useful than objects and gestures in listing the most important things in every province and city … and yet when Polo began to talk about how life must be in those places, day after day, evening after evening, words failed him, and little by little, he went back to relying on gestures, grimaces, glances (Calvino, 1974: 38-39).

For the moment, it seems fair to suggest that we have only the most shadowy understanding of how the ‘difficult to express’ can be transmitted to others, either personally or organisationally. Much of the ‘airport bookstore management literature’ may therefore be rather too glib on this score.

Case studies

In order to illustrate the analysis in this paper, we provide here a classification of some recent case studies which we have explored and mounted on our website (http://www.govint.org/good-practice/case-studies/). They are all cases of user and community co-production of public services and outcomes, which we hypothesised as particularly likely to exemplify the existence of tacit knowledge, as they involve interaction between groups who bring intense but quite different values and experiences to the interaction, have very different capabilities and rely on each other’s cooperation – but do not necessarily know much about each other, so need to find ways of tapping into each other’s knowledge bases in order to encourage mutually beneficial outcomes.

In Table 2 we classify these case studies in terms of the tacit knowledge exhibited by key players in the case studies – sometimes the co-producing service users or other citizens, sometimes the public service staff, and sometimes both. In each case we highlight where on the knowledge spectrum this tacit knowledge lies, and in which knowledge domain it sits.

We sought illustrative case studies of the unknowable, inexpressible and ‘difficult to express’ knowledge domains. We also sought to classify the particular examples of tacit knowledge considered in these case studies in terms of whether they originated from the chaotic, complex and complicated knowledge domains. (As a check, we also sought examples of tacit knowledge in the domain of simple knowledge, where we hypothesize that only explicit knowledge will be evident, but, unsurprisingly, have not found any).
Table 2. Classification of tacit knowledge characteristics of selected co-production case studies

<table>
<thead>
<tr>
<th>Place on knowledge spectrum</th>
<th>Knowledge domain</th>
<th>Case study</th>
<th>‘Technical’ or ‘social’ tacit knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknowable</td>
<td>Chaotic</td>
<td>Jonkoping Highlands Hospital – onset of acute symptoms in gastroenteritis patients</td>
<td>NA</td>
</tr>
<tr>
<td>Unknowable</td>
<td>Chaotic or complex</td>
<td>Coventry Council, Intensive Family Support Service – outcomes achieved through intervention</td>
<td>Technical – co-designing action plans which will meet needs of families – cannot rationally be predicted (so national programme failed but local, intensive program succeeded?)</td>
</tr>
<tr>
<td>Inexpressible</td>
<td>Complex</td>
<td>Jonkoping Highlands Hospital – patients’ response to drug treatments</td>
<td>Technical – interpretation of patterns in trajectory of condition (relies on ‘hunches’ of doctors and nurses)</td>
</tr>
<tr>
<td>Inexpressible</td>
<td>Chaotic or complex</td>
<td>Coventry Council, Intensive Family Support Service – behaviour change achieved through intervention</td>
<td>Social – behaviour change triggered by supportive relationships between staff and families</td>
</tr>
<tr>
<td>Inexpressible</td>
<td>Complicated</td>
<td>Surrey Services for Young People – one-to-one support for young people to change their peer networks</td>
<td>Social – how to transfer between friendship networks</td>
</tr>
<tr>
<td>Difficult to express</td>
<td>Complex</td>
<td>Music for a generation – Herts CC plus partners-intergenerational music workshops for older people and young people with disabilities, learning difficulties or mental health problems</td>
<td>Technical – not possible to explain why different musical activities are effective in changing attitudes and, eventually, behaviours (i.e. pathways to outcomes) – but ‘body language’ suggests best ways to proceed</td>
</tr>
<tr>
<td>Difficult to express</td>
<td>Complex</td>
<td>&quot;Close to ...&quot; - Peer Training of Learner Drivers by Offenders in Austria – compulsory workshops with experienced drivers who have caused serious accidents</td>
<td>Social – young offenders who are of same age, and who can talk about serious accidents they have caused, know how to get through very vividly to young learner drivers, in a way more conventional classes cannot achieve.</td>
</tr>
<tr>
<td>Difficult to express</td>
<td>Complicated</td>
<td>PRESENT program in East Dunbartonshire Council plus partners (Talking Mats) – program for people living with dementia</td>
<td>Technical – not possible to keep discussion at cause-and-effect level – but storytelling, using picture cards, indicate feelings, reactions, preferences, likely behaviours</td>
</tr>
<tr>
<td>Difficult to express</td>
<td>Complicated</td>
<td>Modena, Stradeno website – designed and written by young people for young people (but moderated by council staff)</td>
<td>Social – young people understand that some uses of language inspire trust, confidence, motivation to cooperate – while others don’t</td>
</tr>
</tbody>
</table>
In filling out the cells of this table, it became clear that two distinct types of tacit knowledge were in question. In many cases, the most important tacit knowledge relates to the likely success of an intervention – will it achieve the outcomes or other performance levels which are expected from it? This we have labelled ‘technical’ tacit knowledge. On the other hand, many of the cases demonstrate tacit knowledge in how to change the behaviour of other actors, which relies on being able to establish and make use of social relationships in order to have the desired impact – this we have labelled ‘social’ tacit knowledge.

As these case studies have been chosen to be illustrative, we can make no comments on which of these types of tacit knowledge is more frequent, or more important, in co-production more generally. However, we are exploring how the overall data base of 60+ case studies might be analysed in order to see if some way might be found of probing these questions.

**Role of ‘social’ tacit knowledge**

This is tacit knowledge about how to influence and change the behavior of other stakeholders with whom they interact, e.g. in the service system or in the social network which supports the behavior changes they seek. It therefore includes tacit knowledge about relationship building, maintenance and exploitation (in a nice way).

Schmidt (2012: 1) makes the point that the development and maintenance of organized cooperative work practices require that workers develop and maintain their collective capabilities, which is necessarily an issue of social relationships. He suggests (p. 42) that the ‘managerialist’ perspective, that tacit knowledge must be appropriated for the benefit of the organization, is delusional, as production increasingly relies on the skilled work and coordinative practices of professional workers and the tacit knowledge embedded in these will often not willingly be shared by staff (and is also hindered by the low literacy levels in most modern workplaces). He suggests that a more realistic scenario in which tacit knowledge might indeed be more successfully harnessed involves devolution of coordinative competences to those who hold the tacit knowledge (from ‘managers’ to ‘professionals’), with reforms to the employment contract (to give workers a share of their intellectual property) and higher educational levels of frontline staff.

The transmission process for social tacit knowledge is complex, partly as it is experimental rather than purely thought-out, and intuitive as well as rational, as Weinberger (2010) suggests: “Knowledge is not a result merely of filtering or algorithms. It results from a far more complex process that is social, goal-driven, contextual, and culturally-bound. We get to knowledge — especially “actionable” knowledge — by having desires and curiosity, through plotting and play, by being wrong more often than right, by talking with others and forming social bonds, by applying methods and then backing away from them, by calculation and serendipity, by rationality and intuition, by institutional processes and social roles.”

Moreover, tacit knowledge around relationship building is itself socially-constructed. Eraut (2000: 132) argues: “learning from experience has traditionally been presented as a purely individual activity with other people being part of the experience rather than part of the learning [i.e. co-learners]. ... The learning process is commonly described as a reflective process incorporating prior
explicit knowledge as well as recent experience (and I would argue prior implicit knowledge also). But if the social nature of the situation is acknowledged, this learning process becomes more complicated. Possible understandings may be embedded in the social dimension of the situation and possible actions may be available as types of activity already familiar to other participants. Others will bring their own prior knowledge, explicit or implicit, to discussions of events and their own personal interpretations. We learn that others know things that we do not know, and that we can rely on others to contribute to certain aspects of a situation and save our own mental effort. So the individual process of making personal sense of the situation is likely to draw on a much wider range of cognitive resources, whether this is recognised or not.” This collaborative co-learning, which both harnesses and contributes to the collective tacit knowledge base is likely to be particularly important in intensive, interactive activities such as user and community co-production of public services and outcomes.

Alice Lam (2000) therefore distinguishes ‘embodied’ and ‘embedded’ knowledge. ‘Embodied knowledge’ is individual tacit knowledge, based on ‘bodily’ or practical experience, with a strong automatic and voluntaristic component – it is not fitted into or processed through a conscious decision-making schema. ‘Embedded knowledge’ is collective tacit knowledge, residing in organisational routines and shared norms, often based on shared beliefs and understanding, which make effective communication more possible. It evolves during the interactive learning of ‘communities of practice’. She describes it as “organic and dynamic: an emergent form of knowledge capable of supporting complex patterns of interaction in the absence of written rules”.

This has important conceptual lessons for the development and dissemination of user and community co-production of public services and outcomes. What works and what does not work depends strongly on context and on social relationships – and knowledge of how these social relationships work and can contribute to successful co-production is a key strength of those involved in the co-production, not easily gleaned by non-participants. Co-production is therefore likely to be driven from the front-line rather than the top floor of a public organisations. Furthermore, learning about co-production is a joint, socially constructed activity, not simply one for linear, rational research. Being part of the doing may be intrinsic to learning and helping others to learn.

Conclusions

This paper has explored the role of the tacit knowledge that cannot be made fully explicit – for example, the knowledge which is held by service users and other citizens who are involved in co-production of public services and publicly-desired outcomes. By demonstrating the potential importance of tacit knowledge, we open the door to understanding skills which are not necessarily exhibited in ‘propositional reasoning’ and ways of behaving which are not simply conformity to ‘hidden rules’ (Schmidt, 2000: 45).

The paper breaks down ‘tacit’ knowledge into a number of categories within the spectrum from wholly explicit to wholly non-explicit knowledge, covering the categories of the unknowable; unconscious; inexpressible and difficult to express, each of which brings specific difficulties in the co-production of services or outcomes by both parties.
From the examination of a number of illustrative case studies of co-production, the paper suggests that we further need to distinguish two types of non-explicit knowledge – first, non-explicit knowledge about the effective practices known to service users and members of their communities and networks, whereby they can ensure that their own actions bring about desired results in relation to a give service or outcome (‘technical non-explicit knowledge’); and, second, non-explicit knowledge about how to influence and change the other stakeholders with whom they interact, e.g. in the service system or in the social network which supports the behavior changes they seek (‘social relationship non-explicit knowledge’).

The paper suggests some important conceptual lessons for the development and dissemination of user and community co-production of public services and outcomes. What works and what does not work depends strongly on context and on social relationships. However, explicit knowledge of this context and these social relationships may not be available in the chaotic and complex knowledge domains – and may not be readily available even in the complicated knowledge domain which is likely to characterise many public services. Here, tacit knowledge is as good as it gets – therefore, generating it and harnessing it becomes central to public service and public outcome improvement.

Moreover, knowledge of how these social relationships work and can contribute to successful co-production is a key strength of those involved in the co-production, not easily gleaned by non-participants. Co-production is therefore likely to be driven from those who have access to this tacit knowledge – and hierarchical organisations will flounder if they do not give these actors appropriate roles in decision-making. A key lesson is therefore that learning about co-production is a joint, socially constructed activity, not simply one for linear, rational research. Being part of the doing may be intrinsic to learning and helping others to learn.

Finally, tacit knowledge offers a strongly positive lesson for those co-producing public services and publicly-desired outcomes – its importance suggests that, whatever the appearances, modern public administration and social intervention remains an arena in which responsible, experienced people exercise agency, not just follow rules; use their understanding of the local world around them to improve people’s welfare, not just accept top-down analyses of the ‘big picture’; and collectively construct a better understanding of what needs to be done to achieve positive social change, rather than simply ‘implement the corporate strategy’.

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CASE STUDY SOURCES


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