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Organising visions and the dynamics of community stakeholder groups in the NPfIT

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Abstract

Public sector IT projects have to contend with challenges that go beyond socio-technological hindrances, and which relate to issues regarding bureaucracy, efficiency and budgeting as well. This complexity is compounded when situated in a healthcare context, given the known challenges of appropriate use of IT in this area. This paper employs Swanson and Ramiller's (1997) concept of organizing visions to investigate the discourse surrounding electronic health records in England. We illustrate how the organising vision of electronic health records was apparent in England's National Programme for IT (NPfIT), highlighting its shifting priorities and the variations across the stakeholder groups involved in the project. Recognising the presence of conflicting as well as converging dynamics between these actors, we build on research which has discussed the differences between collective groups such as clinicians, IT developers and managers. We discuss the shifting roles of community groups specific to the NPfIT organizing vision and draw from literature on professional hybridization to illustrate the existing overlap between clinicians and IT professionals, a hybrid form which has seen limited research to date.

Keywords: Organising vision, Public sector IT, Hybrid professionals

1 Introduction

New and innovative information and communication technologies (ICT) would at first glance appear to be an unconventional area of interest to the public sector given its general aversion to risk (Ahmad and Broussine, 2003). In the case of health technologies such as electronic health records (EHRs), the challenges of IT implementations (Goldfinch, 2007) combined with the complexity of the healthcare sector (Goldschmidt, 2005) are exemplified when transferred to public sector settings which have their own set of challenges (Jones, 2008; Ahmad and Broussine, 2003). Despite this, the transformational capabilities of technology have been recognised and governments have seen renewed efforts to incorporate IT for better delivery of services to the public (Silcock, 2001; DH, 2002).

Scholars have devoted much effort into investigating the nuances of EHR implementations at various levels including national level projects (Atkinson *et al*., 2002; Ilie *et al*., 2009; Robertson *et al.*, 2010). The presence of numerous stakeholder groups in health IT projects, each having very different needs and attitudes (Herzlinger, 2006), suggests a high level of interdependencies between these groups. This paper focuses on some of these dynamics, and illustrates how these come into play in a public sector IT setting which has the added dimension of political influence and government control.

A number of approaches such as actor-network theory, technological frames and structuration theory have been employed to investigate technology use and the role of user groups in implementation and usage of these technologies (Doolin and Lowe, 2002; Davidson, 2006). The actor role in actor-network theory is granted some form of action or control (Doolin and Lowe, 2002) which was not always evident in the particular IT setting this paper investigates. Many of the leadership roles in the project we look at, had limited powers in practice, as we shall soon see. The incongruence of technological frames in an inter-organisational setting due to the diverse stakeholder groups involved (Davidson, 2006) points to a need for investigating the dynamics between community groups, and this is offered by the discourse based approach around which the concept of organizing visions (Swanson and Ramiller, 1997) is centred. This approach not only allows us to discuss interactions between community

stakeholder groups and their influence in steering the way technology is adopted, but it also allows us to study the overarching discourses relevant to the vision, in this case being the national implementation of EHRs. We draw on Swanson and Ramiller's (1997) work, recognising the evolutionary nature of discourses surrounding new technologies, subject to the inputs of community stakeholders. These community groups are to be distinguished from communities of practice whose main purpose is the sharing of knowledge amongst group members (Wenger and Snyder, 2000). In this paper the emphasis is on the inputs, discourses and interactions of community groups with regard to a specific initiative, rather than intra-community discourse. We extend Swanson and Ramiller's (1997) framework to a specific public sector IT initiative, namely England's National Programme for IT (NPfIT), discussing how it may be regarded as a vehicle for the organising vision of EHRs in England during the time of its operation.

Studies indicate polarities between some stakeholder groups such as clinicians and managers, and amongst different clinical groups (Marshall, 1998; Robinson *et al*., 1994; Hunter, 1992). However, there is also an increasing phenomenon of gradual convergence between some of these generally opposing groups in certain instances. We draw on literature on professional boundaries and hybrids (Ferlie *et al.* 2011; 2012) to gain insights, and suggest the emergence of another hybrid professional as a consequence of primary care doctors' interest and involvement in IT development.

This paper seeks to identify some of the conflicts amongst community stakeholders such as physicians, nurses, industry experts and the government, in the context of the NPfIT. We explore shifting priorities and discourses in the evolution of the organising vision, and investigate how dominant community groups can cloud the original vision and manipulate the path it takes. The paper also highlights the dissolving boundaries between specific community groups, and the implications held for professionals and hybrid roles in the community.

We first provide a brief overview on the challenges of public sector IT initiatives and health technologies. This will be followed by a discussion on organising visions and why the NPfIT may be regarded as an organising vision in itself. We also discuss the presence and influence of multiple stakeholders in an organising vision, and recent

research on the increasing overlap between various specific professions, a phenomenon termed as professional hybridization. We will then provide an overview of our research methods, followed by our findings, discussion and conclusion.

2. Health technologies and public sector ICT

Technology acts as a double-edged sword in healthcare, capable of providing benefits including improved connectivity, access to reliable information, reduced medical errors, and reduced costs (Bates *et al*., 2003; Goldschmidt, 2005; Herzlinger, 2006; Ilie *et al*., 2009; Atkinson *et al*., 2002), but also presenting impediments such as isolated unconnected systems, system failures and poor infrastructure (Mantzana *et al*., 2008). Other socio-technical challenges to successful health IT implementation include data integrity, security, confidentiality and clinical resistance due to ingrained practices (Goodhue *et al*., 1992; Alshawi *et al.*, 2003; Atkinson *et al*., 2002; Hier *et al*., 2005).

Hierarchies and bureaucracy may be present in many settings but are particularly pronounced in the public sector and government projects (Jones, 2008; Ahmad and Broussine, 2003). Public sector initiatives are extremely risk averse (Ahmad and Broussine, 2003) and a lack of political will is one of the reasons why many national public sector programmes fail (Jones, 2008). The other extreme is equally detrimental, where political will mutates into a political agenda that may conflict with the needs and demands of the public. When this occurs, the potential and aims of such initiatives are often tinged with false assumptions, ulterior motives and ultimately, disillusionment (Ahmad and Broussine, 2003).

Historically the UK public sector has had a focus on productivity and budgeting measures (Jones, 2008). This holds true in the case of the NHS as well, with its various reforms surrounding purchasing models, performance measures, reorganization and emergence of new bodies, fundholding and shifting agendas (Klein, 1995; Morrell, 2006). In the late 1990s, the need for improved service delivery resulted in calls for modernization, and this included the incorporation of information systems to facilitate this aim (Jones, 2008; NHS, 2000; The NHS Confederation, 2003).

In general, IT development projects have an extremely high failure rate (Brown, 2001; Goldfinch, 2007), and when placed in a public sector setting are subject to further challenges including publicity, political changes, the need for accountability and the lack of technical expertise to negotiate appropriately with suppliers (Parliamentary Office of Science and Technology, 2003; Cross, 2005). By the early 2000s, the UK public sector experienced a number of IT project failures as highlighted in a report by the Parliamentary Public Accounts Committee (2000). These projects spanned various departments including agriculture, health, the Inland Revenue, defence and education, and it was acknowledged that there was a need to learn from past mistakes.

It was in this milieu that the NPfIT was conceived the year following the publication of this report. At this time there appeared to be a shift from traditional public sector management to new public management (NPM) (Crawford and Helm, 2009), and the NPfIT reflected this in its attempts to engage in consultations with people rather than limit the level of community involvement. While there was an effort to try and learn from successful projects in other countries such as the US (Stevens, 2004), the programme did not seem to remember lessons from previous IS project implementations in the NHS (Maguire, 2007; Currie, 2008) that were detailed by the Parliamentary Public Accounts Committee (2000). Several studies of the NPfIT have investigated its challenges and underlying problems (Avison and Young, 2007; Brennan, 2007; Hendy *et al*., 2005; Robertson *et al.,* 2010). In this paper we focus on some of the community dynamics and evolution of the vision, rather than an evaluation of the project itself.

3 Organising visions

Swanson and Ramiller (1997:460) use the term ‘organising visions’ in the context of new innovative technologies, and define it as “*a focal community idea for the application of information technology in organisations”*.Dominant discussions or ‘buzzwords’ provide a glimpse into the community discourse steering the vision (Swanson and Ramiller, 1997; 2003). While there are often conflicting views amongst stakeholder groups in the heterogeneous community, they share a common platform, in that they have a mutual understanding of what the vision represents (Swanson and

Ramiller 1997). EHRs, given their relatively new and innovative nature, the diverse range of stakeholders (clinicians, technology workers, patients, etc.), the many on-going debates and uncertainties surrounding them, and the increased attention and investment they are receiving, are one of the rapidly evolving organising visions in the area of healthcare IT (Davidson and Reardon, 2005).

The evolution of an organising vision depends on multiple factors including the business problematic, community discourse and IS practitioner subcultures (Swanson and Ramiller, 1997). The debates which community stakeholders engage in revolve around a commonly recognised subject using mutually understandable language and expressions. However, technology experts often bring their own domain specific terms into a project (Murray, 2001), and this gives rise to jargon or 'legitimated vocabulary' specific to the organising vision itself (Swanson and Ramiller, 1997). These are to be distinguished from buzzwords which emerge and subside during the lifetime of the organising vision, depending on what issues are prioritised at various points of time. With this brief introduction to organising visions, we shall now discuss the significance of community stakeholder groups who influence the path of an organising vision.

3.1 Community groups in organising visions: The blurring boundaries

The career path of an organising vision is determined by factors such as the shifting buzzwords, dominant discourses and the general reception of the vision by community stakeholders (Swanson and Ramiller, 1997, 2004; Lucas *et al.*, 2007). The presence of diverse actors in the community implies that tensions, frictions and disagreements may arise and/or subside during the evolution of the organizing vision (Swanson and Ramiller, 1997), and this has parallels to incongruent technological frames discussed by Davidson (2006).

While Swanson and Ramiller's (1997) model depicts the way an organising vision is shaped and influenced by diverse community groups and acknowledges the possible frictions between them, discussion on how these groups interact with *each other* is limited. Studies have demonstrated the tensions as well as complementarities between physicians, nurses, managers, and IT professionals (Marshall, 1998; Robinson *et al*., 1994; Hunter, 1992) It is also likely that some form of community learning takes

place, as actors learn by doing, by drawing from the on-going discourse and from other stakeholders (Wang and Ramiller, 2009). From an organising vision perspective, these inter-group dynamics are likely to have an impact on the path and career of community organising visions.

Changing needs, expectations and demands of user groups imply shifts in their roles and inputs in an organising vision. For example, the role of patients in healthcare is becoming increasingly empowered, to the extent of being viewed as *consumers* and *partners* in healthcare, rather than passive recipients of care from experts (Anderson *et al*., 2003; Newman and Vidler, 2006; Herzlinger, 2006; Liang, 2007).

Despite the much discussed chasm between clinicians and managers, research has also pointed to the trend of clinicians adopting a dual role, responsible for clinical care as well as management (Hunter, 1992; Montgomery, 2001; Fitzgerald, 1994**).** Both, resistance to imposed control as well as a genuine interest in the managerial aspect of healthcare delivery have served as antecedents to the adoption of such dual roles. Scholars have highlighted this increasing overlap between professional roles and managerial roles, giving rise to concept of professional hybrids (Ferlie *et al.* 2011; 2012; McGivern *et al*., 2012). This phenomenon is particularly relevant to the public sector where efforts to monitor performance, modernise services and encourage collaborative working have given rise to new structures and reforms which exploit hybrid forms to meet these aspirations (Kurunmäki and Miller, 2006; Nooredegraaf, 2007). The English NHS is a classic example having seen much reforms and reorganisations in efforts to both monitor healthcare delivery and to place clinicians in positions of leadership (Stevens, 2004). We shall now discuss organising visions in the context of the NPfIT.

3.2 The NPfIT as an organising vision

While previous studies employing the concept of organising visions use it in relation to broader themes and trends such as business process reengineering and tele-health (Ellingsen and Monteiro, 2008; Klecun-Dabrowska and Cornford, 2002; Greenhalgh *et al*., 2012), we extend the term to a specific project, England's NPfIT. At this point we would like to clarify that an organising vision is not synonymous with a project vision. While it represents an interest common to a heterogeneous community, it may trigger the creation of several projects, all attempting to implement the broader

principles and aims of the vision itself. However, in some cases a particular initiative may dominate a setting to the extent that the organising vision is tightly intertwined with it in that particular context.

We suggest that the NPfIT may be regarded as one such example, wherein the organising vision of EHRs (Davidson and Reardon, 2005) in England has been inextricably linked to the national programme from 2002 to 2011. To further demonstrate how the NPfIT may be regarded as an organising vision in itself, we discuss how it fulfils Swanson and Ramiller's (1997) three functions of organising visions: interpretation, legitimation and mobilization.

Interpretation refers to the way in which a new technology or innovation is explored and understood in its nascent stages. This may be compared to the early efforts to develop EHRs in the primary care sector from the 1970s to 1990s (Benson, 2002). The usage of electronic health records clearly varied between different clinical groups, resulting in islands of health information. This signalled a need for improved information sharing (Burton *et al*., 2004), triggering the call for integrated healthcare in England.

Legitimation questions the need for the technology, and is also influenced by the reputation and authority of those who advocate it (Swanson and Ramiller, 1997). EHR usage prior to the NPfIT was predominantly by GPs, many of whom had an active role in the development of the systems (Benson, 2002; de Lusignan and Chan, 2008), and most GP practices in England were computerised by the time the NPfIT was launched. While the government's drive towards modernization included aims to increase the use of IT in healthcare (Mark, 2005), the NPfIT itself was launched following decisions taken by policy makers behind the doors of 10 Downing Street (Cross, 2004). The success stories of GPs who had implemented EHRs, accompanied by the political will and support of the government, provided sufficient legitimization to initiate a national level integrated care records project.

Mobilisation refers to the effect of the organising vision on the market (Swanson and Ramiller, 1997). Before the launch of the NPfIT, the EHR market was characterised by several small suppliers and independent efforts by clinicians themselves (Sugden *et*

al., 2006; Benson, 2002). The NPfIT changed the scene of the supplier market however, resulting in shifts in the relationships between the NHS, suppliers and clinicians by the establishment of local service providers (LSPs) for the five clusters identified (Sugden *et al.,* 2006; NHS CFH, 2005a). These also acted as threats to existing smaller suppliers who were not a part of the NPfIT.

The national programme saw its fair share of buzzwords and legitimated vocabulary. The transient nature of buzzwords in the career of organising visions (Swanson and Ramiller, 2003) is evident in the way the focal idea at the start of the programme was integration of healthcare, and how this later shifted to the idea of *connected* healthcare systems with ensured *interoperability (*NAO, 2011). The establishment of an agency named 'Connecting for Health' (NHS CFH, 2005b) to carry forward the NPfIT echoes this thought. The project was also characterised by vocabulary specific to its implementation, such as sealed envelopes, opt-in/opt-out, Choose and Book, Summary Care Record (SCR), Detailed Care Record (DCR), N3 network, etc. Its large scale and public sector setting implied the presence of numerous community stakeholder groups including clinicians, IT suppliers, the government, the Department of Health (DH) and patients, all having varying interests and powers.

What shaped the organising vision of the NPfIT and how did this change over time? To answer that, it would be necessary to investigate what level of need and demand there was for an initiative such as the national programme. Was there a clear felt need for it, or was it as Robertson *et al*. (2010) inferred from one of their respondents, 'an expensive and problematic solution to a non-existent clinical problem'? The benefits of an integrated care record system cannot be denied. A recurring thought voiced by our respondents was that it was a 'good idea'. Ideas however need more than plans, specifications and development to be carried through to realization. The key underlying need was *informed* and *contextualized* specifications which took into consideration the views of the multiple stakeholder groups concerned.

We shall now proceed to a description of our methodology, before presenting our findings.

4 Methodology

This study used a combination of documentary data sources and semi-structured interviews for the purpose of data collection, thus employing data triangulation as well as methodological triangulation (Mathison, 1988; Denzin, 1989). 14 pilot interviews were conducted to gain a general awareness of clinicians' views and concerns regarding EHRs. This was done using opportunity sampling and snowball sampling, allowing the sample to emerge during this phase and facilitating respondent-driven identification of subsequent interviews (Patton, 2002; Dilley, 2000).

This informed our next stage by sensitising us to key issues which were raised by respondents. Documentary data sources included publications by the government, the DH and professional bodies. These provided valuable instruments to study progress and viewpoints surrounding the NPfIT at various points of time. For the primary interviews, in order to hear the perspectives of various community stakeholders, we identified professional groups including the Royal College of GPs, Royal College of Physicians, Royal College of Nurses, and the British Computer Society, which we have classified as 'professional bodies' in Table 1. We also had representations from academia, patient groups and industry. We identified 37 respondents for these interviews. Some respondents belonged to multiple categories (for e.g., belonging to a professional body as well as being linked to a DH role), indicative of the overlap between these different stakeholder groups. The interviews conducted were semi-structured with open ended questions and themes for discussion, allowing respondents to talk about their experiences without being led by the interviewers (Silverman, 2006; Yin, 2009).

Category	Number of respondents
Professional bodies (BCS, RCGP, RCN, RCP, AOMRC)	12
BMA	3
DOH/NHS linked bodies (CFH, NHS IA, NCAB)	14
Policy	4
Industry	6
Academia	8
Patient groups	1
Social Entrepreneurship/Consumer information	1
Other health-IT projects/roles	5

Table 1. Distribution of respondents

5 Findings

On the basis of reviewed literature and our findings from our interviews, we identified the key groups involved in the NPfIT organising vision. Figure 1 depicts these stakeholders in the heterogeneous community and how they have their own views on EHRs. These in turn influenced their views on the need, vision and expectations in relation to the NPfIT which acted as the vehicle for EHRs in this context. The diagram also highlights the main lines of interaction between specific community groups.

Initiated under the banner of integrated healthcare, the NPfIT adopted a centralised top-down strategy, attempting to roll out the 'one system fits all' approach (Brennan, 2007) using "ruthless standardisation" as stated in its early strategy document (DH, 2002). Once it was realised that this was an unworkable approach, the buzzwords changed and the focus shifted to connectivity and interoperability. The change in government in 2010 served as a catalyst towards this, as by September 2010 the DH announced the abandonment of the centralised approach (DH, 2010; Bruce, 2010).The project's political backing (Cross, 2004) was clear, as several respondents pointed out the politically driven nature of the NPfIT. While most respondents conceded that the *idea* of a national care record service was good, the approach taken was considered unfeasible.

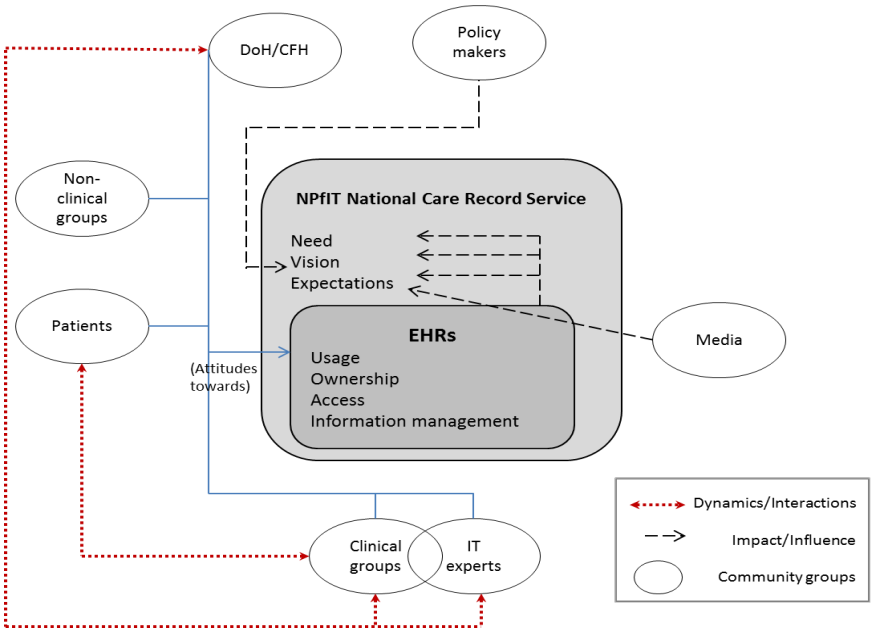

Figure 1. Community stakeholder groups in the NPfIT National Care Record Service organising vision

Launched with the National Care Record Service (NCRS) being one of the core features, later progress reports included other components portrayed as successes. One respondent drew attention to the picture used on the cover of a report on the progress of the NPfIT (NAO, 2006) - that of an x-ray image highlighting the success of the Picture Archiving and Communications System (PACS). PACS was never a part of the initial project specifications however, and this respondent regarded this as a subtle attempt to divert attention from the initial central component of the NPfIT. Media was evidently exploited to pervert the general awareness of the programme's progress, though alongside this there was a significant amount of negative media coverage as well on the project.

With regard to the Spine itself, the NPfIT promoted it as a single national spine intended to facilitate access to people's records from anywhere at any time. An unpublished report drafted by members within the NHS IA and the NCAB on behalf of the Ministerial Taskforce on Information Technology (2003) on the other hand, conceived the notion of a spine as an *individual* spine, with each patient having their own Spine. This got submerged beneath other specifications, and respondents who had been closely involved with the NPfIT at later stages did not seem to be even aware of this initial conceptualisation of the Spine.

> "This is a wonderful example of how things metamorphosed without anybody realising what's happened. The phrase '*the spine',* was first coined by [*personX]*. (....) And [*personX*] had drawn a little diagram which said well, all sorts of these things happen to Mrs Smith. But we need something where the key stuff is you know, if things happen, this thing was running along in some way, and it's holding key stuff and so on. And [*personX*] said, 'like a spine'. And so the phrase 'the spine' became the short hand for this. Now, the change in interpretation that happened, and people didn't even realise they had changed the interpretation, and this reflects how deeply embedded the organisational model of healthcare is. The Spine I just described in that picture, was the spine of Mrs Smith's healthcare (…) I used to say, no we're not creating a national system. We're getting 50 million systems, one for each of us (laughs). (…) This then went into all the stuff I was talking about, the department of health, contracts everything else and the people writing the giant thing. And *they*

called it the spine. And they called it the *NHS spine.* It was the spine of the NHS. It was the spine to hold the *NHS* together. It was like they were deaf!!" – *Clinical informatician, previously with NHS IA*

It was evident that different stakeholders had very different views regarding the use of EHRs, with concerns and needs specific to their professional group. GPs used their records not only as a holistic record to store patients' information, but also as a business tool to manage their GP practices. They regarded themselves as entrepreneurial, business-oriented and holistic by nature, and considered themselves as their patients' medical advocate. Their possessiveness over their patients' information was criticised by their secondary care counterparts who objected to their lack of collaboration in healthcare delivery. Nurses saw themselves in a more supportive and caring role, and used EHRs to gain a better understanding of their patients' conditions.

"And that's because our records, to be honest, are our business tool. If we don't have our records, we can't run our practices and we can't make money (…) And we also have the ethos that GPs operate, that we are the patients' medical advocates. And therefore, we have always been the possessor of the clinical record" – *GP*

"General practitioners record information for themselves to see it later. So the longitudinal record for individual practitioner use is regarded as very special, sacred, and it must be protected. Hospital practitioners record information for others. That's why we write it down. So other people can read it and understand what's wrong with the patients (...) So we're used to sharing information, and sharing information with the patient. GP's aren't." – *Hospital doctor*

While most GP practices were already using computerised records, the concept of a longitudinal record as prescribed by the national programme may have been a source of worry for some clinicians who regarded the EHR as a tracking mechanism which could be potentially used to review their medical decisions at a later point:

"So that the longitudinal record also allowed a retrospective view, and although it was never voiced in public, that was what a number of people were afraid of. That they'd be caught out down the line, having given a less than ideal thing, you see" – *Hospital doctor/NCAB*

The engagement mechanisms employed by the government varied over time. Despite channels for clinical input through entities like the National Clinical Advisory Board (NCAB) and the Care Records Development Board (CRDB), clinicians felt they were being deliberately ignored, causing us to question whether these entities served more as figureheads rather than a genuine effort to understand the needs of the clinical community. Though the NCAB and CRDB were gradually dissolved and replaced by national clinical leads (NCLs), several respondents felt that these leads did not have adequate leadership qualities to fulfil their role of engagement with their peers. Further, while GPs on the one hand felt they were not given due attention, it is possible that the nursing profession felt shadowed by the relative dominance of the doctors, and were even less engaged than them. Some cynics regarded the NPfIT's shifting engagement tactics as a consequence of being unable to garner support from certain user groups, and being forced to resort to other sources of support.

> "All I remember is this clear feeling that ministers thought we were obstructive and unhelpful because we weren't saying yes. My belief is, we'd been proved to be right" – *GP*
>
> "The Department of Health operates in a very simple way. Decide, consult, defend, implement. In other words, involvement is simply a showcase" – *Respondent, Patient organisation*
>
> "I think the reason why there was a concentrated effort to endorse and embrace the RCN was because the British Medical Association was really adamant that the national programme for IT is not working, it's not going to work, and they were quite anti the NPfIT" – *Nurse*

Our findings revealed inter-group dynamics which shaped their views of the programme and its participants. Referring to the first meeting between policy makers and industry experts at 10 Downing Street, a GP commented:

> "These two flashy senior execs said that you know, give us a few billion, and we will computerise the NHS for you. … And these execs, these slick suits…" – *GP*
>
> "The *reason* national records had not taken off across the world, and they haven't still, and they're still struggling, in the UK, is because, they try and build the record around what the companies can offer." – *Hospital doctor, NCAB*

> "They had no experience of delivering healthcare. Whereas the people who had experience of delivering healthcare were seen as being awkward buggers… Everything that they are now saying about what failed in the national programme, we would have told them" – *GP*

This seemed evocative of a general view regarding industry consultants as highly materialistic and opportunistic, with no regard for the actual needs of clinical users. Consequently, suppliers and the clinical community held each other at arm's length, and the continued lack of engagement was a source of anger, frustration and low morale to clinicians.

> "In response to what GPs had wanted, many GPs had very precise requirements, and a GP friend of mine said you have no idea how efficient we can be because of these systems that have been developed in a way that really helps us. And all this new stuff that they're trying to impose on us would slow us down immensely. And one of the central problems of the national programme was they did not have a sufficient understanding of how IT literate people in the health community worked, particularly in acute hospitals, but they assumed that nothing was going on of any consequence" – *Politician*

As seen from the last quote, there was also an underestimation of clinicians' progress with IT despite GPs' proven success with computerised records.

6 Discussion

Though a project where the main end-users were clinicians, the NPfIT had a clear separation between clinicians on one side, and business and industry people on the other, as clinicians' experiences and requirements were generally ignored. The vision was clouded by policymakers' efforts to aspire to levels of health technology implementations attained by other countries such as the US (Stevens, 2004). Suppliers hence had a misplaced source of authority providing them specifications, as these sources had other concerns on their agenda rather than assessing clinical needs. One of the main problems which arose due to lack of clinical engagement was the development of systems which were not fit for purpose, and which were a reflection of what suppliers had to offer, rather than what clinicians actually wanted. As

discussed by Christensen *et al*. (2000), cheaper, simpler and innovative solutions offered by smaller entrepreneurs were overshadowed by complex expensive ones which benefitted the goliaths amongst the suppliers. Not only did this make the programme appear supplier-driven, but our respondents also indicated that there were too many in-betweens in the form of lawyers and the LSPs themselves. Consequently, there was limited communication between the actual subcontracted companies developing the systems, and the end-users, i.e., the clinicians.

The level of dialogue and the influence clinical advisory groups were *allowed* to exert was limited, as is echoed in the sentiments of interview respondents. Surrounded by the general tendency towards NPM (Crawford and Helm, 2009) where consultation with users played an increasingly important role, the NPFIT seemed to conduct these consultations more as an obligation than out of a genuine wish to listen to clinical inputs. Logic dictates that projects learn from past failures, documented evidence from previous projects, and the voice of experience (in this case, being the GPs who had successfully implemented computerised systems in their practices); none of these seemed to have been drawn upon early enough in the NPfIT, thus steering the NPfIT organising vision onto a skewed career path. The nursing professionals seemed to have an underlying feeling of being drowned out by the dominant voices of GPs, and when the programme did attempt to engage with them, they attributed it to the fact that it was only because of a lack of support from doctors. This provides an interesting vignette of how interactions between the DH and clinicians shifted as a result of the tense dynamics between certain groups.

GPs' views of EHRs as their business tool, and their possessive nature of their records, appear to be at odds with the NPfIT's vision of an integrated national care record. The NPfIT seemed to pose a threat to their closure of knowledge (Noordegraaf, 2007) and may have been one of their primary reasons for dissent. Secondary care respondents however seemed more welcoming of the national care record service concept, and this may have been a cause for concern for GPs who were highly protective of their business tools and data. As indicated by some of our interviews, they saw no reason to share information which they had worked hard to organise and store in their own computerised systems. These tensions served as

possible antecedents to several debates surrounding information sharing and access to patients' data.

The persuasive role of media and government publications was touched upon, including subtle cues such as misleading images on cover reports, to assure community groups that the organising vision was on track. Other interviewees also acknowledged that there was much publicity surrounding the NPfIT, and no doubt the press coverage also had an influence on the general public perception regarding the national programme. The interplay of these diverse views and media publicity added momentum to the level of dissent, and likely acted as triggers for rethinking the approach adopted by the project.

The dominant and controlling role played by NPfIT management and policy makers overpowered the potential for innovation, which is the central focus of an organising vision. Despite the existence of clinician-led system specifications around the time the NPfIT began, these were ignored, misinterpreted and completely misrepresented to the extent that the very notion of the 'Spine' as we know it today is in reality not what was envisioned by clinicians at the time. This could be due to manipulations by dominating stakeholder groups and their lack of understanding of clinical needs to the extent that they were oblivious to their misinterpretation of the specifications. The way community members engage in discourse steers the shape and course of the OV. It would also seem that prevalent institutionalised notions and the power of larger profit-seeking IT suppliers overpower creative and new ideas, thus presenting a conflict between the diffusion of innovative technologies (Christensen *et al*., 2000), which is what OVs are centred around, and the views of the dominant community members involved in the OV. This was what happened when the clinicians' specifications for individual Spines (for each person) were overridden by the dominating idea of a single NHS Spine.

The increasing incidence of hybridization between clinicians and managers/leaders (Hunter, 1992; Montgomery, 2001; Fitzgerald, 1994), was evident from our findings. The NPfIT began with a marked chasm between the project leaders and the end users, i.e., the clinicians, giving rise to much dissent due to the lack of clinical engagement. While there were clinical advisory boards in place, the level of influence they were

allowed to exert is questionable, as is echoed in the sentiments of interview respondents. While GPs, acting as managers of their own practices, were a hybrid role established even prior to the programme, the establishment of national clinical leads (NCLs) incorporated new roles specific to the NPfIT.

In their work on organising visions, Swanson and Ramiller (1997) drew distinctions between IS subcultures and other groups within the community. However, with the emergence of professional hybrids (Ferlie *et al*., 2011; 2012), the once clear and rigid boundaries distinguishing specific professional roles are growing increasingly blurred. Our data also revealed traces of IS subcultures within the clinical community, suggesting the absence of a rigid division between IS subcultures and clinical community inputs in this context. While there was dissatisfaction voiced by clinicians regarding the approaches taken by IT suppliers in the NPfIT, much of the knowledge and experience which clinicians (particularly in primary care) leveraged on was a result of their interest in IT. In investigating the prevalent discourses on which the NPfIT was positioned, we regard IT suppliers as a separate group from the mainstream community as proposed by Swanson and Ramiller (1997), but would suggest that the IS subculture is one which is increasingly overlapping into the clinical community, rather than outlining it as external to the community as depicted in their model.

Despite the existence of these IT literate clinicians for several years, as evidenced by the many independent GP systems which sprouted during the 1980's and 1990's, there has been little research done on this form of professional hybrids, and there was a tendency on the part of the NPfIT management to brush off the presence of these professionals. As one of our respondents explained, there was a general notion that clinicians were highly independent individuals not accustomed to being told what to do, and who didn't know what technology would be best for them. Consequently, they were deliberately not included to a great extent in consultations, and it was expected that they would just have to learn how to use the new imposed systems. There was a clear underestimation, or perhaps even ignorance, of the capabilities of clinicians despite their proven skill in both developing as well as implementing and using computerised records in primary care.

7 Conclusion

This paper applies the concept of organising visions to the NPfIT, which served as the carrier for the EHR organising vision in England. Normally used in the context of broader trends and new technology innovations, we extend the usage of the term to this public sector project, as it served as the primary platform for discussions and implementations related to EHRs during this period. We illustrate how organising visions in the public sector have to contend with the control imposed by governments in addition to other community inputs.

While a detailed discussion of the entire evolution of the NPfIT vision is beyond the scope of this paper, we touch upon some of the dominant buzzwords which emerged and how these shifted with time. Our primary focus has been the multiple stakeholder groups present in the heterogeneous community of the NPfIT organising vision, and how these interacted with each other and with the project. We highlight the controlling influence exerted by some of the stronger community stakeholder groups, and how organising visions metamorphose from their original definitions as a consequence of manipulations and ignorance of those involved. We discuss the varied needs of community stakeholders who provide inputs to organising visions, and illustrate how even amongst clinicians there are very different requirements and concerns regarding the use of EHRs, emphasising the challenges of translating these multiple requirements into a single 'one size fits all' approach as was initially adopted by the NPfIT.

The portrayal of GPs as entrepreneurial, business-like and possessive of their records provides a character sketch which could explain their keen interest in proper use of technology for the purpose of patient data entry. We highlight the presence of a hybrid role, which though existent for a while now, has not been studied in the context of professional hybrids: that of the GP-IT professional. We suggest that this is an area with scope for much further research, and would provide valuable insights for future research on the area of professional hybrids.

References

Ahmad, Y. & Broussine, M. (2003). The UK public sector modernization agenda. Public Management Review, 5(1):45-62.

Alshawi, S., Missi, F. & Eldabi, T. (2003) Healthcare information management: the integration of patients' data, *Logistics Information Management*, 16(3/4):286-295.

Anderson, J.G., Rainey, M.R. & Eysenbach, G. (2003). The impact of cyberhealthcare on the physician-patient relationship. Journal of Medical Systems, 27(1):67-84.

Atkinson, C., Eldabi, T., & Paul, R.J. (2002) Integrated approaches to health informatics research and development, Logistics Information Management, 2(15):138-152.

Avison, D. & Young, T. (2007). Time to rethink healthcare and ICT? Communications of the ACM, 50(6):69-74.

Bates, D.W., Ebell, M., Gotlieb, E., Zapp, J. & Mullins, H.C. (2003). A proposal for electronic medical records in U.S. primary care, *Journal of the American Medical Informatics Association*, 10(1):1-10.

Benson, T. 2002. Why general practitioners use computers and hospital doctors do not – Part 1: incentives. *BMJ*, 325:1086-9

Brennan, S. (2007). The biggest computer programme in the world ever! How's it going? *Journal of Information Technology*, 22:202-211.

Brown, T. (2001). Modernisation or failure? IT development projects in the UK public sector. *Financial Accountability* and Management, 17(4):0267-4424.

Bruce, S. (2010). NPfIT future is modular and locally-led. *Ehealth Insider*, 9 September 2010.

Burton, L.C., Anderson, G.F. & Kues, I.W. (2004). Using electronic health records to help coordinate care. *The Milbank Quarterly*, 82(3):457-81.

Christensen, C.M., Bohmer, R. and Kenagy, J. (2000). Will disruptive innovations cure healthcare? *Harvard Business Review*, 78(5):102-111.

Committee of Public Accounts. (2000). First report, Improving the delivery of government IT projects. [WWW: http://www.publications.parliament.uk/pa/cm199900/cmselect/cmpubacc/65/6503.htm]

Crawford, L.H. & Helm, J. (2009). Government and governance: The value of project management in the public sector. *Project Management Journal*, 41(1):73-87.

Cross, M. (2004). In sickness or in health? *IEE Review*, 50(10).

Cross, M. (2005). Public sector IT failures. *Prospect*, October 2005, 48-52.

Currie, W. L. (2008). Evaluating the governance structure for public sector IT: The UK National Programme in the health service. In: Irani, Z. and Love, P. (2008). (eds). *Evaluating information systems: Public and private sector*. Butterworth-Heinemann: Oxford.

Davidson, E. & Reardon, J. (2005). Organising visions for IT in healthcare: Analysis of the discourse surrounding electronic health records. Academy of Management Conference, Honolulu, Hawaii.

Davidson, E. 2006. A technological frames perspective on information technology and organizational change. Journal of Applied Behavioral Science. 42(1):23-29.Denzin, N.K. (1989). 'The research act'. 3rd ed. Englewood Cliffs, NJ: Prentice Hall.

DH. (2002). Delivering 21st century IT support for the NHS: National strategic programme.

DH. (2010). The future of the National Programme for IT'. *Press release*. 9 September 2010.
Dilley, P. (2000). 'Conducting Successful Interviews: Tips for Intrepid Research'.Theory Into Practice*,* **39**(3).
Doolin, B. and Lowe, A. 2002. To reveal is to critique: Actor-network theory and critical information systems research. *Journal of Information Technology,* 17:69-78.
Ellingsen, G. & Monteiro, E. (2008). The organizing vision of integrated health information systems. *Health Informatics,* 14(3):223-236.
Ferlie, E., Fitzgerald, L., McGivern, G., Dopson, S. and Bennett, C. (2011). Public policy networks and 'wicked problems': A nascent solution? *Public Administration,* 89(2):307-324.
Ferlie, E., McGivern, G. & Fitzgerald, L. (2012). A new mode of organizing in healthcare? Govermentality and managed networks in cancer services in England. *Social Science and Medicine*, 74(3):340-347.
Fitzgerald, L. (1994). Moving clinicians into management: A professional challenge or threat? *Journal of Management in Medicine*. **8**(6)32-44.
Goldfinch, S. (2007). Pessimism, computer failure, and information systems development in the public sector. *Public Administration Review*, 67(5):917-929.
Goldschmidt, P.G. (2005) , Communications of the ACM, 10(48):69-75.
Goodhue, D.L., Wybo, M.D. & Kirsch, L.J. (1992) The impact of data integration on the costs and benefits of information systems, *MIS Quarterly*, 16(3):293-311.
Greenhalgh, T., Procter, B., Wherton, J., Sugarhood, P. & Shaw, S. (2012). The organising vision for telehealth and telecare: Discourse analysis. *BMJ Open,* 2, e001574.
Hendy, J., Reeves, B.C., Fulop, N., Hutchings, A., & Masseria, C. (2005). Challenges to implementing the national programme for information technology. *BMJ Online*, 331.
Herzlinger, R.E. (2006) Why innovation in health care is so hard, *Harvard Business Review*, 84(5):58-66.
Hier, D.B., Rothschild A., LeMaistre A., Keeler J. (2005) Differing faculty and housestaff acceptance of an electronic health record, *International Journal of Medical Informatics,* 74:657-662.
HM Government. (2006). Transformational Government: Enabled by technology. *Annual Report*.
Hunter, D.J. (1992). Doctors as managers: Poachers turned gamekeepers? *Social Science and Medicine,* 35(4):557-566.
Ilie, V., Van Slyke, C., Parikh, M.A. & Courtney, J.F. (2009) Paper versus electronic medical records: the effects of access on physicians' decisions to use complex information technologies, Decision Sciences, 2(40):213-241.
Jones, S. (2008). Social dimension of IT/IS evaluation: Views from the public sector. In: Irani, Z. and Love, P. (2008). (eds). *Evaluating information systems: Public and private sector*. Butterworth-Heinemann: Oxford.
Klecun-Dabrowska, E. & Cornford, T. (2002). The organising vision of telehealth. ECIS 2002, June 6-8 2002, Gdańsk, Poland.
Klein, R. (1995). Big bang health care reform: Does it work? The case of Britain's 1991 National Health Service reforms. *The Milbank Quarterly,* 73(3):299-337.

Kurunmäki, L. & Miller, P. (2006). Modernising government: The calculating self, hybridization, and performance measurement. Financial Accountability and Management, 22(1):0267-4424.

Liang, L. (2007). The gap between evidence and practice. *Health Affairs,* 26 (2), w119-w121.

Lucas, H.C., Swanson, E.B. & Zmud, R.W. (2007). Implementation, innovation and related themes over the years in information systems research. *Journal of the Association for Information Systems.* 8(4):206-210.

Maguire, S. (2007). Twenty five years of national information systems in the NHS. Public Money and Management, 27(2):135-140.

Mantzana, V., Themistocleous, M., Morabito, V. & Soulioutis, K. (2008). Evaluating actors and factors associated with healthcare information systems. In: Irani, Z. and Love, P. (2008). (eds). Evaluating information systems: Public and private sector. Butterworth-Heinemann: Oxford.

Mark, A.L. 2005. Modernising healthcare – is the NPfIT for purpose? *Journal of Information Technology*, 22:248-256.

Marshall, M. (1998). How well do general practitioners and hospital consultants work together? A qualitative study of cooperation and conflict within the medical profession. British Journal of Medical Practice, 48, 1379-1382.

Mathison, S. (1988). 'Why Triangulate?', *Educational Researcher*, 14.

McGivern, G., Currie, G., Ferlie, E. and Fitzgerald, L. (2012). Identity work on the dark side: Hybrid manager-professionals and the reconstruction of professionalism. *Working Paper*.

Montgomery, K. (2001). Physician executives: The evolution and impact of a hybrid profession. *Advances in Health Care Management,* **2**:215-241.

Morrell, K. (2006). Policy as narrative: New Labour's reform of the National Health Service. Public Administration, 84(2):367-385.

Murray, J.P. (2001). Recognising the responsibility of a failed information technology project as a shared failure. *Information Systems Management,* 18(2):1-5.

NAO. (2006). The National Programme for IT in the NHS. *Report by the Comptroller and Auditor* General, HC 1173, June 2006.

Newman, J. and Vidler, E. (2006). Discriminating customers, responsible patients, empowered users: Consumerism and the modernization of healthcare. Journal of Social Policy, 35(2):193-209.

NHS. (2000). The NHS plan: A plan for investment, A plan for reform. Crown Copyright.

NHS CFH. (2005a). A guide to the national programme for information technology.

NHS CFH. (2005b). Making IT work. Issue 4, July 2005.

Nooredegraaf, M. (2007). From "pure" to "hybrid" professionalism: Present-day professionalism in ambiguous public domains. Administration and Society, 39(6):761-785.

Parliamentary Office of Science and Technology. (2003). Government IT projects. POST Report 200, July 2003.

Patton, M.Q. (2002). Qualitative Research and Evaluation Methods.Sage: London.

Robertson, A., Cresswell,K., Takian, A., Petrakaki, D., Crowe, S., Cornford, T., Barber, N., Avery, A., Fernando, B., Jacklin, A., Prescott, R., Klecun, E., Paton, J., Lichtner, V., Quinn, C., Ali, M., Morrison, Z., Jani, Y., Waring, J., Marsden, K. & Sheikh, A. (2010). Implementation and adoption of nationwide electronic health records in secondary care in England: Qualitative analysis of interim results from a prospective national evaluation. *BMJ*. 341: c4564.

Robinson, G., Beaton, S. & White, P. (1993). Attitudes towards practice nurses – survey of a sample of general practitioners in England and Wales. *British Journal of General Practice*, 43:25-29.
Silcock, R. (2001). What is e-government? Parliamentary Affairs, 54:88-101.
Silverman, D. (2006). 'Interpreting qualitative data: methods for analysing talk, text and action'. London, Thousand Oaks: Sage Publications
Smith, R. (2005). The private sector in the English NHS: From pariah to saviour in under a decade. Canadian Medical Association Journal, 173(3): 273-274.
Stevens, S. (2004). Reform strategies for the English NHS. *Health Affairs*, 23:33-44.
Sugden, B., Wilson, R., & Cornford, J. (2006). Reconfiguring the health supplier market: Changing relationships in the primary care supplier market in England. Technical Report Series, No. CS-TR-951, March 2006.
Swanson, E.B. & Ramiller, N.C. (1997). The organising vision in information system innovation. Organisation Science, 8(5):458-474.
Swanson, E.B. & Ramiller, N.C. (2003). Organising visions for information technology and the information systems executive response. *Journal of Management Information Systems*, 20(1):13-50.
The NHS Confederation. (2003). The national strategy for IT in the NHS. Briefing. No. 88. [WWW: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4071399.pdf]
Wang, P. & Ramiller, N.C. (2009). Community learning in information technology innovation. MIS Quarterly, 33(4):709-734.
Wenger, E.C. and Snyder, W.M. 2000. Communities of practice: The organizational frontier. *Harvard Business Review*, 139-145.
Yin, R.K. (2009). Case Study Research: Design and Methods. 4th ed. Sage: London