Children's services in the age of information technology: What matters most to frontline professionals

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Abstract

Summary

The last two decades have seen information systems featuring prominently in calls for the modernisation of the UK social care system. However, critics have maintained that these systems are of limited value to social care professionals whose design and implementation is driven by a preoccupation with performance management and a culture of professional audit and accountability, precepts of 'managerialism'. However, this area of research has often suffered from lack of focus on how technological changes affect public administration and service delivery and often characterises technology as a politically neutral tool detached from its socio-political context whilst also ignoring the strategic predispositions of human service professionals.

Findings

This research was conducted in three local authorities in England. Using the 'technological affordance' perspective, we contend that the way social workers interact with Integrated Children's System is shaped by the discord between socio-historically evolved professional values epitomising the social work profession and managerialist reforms promoting standardised ways of performing it.

Application

Integrated Children's System has transformed social work from an art to a technical activity, dominated by unimaginative and routinised working practices. Social workers are becoming peripheral figures and this is where social work needs to be reclaimed. Policymakers need to rethink taken for granted assumptions that practitioners would replace their professional expertise with technology and realise that the effective use of Integrated Children's System depends on bureau-professionalised judgements of social workers. Whilst specific patterns of technology usage can be developed and institutionalised, real objectives of children's social services should not be sacrificed.

Keywords Social work, social work practice, social work values, managerialism, public sector, management

Introduction

Recent years have witnessed an increase in government's use of information and communication technologies (ICTs) in public administration and delivering government services (Buffat, 2015; Snellen, 2005). Concurrently, the last two decades have also seen information systems (ISs) featuring prominently in calls for the modernisation of the UK social care system (Parton, 2009; White, Wastell, Broadhurst, & Hall, 2010). It was argued that children's services in England and Wales would benefit from the introduction of a fully networked and integrated ISs whose standardised decision-making protocols and tools would underpin enhanced service delivery (Hill & Shaw, 2011; Pithouse, Hall, Peckover, & White, 2009; Wastell & White, 2014).

However, critics have maintained that these systems are often unfit for purpose and of limited value to social care professionals offering poor value for investment (White et al., 2010). Whilst some researchers have highlighted the inflated claims of the effectiveness of these systems, others have reported them to be over-bureaucratised systems whose design and implementation is driven by a preoccupation with a culture of professional audit and accountability (Hill & Shaw, 2011; Parton, 2009; Shaw et al., 2009; Tregeagle & Darcy, 2008; Tsui & Cheung, 2004). ISs have, from this view, reduced, rather than increased, the time that social workers spend engaging with children, families and other service users (Gillingham, 2013).

Although implementation of new technologies change the way professional services are delivered and professional duties are performed, this area of research has often been conflated with public management research (Lips & Schuppan, 2009, p. 739). This implies lack of focus on how technological changes affect public administration (Pollitt, 2011) and how the modern technologies – aimed at curtailing discretionary powers of professionals and proceduralising the profession – affect service delivery (Buffat, 2015). Furthermore, whilst ignoring the strategic predispositions of human service professionals, 'technology' is often depicted as a politically neutral tool whose objective characteristics can be detached from the social or political context in which it is designed, developed and used (Labatut, Aggeri, & Girard, 2012). Refuting this assumption and following Gillingham (2016), this article will show that the introduction of advanced information technology (IT) systems leads to changes in the situated practices of social workers. Developing the argument, this article will answer the questions 'what actually happens when government brings in a new IT system to modernise a public service' and 'how do policy level aspirations and professional level predilections intertwine to shape the phenomenon of technological appropriation in children's services'? The article shows the ways in which the introduction of the Integrated Children's System (ICS) in England and Wales was influenced by the policy context, its appropriation in professional practice was embedded in institutional structures and how the intentions and interpretations of professionals were associated with professional values.

The article will argue for adopting a concept of technological affordances to find an intermediate position between extreme theoretical positions of 'technology being dominant actor' (technological determinism) and 'the social shaping of technology' (social determinism) to study technology-led change in public services (Buffat, 2015; Pollitt, 2011). The affordances perspective allows the research to focus on the

objective characteristics of technology whilst relating these to purposive, goal-oriented human action (Strong et al., 2014). The theoretical concept of 'affordance' attributes meaning to human actions whilst highlighting its interaction with functional properties of technology, thus affording a language to highlight the process of context-dependent social actors using technologies in particular ways for particular purposes (Greenhalgh & Stones, 2010, p. 1286).

These particular ways of IT system usage can be institutionalised when professionals perceive these as affording or facilitating them with their professional work. The affordance perspective can generate insights into this reshaping of professional practices, which means untangling the perceptions that lead professionals to adopt specific ways of appropriating technology when performing professional tasks. This article argues for better understanding of the process of technology appropriation in public/human service organisations and for better development of technology that would assist practitioners with their daily professional work.

The next section narrates an account of the introduction of ICS into UK social services, followed by the explication of a theoretical case for adopting the affordance perspective outlined in the proceeding section.

Research context – Introducing the ICS into social services in the UK

Social services departments and social work profession as a discrete entity were established in the 1970s in England and Wales following recommendations made in the Seebohm report (Payne, 2005). In its early days, even though social services were located within local authorities, the profession enjoyed significant professional autonomy and adhered to professional principles rather than inherent bureaucratic ideals of local authorities (Payne, 2005). There was less hierarchical control and professionals had professional autonomy (Harris, 1998). However, the managerial reforms that occurred from the early 1980s onwards challenged the already fragile control the UK social services had over the design of service delivery (Kirkpatrick, Ackroyd, & Walker, 2005). Furthermore, the last 20 years have seen a rise in managerialism that has resulted in employment of managerial strategies within local authority social services to control and proceduralise professional practice (Evans, 2013).

> Managerialism is the idea that management is a discrete activity drawing on a distinct set of notions and skills that, together, assert the right of managers to manage, employing techniques primarily drawn from the business sector in the pursuit of economy, efficiency and effectiveness. (p. 742)

As a result, since the 1980s, key initiatives of management practices, following performance indicators, proceduralisation and audit culture – inherent to the private sector – have been adopted and implemented in the UK public sector (Harris, 2003), which has led to reduction in status and professional autonomy of public sector professionals (Mueller, Valsecchi, Smith, Gabe, & Elston, 2008). Furthermore, the UK social services became increasingly dominated by centrally defined criteria of service delivery and standardised procedures for assessment and planning. Professional autonomy was replaced with external accountability and performance assessment techniques replaced work effectiveness as government wanted to move

back into an era of 'bureau-professional' regimes to bring consistency in service delivery (Clarke, 1998). This was the start of a new era with increased proceduralisation, transparency and accountability aimed at curbing the incidences of professional malpractice (Alvesson & Thompson, 2005; Carey, 2008; Whipp, Kirkpatrick, & Kitchener, 2004).

Inherent to these changes, government adopted a central role in determining means and ends of providing effective services to clients, challenging the status of professionals as equal partners (Evans, 2013; Harris & White, 2009). Government – by drawing strong legislations and offering departmental guidance – decided to become more active in prescribing how local services were to be run. The aim was the transfer of control from professionals to managerial elite (Whipp et al., 2004), borne directly out of this changing institutional context (Leicht, Walter, Sainsaulieu, & Davies, 2009). These ambitions provided the broad context of administrative reforms introduced by the Labour Government of 1997, and the political rationale for the view that the introduction of new IT could underpin a shift to more standardised and transparent work practices in the UK public sector, including social services (Budd, 2007).

One such initiative was the introduction of the national specification of the ICS, designed to improve the standard of services provided to children of England and Wales (see Shaw et al., 2009). ICS allows social workers to record details of case assessment, planning and intervention. At the heart of the system is an electronic Assessment Framework that standardises and systematises provisions of services, allowing managers and social workers to use information efficiently and effectively (Hill & Shaw, 2011). At the time when ICS was introduced, a key claim was that it would ensure consistency across decisions made by practitioners and assist them with predicting important outcomes regarding cases (Ince & Griffiths, 2011).

A number of commentaries, however, have highlighted the bureaucratic rigidities associated with ICS (see Garrett, 2005; Hill & Shaw, 2011; Parton, 2008; Pithouse et al., 2009). Whilst institutional changes prioritised data entry rather than engagement with fellow professionals or those in need of support (Burton & van den Broek, 2009; Ponnert & Svensson, 2016), the system usage increased the risk of failure in the coordination of care services (White et al., 2010). These failures have commonly been ascribed to the inherent limitations of ICS and the proceduralism it imposed on social work (Carrilio, 2008; Wastell and White, 2014; White et al., 2009).

These changes resulted in professional compliance of social workers with new administrative processes and regulations displacing custodial norms of engagement with youth (Dustin, 2007). Social services have been transformed into a profession that relies less on collegiality and more on centrally guided decision-making, i.e. a visible shift of power from professionals to managerial cohort where IT is a medium used to enhance centralisation and managerial control of day-to-day operations. The initiative to allow more functional decentralisation (Budd, 2007) has in fact led to centralisation of service design and delivery.

However, we suggest that the patterns of technology usage in a professional setting are not shaped just by institutional and managerial reforms, but also by the

perceptions of professionals toward IT and IT-led changes. This point is germane to our theoretical concern with 'social informatics' and 'technological affordances'.

Social informatics and technological affordances

'Social Informatics' is the interdisciplinary study of how ISs are designed, implemented, adopted and appropriated in particular institutional and organisational contexts (Kling, 2007). Recent debates in social informatics literature assert that the affordance perspective can help researchers in developing better theories to understand the impact of IT on organisations and (non)uniform patterns of its usage (Strong et al., 2014).

Gibson, who wanted to find balance between objective and subjective elements of behavioural accounts, developed the concept of affordance in the field of ecological psychology. Gibson (1986) contends that users only interact with a technological artefact after assessing its usefulness in achieving their goals. This view conceptualises the affordances as possibilities and limits for an action that an artefact offers a user depending on his intentions. Building on Gibson's work, Norman (1990) argues for intentionally inscribing affordances into technology independent of users' perception – thus allowing for standardised technology use – whilst Hutchby provides an interactionist view of affordances where they are not predetermined, but depend on how users interpret technology's functionality within the context of their interaction. Hutchby (2001) argues for fluidity of affordances in relation to users due to technology's entanglement with human actors and their intentions and interpretations.

Without discrediting the importance of social interpretations of technology, Hutchby contends that affordances are finite, and limitations put by the functional features of a technology cannot be exterminated through social interpretations. Technology has functional properties (digital functionality in the case of IT) (Petrakaki, Klecun, & Cornford, 2014) that enable users to interact with it to achieve their goals (Leonardi & Barley, 2008). This interactionist approach, however, suffers from a lack of emphasis on contextual features of the situation. Bloomfield, Latham and Vurdubakis (2010) and Chemero (2003) have highlighted how broader institutional and socio-cultural systems play an important role in shaping patterns of technology usage. They argue that affordances, i.e. how users perceive a technological artefact in terms of its usefulness cannot be completely reduced to its functional properties or their own intentions as they are embedded in the context of their usage, i.e. social services. This view conceptualises affordances as potential utility of technology due to its specific functional feature that a user is able to perceive, interpret and engage with, in order to achieve his personal or professional goals. Here, the implicit implication is that technology not only allows a user to achieve his goals by engaging with it in a certain way, but also by restraining him from engaging with it in all other ways. Thus, affordances are not only enabling but can also be constraining (Strong et al., 2014), often resulting in its non-prescribed and non-standardised usage. Thus, whilst we contend that technological affordances are nurtured in a professional context where human actors interact with these technologies, we also imply that these interpretations can give rise to patterns of technology usage that are different from desired patterns as envisioned by senior management.

We believe that the perspective of 'affordances' can provide valuable intellectual assistance to address these challenges of studying ICS in children's services, its impact on the profession of social care, and its documented failure and chasm between intended and actual engagement of social care professionals with ICS.

Research design

In order to conceptualise technology-induced changes in public service organisations and the process of ICS appropriation in social work children's services, a multiple case study design was adopted as it is more robust and renders more significance and credibility to the research (Yin, 2014), thus leading to better theoretical developments and stronger literary contributions.
Case studies setting

This research was the first author's PhD project. In order to gain access, 10 local authorities' children's services were contacted and three sites were selected out of four who agreed to take part. The three selected authorities differed in terms of population and configurations of service provision, i.e. a small-independent authority (Pen-y-Ghent), a medium-sized authority (Whernside) serving a mix of rural and urban populations and a well-reputed authority (Ingleborough) based in a metropolitan city in England. Pseudonyms (i.e. Pen-y-Ghent, Whernside and Ingleborough) are used to refer to local authorities in order to maintain their anonymity.

Pen-y-Ghent officially went live with their version of ICS in 2007. Whernside, on the other hand, experienced several ISs over the years before finally settling with their current version of ICS. Ingleborough went live with ICS in 2007, signing a contract with a vendor different to the one providing the system to children's services in the preceding two authorities. Two additional ISs were also deployed at Ingleborough serving additional purposes such as managing relevant casework, statistics and finances. These settings also ensured that at the time of data collection, all three sites had been using ICS for a number of years and therefore the responses we gathered cannot be categorised as professional resistance to a newly introduced technology. Rather, this technology has attempted to embed itself within the plateau of the social care profession with little success. This also implies that the reason behind this non-assimilation is not mere technical inefficiency of ICS; instead, it is the underlying clash between technological ways of doing work and the essence of the social care profession.
Data gathering

Findings for this research were chiefly derived from semi-structured interviews. Since social phenomena are context dependent and rely on the notion of agents to become observable (Rubin & Rubin, 2005), interviewing was deemed as an appropriate method of gathering data. Detailed semi-structured interviews were conducted with professionals at different hierarchical levels across the three case study sites to elicit a comprehensive view of the process of technology appropriation in children's services. A breakdown of the data collection is given below in Table 1.

Table 1. Data collection.

Pen-y-Ghent	Whernside	Ingleborough
Professional role (number of interviewees)		
Information system manager (2)	Information system manager (1)	Information system manager (1)
Service manager (2)	Practice manager (3)	Group manager (1)
Safeguarding officer (1)	Group manager (1)	Service manager (1)
Team manager (1)	Senior practitioner (1)	Consultant social worker (1)
Senior practitioner (1)	Social worker (3)	Social worker (4)
Social worker (4)		

The interviews were conducted over a period of 10 months in 2013–2014. Each interview on average lasted for 70–90 minutes and participating local authorities and participants were assured of complete anonymity.

Data analysis

Data from interviews were analysed using the three-stage coding scheme, i.e. 'Open', 'Axial' and 'Selective' (Harris & Ogbonna, 2002). The aim of the coding process was to highlight affordances related to the functionality of ICS and how they were enacted and realised in practice. The first stage was 'Open Coding', which involved 'line-by-line analysis of text and the subsequent "deconstruction" of data into emerging categories' (Harris & Ogbonna, 2002, p. 37) that represented digital functionality of ICS. The second phase was 'Axial Coding' where categories were further refined on the basis of surfacing patterns and themes associated with them were identified. This stage led to the development of subcategories with relationships highlighting the role functionality of ICS plays in enabling a professional to provide social care. The final stage of 'Selective Coding' involved the 'evaluation of selected data that appears particularly relevant in refining the emerging interpretation' (Harris & Ogbonna, 2002, p. 37).

This process of coding ensured that a rich understanding of ICS appropriation was developed, facilitating a critical discussion of selected findings from our research. The next section highlights how professionals appropriated ICS, how these appropriations were embedded in the ever-changing institutional context of social services that is experiencing a rise in audit culture and reduction in professional autonomy of social workers under the precept of managerialism, and what these changes bode for the social service profession and professionals. These findings are interspersed with salient quotations of social care professionals from three case study local authorities and analysed in light of relevant literature to highlight our interpretation of data. This lays the foundation for discussion in the following section that develops the analysis further, answering the research questions mentioned in the 'Introduction' section.

Findings

This section of the article – presenting excerpts from interviews – shows the ways in which social care professionals across three participating authorities appropriated

particular features of ICS to perform their professional duties, amidst the changing institutional demands on their profession. As has been argued in preceding sections, ICS was deployed in ways conforming to managerialist programmes of modernisation in the UK social services; however, the interview material shows a range of responses of social workers that reflect them employing their situational rationalities to interpret modern social work and the role of ICTs in delivering these public services. This section highlights that what shapes the way social workers interact with ICS is the discord between socio-historically evolved professional values epitomising the social work profession and managerialist reforms promoting standardised ways of performing it.

ICS has introduced new forms of control leading to standardisation of social work turning it into machine bureaucracy. This follows the wider changes in the definition of good professional practices and the required professional competencies (Heffernan, 2006). ICS – adhering to state designed wider auditing and accountability criteria for social services (Clark & Newman, 1997) – has replaced professional efficiency with performance assessment techniques. It resonates with precepts of managerialism, that is managers rather than professionals that hold the power to organise, through regulations and audits of professional practices (Burton & van den Broek, 2009). Acting as regulators, technologies – coded with functional inscriptions – legitimise and afford certain aspects of work and constrain others, whilst also prescribing how to achieve those ends (Akrich & Latour, 1992; Ley & Seelmeyer, 2008). This 'management using technology' ideology was the reason that the majority of interviewed frontline practitioners deemed ICS as a tool implemented by senior management to enhance their control over social care provision. These rules seem to have created pressure for social workers to spend time updating ICS rather than spending time with families and children.

> We spend most of our time in the office recording basically and less time out doing interaction with the families … I think it is because of government regulations. I think it is because of all the policies and procedures we have, we have to record everything. Things have to go in certain forms, you know that is just the way it is. (Pen-y-Ghent-SocialWorker2)

Social care reforms further regulated the profession by recommending the organisation of data in certain ways using ICS to standardise professional practices that further reflects government's preoccupation with professional audit and measurement via ICS (Gillingham, 2016). This directive approach aims at determining the exact ways in which the social work needs to be performed. ICS is highly interventionist, introducing new forms of 'control at distance' (Rose & Miller, 1992), i.e. a more ubiquitous form of control that would be internalised by frontline social workers. Some respondents – affirming this internalisation – deemed this controlling aspect of ICS as enabling as it assists them with information gathering and performing their professional tasks: 'So when we are actually on home visits, it does help you think, sometimes, it helps you to get into the frame of mind where you're trying to gather information that will fit into the assessment' (Whernside-SocialWorker2).

Similarly, some respondents argued that controlling and standardising is part of the institutional and professional support structure enabled by ICS.

> But for me, I know that you [manager] had that opportunity to read [casework], whether you [manager] read or not, that responsibility is off my back now. I would like them [managers] to read my stuff to make sure that I haven't missed something important in the case because you know I am only a human being and it happens. If they don't, then that's up to them. I am going to go through [the] assumption that you read it as a manager and have agreed with what my decision is. (Whernside-SeniorPractitioner)

However, this technological intervention has also made it possible for professionals to justify their decisions by hiding behind computerised procedures (Buffat, 2015). This has resulted in professionals not wanting to exercise their professional autonomy to retaliate against the control ICS enacts as this may affect the responsibility they bear towards clients. Whilst ICS does not allow for 'blame-shift', it certainly facilitates 'responsibility sharing', inherent in the proceduralism it propagates where work done by frontline professionals has to be 'approved and authorised' by their managers as was highlighted by a senior practitioner at Pen-y-Ghent.

However, this argument of 'responsibility sharing' does not align with professional values held by professionals who conceive ICS's sole purpose is to enable the child protection process. The effective engagement between professionals and technologies depends on the extent of alignment that exists between values demonstrated by technologies and those held by professionals (Evans, 2013). The alignment of the two can enhance the experience of professionals using technology. There is evidence that social care professionals embrace institutional and bureaucratic pressures and procedural changes when they fall in line with professional values they hold, which reinforces their viewpoint of good professional practice. For Evans (2013, p. 744), 'Any set of rules is likely to have the potential of use in a range of different ways and, as such, they may be a resource to promote professional goals as much as management control.' Our research provided evidence of this where some professionals deem this reliance on objectivity and prescriptive outlook as enabling.

> I like the idea of the system; I like being told exactly what I need to be doing, because sometimes if you have got so much to do, it becomes hard to focus, ICS tells you all the procedures and what parts to fill in, so I think that it is really good and it keeps you on top of everything. (Pen-y-Ghent-SocialWorker)

However, data also highlighted the tussle between expectations of procedural excellence and need of procedural pragmatism leading to reliance on professional autonomy of social workers. Whilst procedural expectation requires managers to proofread all the work done by frontline professionals, pragmatism forces them to often tick boxes due to lack of time, urging them to put faith in professional expertise of frontline professionals.

> There are other documents within my unit that people generate that I should look at … they send it to me, and I should approve it. But I never do that, somehow, I don't have time to read everything. Actually I can see that being more of an issue with framework, there's much more of those delegation issues. I know my team very well, I think I feel less of a need to check up on everything. (Ingleborough-ServiceManager)

Whilst ICS makes it possible and managerial values demand for managers to monitor professional work of their subordinates via ICS, there is an implicit professional understanding that not all managers do it. Professionals who deem their

discretionary powers as the core aspect of their profession find these regulatory powers of ICS to be constraining and an attempt at de-professionalisation (Healy & Meagher, 2004). This also symbolises changing professional values being profiled into the essence of the profession through these technologies.

> Sometimes bureaucracy can prevent the actual primary task from being achieved; if the task is really for the social workers to reduce risks and promote welfare for children. If the majority of your time is being spent collecting information, something is missing; something is being lost and it is that relationship … We should be thinking to minimise the bureaucratic burden as much as possible. (Ingleborough-SocialWorker)

The rhetoric behind modernising children's services was to avoid costly incidences involving children. ICS was meant to assist professionals in making timely interventions in the lives of vulnerable children. However, ICS has moulded the social services into a profession where meeting key performance indicators is the new priority. Inspection through ICS focuses on concrete and supposedly true constructs of writing timely reports, making family visits and implementing childcare plans. This has led to a shift where the profession has become fixated on consistency through numbers rather than substantive quality of the recorded episode.

> . . . if a worker is desperate to get an assessment done within a certain timescale, that might impact on the quality of the assessment. Because they don't have all the information they should be gathering and therefore the assessment isn't of the quality that we would like it to be. So there are some drawbacks. (Whernside-GroupManager)

ICS provides management with a covert rationality to implement these performance indicators to exert management control (termed as 'audit culture' by Munro (2011)) and divert social workers from doing their actual job. Senior management envisage this ability of ICS to bring transparency to the professional work as a vehicle to rationalise the changing nature of the profession, i.e. marketisation of the profession. There is an argument that following procedures and evidencing the professional work is not inherently a bad idea or an attack on professionalism. Rather it illustrates a professional's commitment to transparency and accountability, highlighting the importance of rights of service users (Banks, 2004). However, this technologically facilitated audit culture continuously elaborates the bureaucratic aspects of social work, forcing professionals to meet the demands of ICS and senior management rather than prioritising demands of service users resulting in replacement of occupational values with organisational and market values.

> I think that brings you back to the whole problem of social work and the bureaucracy around it. If it's about the families, why do we have so much paperwork [recording] to do? Shouldn't we be spending 90% of our time doing that intervention, working with the families, supporting them one-to-one in the home and in the community? (Whernside-SocialWorker)

Whilst rules, policies and procedures construct a picture of modern public service as a series of sorted activities, in reality it is not such an ordered entity, with multiple rules, preferences and aspirations at play (Hill & Shaw, 2011). Some respondents viewed social services as a convoluted activity that requires them to be able to exercise their discretionary judgements as per the situational requirements, a feature not facilitated by ICS, thus rendering the system as an obstacle to performing professional tasks. 'ICS is a very process-driven system. It has workflow embedded

inside it and […] the way the system has been developed over the last five or six years is really very rigid' (Ingleborough-InformationSystemManager).

However, the claim that all social workers comply with new control measures without putting up a resistance as highlighted by Carey (2008) is problematic; how professionals react to rules and policies is a complex phenomenon (Evans, 2013). Whilst senior management in organisations is primarily concerned with reducing the gap between policy and its implementation via ICT, frontline practitioners are interested in deviating from set procedures, employing their discretion to devise new ways of working in order to meet their professional objectives (Evans, 2016).

This process driven and regulating nature of ICS has forced some professionals to indulge in non-prescribed ways of using ICS to bridge a gap between prescribed ways of engaging with ICS and their situated professional rationalities. Our research – for example – highlighted some professionals resorting to non-recommended practices of using their personal computers to access highly confidential case information – even when this can have serious consequences for the professionals – with the intention of carrying out their professional duties and overcoming ICS rigidity and proceduralism.

> . . . what I have also done which I should not have done, I have emailed documents to myself and worked on my home computer and emailed them back to myself which [according to] data protection, they [senior management] can sack me for that. (Ingleborough-ConsultantSocialWorker)

Discussion

In the previous section, we presented selected findings from our field study highlighting that ICS appropriation in children's services is a context-dependent and goal-oriented interaction between social care professionals and ICS that is also contingent on particular capabilities of ICS. We showed that the changing scope of social care and facilitating role played by IT are perceived and interpreted differently by different professionals. This subjectivity arises from situational and context-dependent dispositions of professionals. In this section, we explore the utility of the 'affordance' perspective to theorise and articulate these situational interpretations, how ICS has changed the profession and what lessons can be learned to aid future technology development, not just in children's services but also other human services organisations.

Looking at IT appropriation from a 'technological affordances' lens concludes that for a technology to be successful, it is important that policymakers and users perceive and interpret it in the same way, attach the same goals to it and engage with it in uniform ways. Technologies often fail due to their improper enactment in practice because of being perceived as constraining, resulting in obvious resistance (Lapointe & Rivard, 2005). Furthermore, the 'affordance' perspective also suggests that technology appropriation is context dependent and therefore needs to be understood in conjunction with associated institutional processes (Strong et al., 2014). This was evident in the discord between responses of frontline social care professionals and documented aspirations of policymakers around the utility of ICS in modernising the social service profession in England and Wales.

The majority of the evidence base focusing on impact of modern ISs on professional services – adopting a mechanical and simplistic approach – argue about its inhibitory impact on the discretionary powers of professionals (Buffat, 2015; Pollitt, 2011). However, there is limited research evidence suggesting that this impact is not linear, rather convoluted and complex. Aligned with the latter, our research contends that it is difficult to judge the impact of ICS on the social care profession as positive or negative as is implied by nuanced reactions of professionals towards ICS, which is evident in the preceding section. Whilst selected aspects of ICS enable social service professionals to perform their daily professional tasks, ICS has also made a significant impact on the nature and essence of the profession. Some professionals deem ICS to be assisting them with their work whilst others find it as a controlling tool curbing their professional autonomy (Evans & Harris, 2004) and limiting their professional jurisdictions. Although technical variation of ICS is one of the reasons for non-standardised consequences it produces in the face of an institutional narrative of standardisation, it is mainly the varying perceptions and intentions of social care professionals that determine their engagement with ICS. This in turn also determines if professionals are willing to appropriate new IT as willed by managers and policymakers or resist it as something incompatible with their professional values (see also Buffat, 2015 for a discussion on the 'curtailment' and 'enablement' thesis). These reflections are consistent with the idea that subordinate actors faced with the top-down imposition of large IT systems may engage with it in ways that are more nuanced, heterogeneous and 'creative' than would be implied by fixed categories of resistance versus compliance (Courpasson, Dany, & Clegg, 2012).

Fundamental beliefs and ways of thinking create the representations of underlying professional values through practices or structures and modern children's services are a representation of changing professional values (Higgins, 2017). These values have evolved over time with 'managerialism' being the most recent force driving this evolution and ICS is a product of these conjectures. Social workers argue that ICS has curtailed their professional autonomy, making social work more informational (Parton, 2008), and in the process, transitioning it from an art to a technical activity. For Snellen (1998),

> It is not by bureaucratic but by infocratic means that the street-level bureaucrat1 can be prevented from manipulating the information streams between organization and client. It is because of ICT applications that street-level bureaucrats have lost what Prottas called their intermediary or central position between information streams. (p. 500)

New technology-led changes have resulted in domination of unimaginative and routinised working practices in social services. ICS guides professionals in terms of what boxes to tick, what headings to insert and based on that what actions to take. The initiative (ICS) that was taken to allow for more functional decentralisation (Budd, 2007) has in reality led to centralisation of decision-making and enhanced control over functional details. Frontline practitioners deem their primary professional responsibility to be spending time with families and children, developing relationships and offering them the best personalised service. ICS is believed to be pushing professionals to compromise on these fundamental professional values of social care, adding administrative responsibilities to their professional duties (Wastell & White, 2014).

Social workers are becoming peripheral figures and this is where social work needs reclaiming in its true spirit. ICS has transformed a profession whose core was based on relational aspects of professional–client interaction to an objective and context-free evidence-based (informational) profession. ICS has led to 'ordinary citizens…being transformed into preformatted legal-administrative categories' (Buffat, 2015, p. 155). This was confirmed when a review of 26 core assessments pointed towards a narrow and standardised account of children's identities by social workers (Higgins, 2017; Thomas & Holland, 2010). These findings provide a message for policymakers to rethink taken-for-granted assumptions that practitioners would replace their professional expertise with technology as Lipsky (1980) argued,

> The essence of street-level bureaucracies is that they require people to make decisions about other people. Street-level bureaucrats have discretion because the nature of service provision calls for human judgment that cannot be programmed and for which machines cannot substitute. (p. 161)

Practitioners – especially those working in human service organisations – would always find their professional identities clashing with their newly introduced role as computer system administrators. Appropriate communication is imperative to ensure that technology is perceived as enabling. There is a communication gap between system designers and users, reflected in official and unofficial accounts of practices. The dedication to the cause of introducing ICS resulted in government ignoring early cries of professionals by terming them as 'teething problems' which would resolve themselves (Hill & Shaw, 2011). This attitude has yet to change and this communication gap has led to ICS being perceived as tool led as opposed to user led, which has a negative impact on working practices of professionals (Gillingham, 2013).

Whilst UK social services are seen as weakly professionalised, the evidence suggests that the 'effective' use of ICS may depend precisely on those custodial and bureau-professionalised judgements that have been disparaged by senior management and government. The affordance perspective can help policymakers to not only devise pro-client or pro-professionals technological interventions but also identify where those interventions will produce maximum organisational value, i.e. aid social workers with their professional work. As was eloquently stated by Munro (2011), 'Helping children is a human process. When the bureaucratic aspects of work become too dominant, the heart of the work is lost' (p. 10).

Limitations

Whilst there were slight differences in the technical functionalities and outlook of the ICS used by the participating local authorities, it was not within the scope of this research to focus on their technical features in absolute. Rather, the aim was to highlight the role these technical features (ICS) played in changing the nature of the social care profession on an ideological level and how social care professionals engaged with it to appropriate these changes. However, this presents an interesting opportunity for future research to engage with ICS on an absolute level and compare the standard functionalities across sites and versions of ICS, to study their impact on daily social care work.

Conclusion

Our research highlighted the ICS-led transformation of social work from a social care orientation to a service delivery model (Hill & Shaw, 2011; Parton, 2009). The introduction of ICS has created a heavily structured task environment that relies on meeting performance indicators and doing things right as opposed to right things (Munro, 2011). However, the benefit to service users is not evident. Kirkpatrick et al. (2005) contend that the extent of managerial control in modern bureaucracies is debatable and it is not clear how successful senior management has been at curbing professional discretion often exercised at frontline decision-making. Whilst ICS appears to have standardised the operational procedures involved in social care provision, at the same time it carries marks of locally constructed meanings and long-standing professional values.

The discussion presented suggests that the affordance perspective can help to develop a better understanding of the process of technology appropriation in human service organisations. Specific patterns of technology usage can be developed and institutionalised within and across organisations by aligning its interpretation by different professionals. However, real objectives of children's social services should not be sacrificed to achieve this objective. Currently, ICS has structured a relationship between social workers and service users that is based on a customer/provider model that ultimately increases the probability of poor assessments and ineffective arrangements for required intervention (Higgins, 2017; Wastell & White, 2014).

Senior management needs to realise that a good technical system is developed when an inclusive approach is adopted and discretion is devolved to those carrying out actual work. Policymakers and management need to stop perceiving social workers as part of the problem and instead realise that they could be part of a more viable solution to effective service delivery. Policymakers have to accept that problems are also inherent in the ICS and wider political–bureaucratic context of social care and the public sector in the UK as opposed to professionals resisting ICS only as a turf war. A possible solution lies in developing a system according to the functional and professional predispositions of social workers.

Ethics

The research was approved by the University of Essex Ethics Committee.

Notes

1Street level bureaucrats – in this context social care professionals – are defined as public service professionals who deal with service users directly – usually face-to-face – and as professionals, possess and exercise discretionary powers to make decisions in the best interest of service users (Buffat, 2015).

References

Akrich, M., Latour, B. (1992). A summary of a convenient vocabulary for the semiotics of human and nonhuman assemblies. In Bijker, W . Law, J. (Eds), Shaping technology/building society studies in sociotechnical change (pp. 259–264). Cambridge: MIT Press.

Alvesson, M., Thompson, P. (2005). Post-bureaucracy? In Ackroyd, S., Batt, R., Thompson, P., Tolbert, P. (Eds), A handbook of work and organization (pp. 485–507). Oxford, UK: Oxford University Press.

Banks, S. (2004). Ethics, accountability and the social professions. Basingstoke, UK: Palgrave.

Bloomfield, B. P., Latham, Y., Vurdubakis, T. (2010). Bodies, technologies and action possibilities when is an affordance? Sociology, 44, 415–433. doi:10.1177/0038038510362469

Budd, L. (2007). Post-bureaucracy and reanimating public governance: A discourse and practice of continuity? International Journal of Public Sector Management, 20, 531–547. doi:10.1108/09513550710818403

Buffat, A. (2015). Street-level bureaucracy and e-government. Public Management Review, 17, 149–161. doi:10.1080/14719037.2013.771699

Burton, J., Van Den Broek, D. (2009). Accountable and countable: Information management systems and the bureaucratization of social work. British Journal of Social Work, 39, 1326–1342. doi:10.1093/bjsw/bcn027

Carey, M. (2008). The quasi-market revolution in the head: Ideology, discourse, care management. Journal of Social Work, 8, 341–362. doi:10.1177/1468017308094989

Carrilio, T. E. (2008). Accountability, evidence, and the use of information systems in social service programs. Journal of Social Work, 8, 135–148. doi:10.1177/1468017307088495

Chemero, A. (2003). An outline of a theory of affordances. Ecological Psychology, 15, 181–195. doi:10.1207/S15326969ECO1502_5

Clarke, J. (1998). Doing the right thing? Managerialism and social welfare. In Abbott, P., Meerabeau, L. (Eds), The sociology of the caring professions (pp. 234–254). London, UK: UCL Press.

Clarke, J., Newman, J. (1997). The managerial state. London, UK: SAGE.

Courpasson, D., Dany, F., Clegg, S. (2012). Resisters at work: Generating productive resistance in the workplace. Organization Science, 23, 801–819. doi:10.1287/orsc.1110.0657

Dustin, D. (2007). The McDonaldization of social work. London, UK: Ashgate Publishing Ltd.

Evans, T. (2013). Organisational rules and discretion in adult social work. British Journal of Social Work, 43, 739–758. doi:10.1093/bjsw/bcs008

Evans, T. (2016). Street-level bureaucracy, management and the corrupted world of service. European Journal of Social Work, 19, 602–615. doi:10.1080/13691457.2015.1084274

Evans, T., Harris, J. (2004). Street-level bureaucracy, social work and the (exaggerated) death of discretion. British Journal of Social Work, 34, 871–895. doi:10.1093/bjsw/bch106

Garrett, P. M. (2005). Social work's 'electronic turn': Notes on the deployment of information and communication technologies in social work with children and families. Critical Social Policy, 25, 529–553. doi:10.1177/0261018305057044

Gibson, J. J. (1986). The ecological approach to visual perception. Hillsdale, NJ: Lawrence Erlbaum Associates.

Gillingham, P. (2013). The development of electronic information systems for the future: Practitioners, 'embodied structures' and 'technologies-in-practice'. British Journal of Social Work, 43, 430–445. doi:10.1093/bjsw/bcr202

Gillingham, P. (2016). Technology configuring the user: Implications for the redesign of electronic information systems in social work. British Journal of Social Work, 46, 323–338. doi:10.1093/bjsw/bcu141

Greenhalgh, T., Stones, R. (2010). Theorising big IT programmes in healthcare: Strong structuration theory meets actor-network theory. Social Science and Medicine, 70, 1285–1284. doi:10.1016/j.socscimed.2009.12.034

Harris, J. (1998). Scientific management, bureau-professionalism, new managerialism: The labour process of state social work. British Journal of Social work, 28, 839–862. doi:10.1093/oxfordjournals.bjsw.a011404

Harris, J. (2003). The social work business. Basingstoke, UK: Palgrave.

Harris, J., White, V. (2009). Modernising social work. Bristol, UK: Policy Press.

Harris, L. C., Ogbonna, E. (2002). The unintended consequences of culture interventions: A study of unexpected outcomes. British Journal of Management, 13, 31–49. doi:10.1111/1467-8551.00221

Healy, K., Meagher, G. (2004). The reprofessionalization of social work: Collaborative approaches for achieving professional recognition. British Journal of Social Work, 34, 243–260. doi:10.1093/bjsw/bch024

Heffernan, K. (2006). Social work, new public management and the language of 'service user'. British Journal of Social Work, 36, 139–147. doi:10.1093/bjsw/bch328

Higgins, M. (2017). Child protection social work in England: How can it be reformed? British Journal of Social Work, 47, 293–307. doi:10.1093/bjsw/bcv078
Hill, A., Shaw, I. (2011). Social work and ICT. London, UK: SAGE.

Hutchby, I. (2001). Technologies, texts and affordances. Sociology, 35, 441–456. doi:10.1177/S0038038501000219

Ince, D., Griffiths, A. (2011). A chronicling system for children's social work: Learning from the ICS failure. British Journal of Social Work, 41, 1497–1513. doi:10.1093/bjsw/bcr016

Kirkpatrick, I., Ackroyd, S., Walker, R. (2005). The new managerialism and public service professions. Hampshire, UK: Palgrave.

Kling, R. (2007). What is social informatics and why does it matter? The Information Society, 23, 205–220. doi:10.1080/01972240701441556

Labatut, J., Aggeri, F., Girard, N. (2012). Discipline and change: How technologies and organizational routines interact in new practice creation. Organization Studies, 33, 39–69. doi:10.1177/0170840611430589

Lapointe, L., Rivard, S. (2005). A multilevel model of resistance to information technology implementation. MIS Quarterly, 29, 461–491. doi:10.2307/25148692

Leicht, K. T., Walter, T., Sainsaulieu, I., Davies, S. (2009). New public management and new professionalism across nations and contexts. Current Sociology, 57, 581–605. doi:10.1177/0011392109104355

Leonardi, P. M., Barley, S. R. (2008). Materiality and change: Challenges to building better theory about technology and organizing. Information and Organization, 18, 159–176. doi:10.1016/j.infoandorg.2008.03.001

Ley, T., Seelmeyer, U. (2008). Professionalism and information technology: Positioning and mediation. Social Work and Society, 6, 338–351.

Lips, A. M. B., Schuppan, T. (2009). Editorial: Transforming e-government knowledge through public management research. Public Management Review, 11, 739–749. doi:10.1080/14719030903318921

Lipsky, M. (1980). Street-level bureaucracy: The dilemmas of individuals in public service. New York, NY: Russell Sage Foundation.

Mueller, F., Valsecchi, R., Smith, C., Gabe, J., Elston, M. A. (2008). 'We are nurses, we are supposed to care for people': Professional values among nurses in NHS Direct call centres. New Technology, Work and Employment, 23, 2–16. doi:10.1111/j.1468-005X.2008.00199.x

Munro, E. (2011). The Munro review of child protection: A child–centred system. London, UK: Department for Education.

Norman, D. A. (1990). The design of everyday things. New York, NY: Doubleday.

Parton, N. (2008). Changes in the form of knowledge in social work: From the 'social' to the 'informational'? British Journal of Social Work, 38, 253–269. doi:10.1093/bjsw/bcl337

Parton, N. (2009). Challenges to practice and knowledge in child welfare social work: From the 'social' to the 'informational'? Children and Youth Services Review, 31, 715–721. doi:10.1016/j.childyouth.2009.01.008

Payne, M. (2005). The origins of social work. Basingstoke, UK: Palgrave.

Petrakaki, D., Klecun, E., Cornford, T. (2014). Changes in healthcare professional work afforded by technology: The introduction of a national electronic patient record in an English hospital. Organization, 23, 206–226. doi:10.1177/1350508414545907

Pithouse, A., Hall, C., Peckover, S., White, S. (2009). A tale of two CAFs: The impact of the electronic common assessment framework. British Journal of Social Work, 39, 599–612. doi:10.1093/bjsw/bcp020

Pollitt, C. (2011). Mainstreaming technological change in the study of public management. Public Policy and Administration, 26, 377–397. doi:10.1177/0952076710378548

Ponnert, L., Svensson, K. (2016). Standardisation – The end of professional discretion? European Journal of Social Work, 19, 586–599. doi:10.1080/13691457.2015.1074551

Rose, N., Miller, P. (1992). Political power beyond the state: Problematics of government. British Journal of Sociology, 43, 173–205. doi:10.1111/j.1468-4446.2009.01247.x

Rubin, H. J., Rubin, I. (2005). Qualitative interviewing: The art of hearing data. Thousand Oaks, CA: SAGE.

Shaw, I., Bell, M., Sinclair, I., Sloper, P., Mitchell, W., Dyson, P., Rafferty, J. (2009). An exemplary scheme? An evaluation of the integrated children's system. British Journal of Social Work, 39, 613–626. doi:10.1093/bjsw/bcp040

Snellen, I. (1998). Street level bureaucracy in an information age. In Snellen, I., van de Donk, W. (Eds), Public administration in an information age: A handbook (pp. 497–505). Washington, DC: Ohmsha, IOS Press.

Snellen, I. (2005). E-government. A challenge for public management. In Ferlie, E., Lynn, L., Pollitt, C. (Eds), Oxford handbook of public management (pp. 398–421). Oxford, UK: Oxford University Press.

Strong, D. M., Johnson, S. A., Tulu, B., Trudel, J., Volkoff, O., Pelletier, L. R., Garber, L. (2014). A theory of organization-EHR affordance actualization. Journal of the Association for Information Systems, 15, 53–85. Retrieved from http://aisel.aisnet.org/sprouts_all/300

Thomas, J., Holland, S. (2010). Representing children's identities in core assessments. British Journal of Social work, 40, 2617–2633. doi:10.1093/bjsw/bcp154

Tregeagle, S., Darcy, M. (2008). Child welfare and information technology: Today's challenge. British Journal of Social Work, 38, 1481–1498. doi:10.1093/bjsw/bcm048

Tsui, M. S., Cheung, F. C. (2004). Gone with the wind: The impacts of managerialism on human services. British Journal of Social Work, 34, 437–442. doi:10.1093/bjsw/bch046

Wastell, D., White, S. (2014). Making sense of complex electronic records: Socio-technical design in social care. Applied Ergonomics, 45, 143–149. doi:10.1016/j.apergo.2013.02.002

Whipp, R., Kirkpatrick, I., Kitchener, M. (2004). The management of children's residential care: A managed service. London, UK: Palgrave.

White, S., Broadhurst, K., Wastell, D., Peckover, S., Hall, C., Pithouse, A. (2009). Whither practice-near research in the modernization programme? Policy blunders in children's services. Journal of Social Work Practice, 23, 401–411. doi:10.1080/02650530903374945

White, S., Wastell, D., Broadhurst, K., Hall, C. (2010). When policy o'erleaps itself: The 'tragic tale' of the integrated children's system. Critical Social Policy, 30, 405–429. doi:10.1177/0261018310367675 , SAGE Journals

Yin, R. K. (2014). Case study research: Design and methods. London, UK: SAGE.