A Systems Approach to Policy Evaluation

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ABSTRACT

There is growing interest in evaluating policy implementation in ways that grapple with the complexity of the process. This article offers an example of using systems methodology to explore how the child protection policy in child contact centres has functioned in practice. Rather than just asking the traditional evaluation question "is it working?" this study sought to understand how the policy was working and how it was interpreted as it interacted with other systems, producing conflicts, local variation and emergent effects. It illustrates how the systems concepts of 'emergence', 'local rationality', 'socio-technical systems' and 'feedback for learning' can contribute new knowledge and understanding to a complex policy evaluation problem.

KEY WORDS: Systems approaches, complex systems, policy evaluation, child protection

INTRODUCTION

There is increasing interest in evaluating policy implementation in ways that acknowledge and deal with the complexity of the process (Barnes et al., 2003; Byrne, 2013; Callaghan, 2008; Sanderson, 2000). When policies are not implemented as expected, a common policy response is to introduce reforms aimed at more prescription and control of workers' practice. This was a finding of the Author's own Review, which, at the request of the Government, reviewed the statutory child protection system in England (Author's own, 2011). It is also in keeping with wider trends in public management over the past thirty years, characterised by ubiquitous evaluation aimed at checking that workers are following policy designs (Hood, 1991; Hood et al., 2015; Pollitt et al., 1999; Power, 1997). In this context, evaluation can come to typically embody a top-down approach, principally concerned to promote accountability and control through compliance with policy implementation targets and standards (Sanderson, 2000, p. 438). Systems methodology, adopted in the Author's own Review and in the case study research presented in this paper, provides an alternative way of thinking about policy implementation.

In this article we illustrate how a systems approach was used to understand how child protection policy in child contact centres was interpreted as it interacted with other systems, producing conflicts, local variation and emergent effects. Workers were viewed, not as individual, autonomous, rational actors, but as components of a socio-technical system, influenced by both overt and covert messages, the tools available to them and the interacting parts of the larger system they were operating in. The tools and prescription that had been introduced in order to address problematic practice were not assumed to have positive or

neutral effects. Instead, these reforms were positioned as a component of the system and subject to analysis of their interacting effects. We use key findings from this study to illustrate how the systems concepts of 'emergence', 'local rationality', 'socio-technical systems' and 'feedback for learning' can contribute new knowledge and understanding to a complex policy evaluation problem.

SYSTEMS APPROACHES

Systems approaches are a conceptual framework (Hummelbrunner, 2011), a way of seeing the world that provides a language to communicate and investigate complex issues, including the evaluation of policy. Systems approaches encompass a broad church, spanning multiple disciplines including, General Systems Theory, developed by biologist, von Bertalanffy; Cybernetics, pioneered by Ashby, a psychiatrist and Bateson, an anthropologist; System Dynamics, developed by Forrester, a computer engineer; Soft Systems Methodology, devised by Checkland, a management scientist; as well as safety engineering systems approaches, pioneered by engineers, including Heinrich. These diverse schools are united by their focus on understanding how factors are connected to each other in a system: a set of things working together as a complex whole. They are also unified by the concept of emergence: that interactions between the parts of a system can produce 'emergent' properties that cannot be understood by examining each part in isolation. Systems approaches therefore focus on "functional abstraction rather than structural decomposition" (Rasmussen, 1997, p. 183). The application of systems approaches to the field of evaluation has focused on the generic systems concepts of interrelations, perspectives and boundaries (Hummelbrunner, 2011; Midgley, 2007; Reynolds, 2014). Reynolds (2014: 81) for example, suggest that in the context of evaluation, these concepts relate to "understanding interrelationships associated

with a situation; engaging with contrasting perspectives regarding a situation; and reflecting on boundaries of such representations and interactions".

Systems approaches make a unique contribution through the systems concepts they provide and authors from other schools of thought have acknowledged the usefulness of systems concepts (Cartwright et al., 2012; Pawson, 2013). However, systems approaches for evaluation have also been critiqued as too "wordy" and too abstracted (Pawson, 2013). May (2006) argued that systems approaches, "[fit] well with analysis at a macro-level, but…struggle with the business of accounting for action at a micro-level" and that they may lead to "paralyzing uncertainty about the unpredictable consequences of intervening in a complex system" (May, 2006, p. 2). Further it has been argued that systems approaches can result in misguided and risky attribution of all responsibility to systems (Aveling et al., 2015; Wachter et al., 2009).

The systems approach we adopt here for the purpose of policy evaluation is based on safety engineering systems. It was originally developed to improve safety and reduce human error in high-risk industries, including aviation and nuclear power. In this context, systems approaches were innovated to conceptually lift investigations of accidents beyond the finding that individuals were at fault, to provide a framework for investigating and understanding how the context individuals were operating in may have enabled or constrained certain behaviour that contributed to the accident.

The systems approach challenged the dominant safety paradigm, which was based on, what has been labelled, 'hard' systems thinking of the 1950's and 1960's. 'Hard' systems thinking

assumes that problems are well-defined and that systems can be engineered and controlled to achieve objectives (Checkland, 1989). From a safety engineering perspective, the focus in 'hard' systems thinking is therefore to search for ways to keep human performance within prescribed boundaries of systems that are assumed to otherwise be safe (Dekker, Cilliers, & Hofmeyr, 2011).

By contrast the new paradigm, which fits within the broad category of 'soft' systems thinking (Checkland, 1989), assumes that safety and accidents are the products of inherently complex, adaptive systems in which causality is non-linear and outcomes are unpredictable (Dekker et al., 2011). This new approach is therefore critical of "rule-following" safety approaches that, in the wake of failure, focus on introducing new procedures or enforcing existing ones (Dekker, 2003). From this perspective, evaluation must logically go beyond examining compliance. The idea instead is to understand 'the relationships and roles of individuals *in* systems' (Dekker, 2007b) and thereby to see human error as a symptom of problems at a deeper level (Cook et al., 1998; Dekker, 2002; Helmreich, 2000; Leveson, 2004; Rasmussen, 2003; Reason, 2000; Woods et al., 2006; (Dekker et al., 2011; Hollnagel, Woods, & Leveson, 2007).

This safety engineering systems literature has been adopted in the field of child protection to understand factors enabling and constraining the behaviour of practitioners' every day practice (author's own et al., 2009; author's own, 2005). An innovative approach blending systems concepts was subsequently used in the Author's own Review of the UK's Child Protection system to investigate unintended consequences of policies and why well-intentioned reforms failed to elicit the intended improvements (author's own et al, 2015; author's own 2011). Our article contributes to this literature by illustrating how safety

engineering systems concepts can contribute new knowledge and understanding to a complex policy evaluation problem. This systems approach provides clear concepts and focuses analysis at the system-level but by no means ignores the individual. As our example demonstrates, it can be used to provide an explicit framework to understand the dynamic properties of the context into which a policy is introduced and the influence of it on policy outcomes.

The application of systems approaches to evaluation can be categorised as a form of theory-based evaluation in the same family as, for example, Theories of Change (Weiss, 1995) and Realist Evaluation (Pawson & Tilley, 1997). In keeping with other theory-based methodologies it emphasises theory, rather than simply methods, as the basis of 'good' evaluation and in this respect contradicts the current evidence-based policy framework. It also differs from the dominant paradigm in its focus, not on the 'black box' of descriptive, intended outcomes but on explanations of the process of how policy works (or fails) and how it is interpreted as it interacts with other systems, producing conflicts, local variation and emergent effects. Therefore, while traditional evaluation approaches are concerned with assessing compliance with defined objectives the systems approach is a learning system (Dekker et al., 2011).

CASE STUDY

Government policy in England stipulates that all organisations that work with children should protect them from maltreatment. Child contact centres in England were originally set up to provide an attractive venue in which children could spend time with a parent who no longer lived with them but, increasingly, they have been used to provide a meeting place when there is some level of concern about the child's safety if they meet unsupervised. Centres are of

two types: ‘supported services’, provide a low level of vigilance and ‘supervised services’ provide a high level. Centres are largely run by voluntary sector agencies, with some private providers. However, most centres in England receive public sector funding and take referrals from public sector agencies such as the Family Justice System and Children’s Social Care.

Previous research demonstrated persistent problems in child protection practice in child contact centres in England (Aris et al., 2002; Harrison, 2008; Thiara et al., 2012). In response to concerns, a series of reforms were introduced. These included, Protocols for Referral for solicitors and judges, which were introduced in 2000 and revised in 2010 (NACCC, 2010). The introduction, in 2004/5 of a national Accreditation system for contact centres, with eligibility for state funding being dependent on the attainment of accreditation (NACCC, 2011, p. 7) and a Standard Referral Form was introduced as part of the accreditation system. However, research found that problematic practice persisted despite these reforms (Thiara & Gill, 2012). This study adopted a systems approach to explore why the reforms were not having their intended effect.

As a conceptual framework for evaluation, systems approaches do not specify methods. Rather the researcher should adopt the methods most appropriate to the questions being asked. However, the safety engineering approach emphasises achieving a deep understanding of people’s reasoning for their behaviour. Further, it emphasises the importance of observations of practice since what people do and what they say they do often conflict (Dekker, 2002; Woods et al., 2002). Therefore qualitative methods are likely to be involved.

This study adopted a mixed methods approach. A quantitative analysis was made of ten years of survey data on child contact centres (collected by the National Association of Child Contact Centres), producing statistically generalizable data on contact centres' characteristics. The survey data was used to select six cases study centres, representing a range of child contact centre types. In each of these centres observations of practice (58 hours in total) and in-depth qualitative interviews with staff (27 interviews in total averaging over an hour each) were undertaken. Interviews were also conducted with judges (N=3), solicitors (N=9) and social worker (N=6) who had referred to a contact centre. The study was approved by the London School of Economics (LSE) Research Ethics Committee.

FINDINGS

Below we use this case study to illustrate how the safety engineering systems concepts of ' 'emergence', 'local rationality', 'socio-technical systems' and 'feedback for learning' can contribute new knowledge and understanding to a complex policy problem. We will not outline all findings from the study in depth (these are available in author's own, 2013, 2014, 2015), instead we will focus on illustrating how these systems concepts enabled the contribution of new knowledge to the field.

Emergence

A core tenet of the systems approach is the concept that behaviour is an 'emergent' property of systems, not their component parts (Dekker, 2005; Woods & Cook, 2002). In other words, 'emergent' behaviour is produced through interactions in the system and cannot be understood by examining each part in isolation.

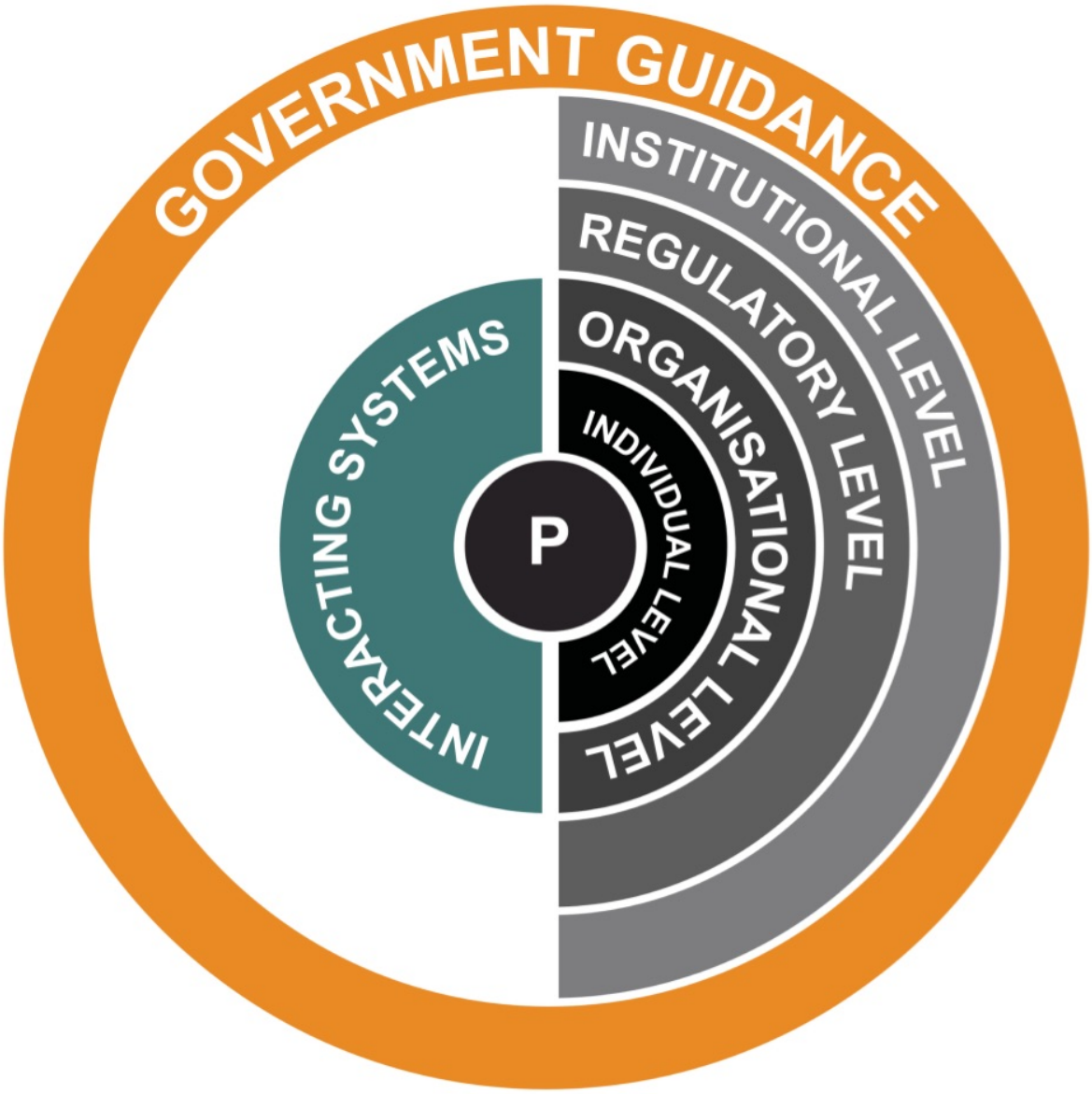
A reductionist approach would seek to simplify the analysis of the complex web of interdependent factors that might influence behaviour by breaking down the system into more manageable parts. However, the systems perspective asserts that because behaviour may be an 'emergent' product of the systemic interactions *between* parts, rather than the sum of its parts, the reductionist approach may miss the phenomenon of interest. For this reason, in the systems approach, there is a focus on the dynamics of the system – the systemic interactions - and how these explain the behaviour observed (Dekker, 2008; Hoffman et al., 2000; Reason, 1997). As Dekker (2005: 185) points out, this is quite different to simply 'reminding people of context'.

While systems thinkers may aspire to holism – examining the whole system – more contemporary systems thinkers (including those who have applied systems approaches to evaluation) acknowledge that this is likely impossible (Hummelbrunner, 2011; Midgley, 2007; Dekker et al. 2011) and may not be productive (Imam, LaGoy, & Williams, 2007). No matter how comprehensive, a systems approach tends to be incomplete (Imam et al., 2007; Reynolds, 2014) and boundaries of any system are not clear cut. What should be considered "inside" and "outside" the analysis is likely to be contested (Imam et al., 2007). As Dekker and colleagues (2011: 943) put is, "the observer is not just the contributor to, but in many cases the creator of, the observed". Where the boundary of the "system" is placed is a theoretical assumption rather than an objective fact (Fish, et al., 2008, p. 26). Therefore, rather than striving for completeness the focus is on acknowledging what is left out and reflecting on its implications (Imam et al., 2007).

In our case study, government guidance articulating the responsibility to protect children from maltreatment was positioned as interacting with multiple layers in a system to produce

practice. The systemic interactions explored are represented below in Figure 1, with practice represented by 'P'. The model does not therefore strive to represent an objective system, rather it is a blueprint of the levels of systemic interactions explored in this study. The model encompassed factors at the 'individual level' (e.g. workers' perceived role, knowledge, understanding and skills), the 'organisational level' (e.g. available physical space in centres, levels of professionalization, time and training available to workers), the 'regulatory level' (encompassing the tools provided to centres and referrers by the regulator and the feedback system used to accredit centres) and the 'institutional level' (how well government provision had addressed the typical weaknesses in voluntary sector provision set out in Salamon's (1987) 'voluntary failure' thesis). In addition, referrers to child contact centres (judges, solicitors and social workers) were conceptualised as operating in systems which interact with the contact centre system: the Family Justice System and the Children's Social Care system. Therefore, the focus of analysis, was not simply on the individual parts, but on the interactions between the parts (Rasmussen et al., 2000) within the contact centre system and on the interactions between interacting systems (Perrow, 1984).

Figure 1: Conceptual model of system components: child contact centres



In terms of the boundaries of the system constructed for the purpose of analysis, it is particularly notable that while direct observations of service-user families were undertaken, families were not interviewed directly and so their directly articulated perspectives are absent from the study**.** While practice can be considered co-produced with service users (Fish, 2009), the decision to focus on service providers was made due to resource constraints. Further studies could helpfully focus directly on service-users' perspectives.

The model illustrated in Figure 1 influenced the entirety of the study's findings, as will be seen from the examples presented in the sections below, but for illustration, we provide an immediate example of how this systems framework led to new findings.

Taking children's wishes and feelings into account is a central part of protecting children from maltreatment, since children are a key source of information on their own safety and well-being (Horwath, 2002; Author's own 2011; Willow, 2002). The study therefore included an investigation of how workers in the case study contact centres engaged with children. A typology of child engagement was developed from the findings, illustrating that engagement with children in contact centres was diverse and could be conceptualised as ranging from 'coercive' to 'limited' to 'meaningful'. These different styles produced markedly different responses when a child indicated that they did not want to see their father, with the coercive style overriding the child's opinion. The study concluded that these divergent engagement types were emergent properties of system-wide variation in beliefs about the importance of contact versus the importance of protection, the capacity of children to have valid wishes and feelings, and lack of clarity about the centre's role in implementing court orders.

On the latter point, actors held different and contrasting views on whether centres should implement court-ordered contact, regardless of the child's reactions, or decide whether or not to continue facilitating contact, depending on the individual child's views. Centre workers, judges, solicitors and social workers held divergent views on these issues. Therefore, the system lacked conceptual clarity in terms of the child welfare issues and organisational clarity in terms of contact centres' role. Contact centres resolved this ambiguity in different ways, in keeping with individual workers' perceptions and training and the resources available to the centre. The study concluded that strategies to address problematic child

engagement would need to focus, not simply on contact centres but on the wider systems with which they interacted (Author's own, 2013).

Local rationalities

Engaging with multiple perspectives in terms of stakeholders (groups of people) and stakes (individual values or motivation which may differ from formal goals or objectives) is central to systems approaches as applied to evaluation (Hummelbrunner, 2011. See also Reynolds, 2014; Midgley, 2007). This literature has also emphasised the importance of inter-relationships (Hummelbrunner, 2011; Midgley, 2007; Reynolds, 2014). In a case study, Reynolds (2014: 82) for example, applied the concept of inter-relationships by asking three "interrelated systemic stakeholder questions":

1) What is at stake?
2) Who are the stakeholders?
3) What possibilities exist for improving stakeholdings?

'Local rationality' is a core principle in safety engineering systems and provides a useful concept exploring stakeholders' perspectives and stakes. 'Local rationality' asserts that 'people's behaviour is rational, though possibly erroneous, when viewed from the locality of their knowledge, attentional focus and strategic trade-offs' (Woods et al., 1994, p. 93). Therefore, the focus is on understanding why people do what they do, rather than on judging them for what we think they should have done (Dekker, 2007a; Autho's own et al., 2009; Perrow, 1984; Rasmussen et al., 1990; Reason, 2000; Woods et al., 1994). In other words, rather than searching for human failures, the systems approach searches for human sense-making in multiple actors' (potentially conflicting) perspectives (Dekker, 2002).

Meaning is understood as emanating, at least in part, from social negotiations and construction within a group. Dekker (2008) emphasises the need to:

> *'Understand how people use talk and action to construct perceptual and social order: how, through discourse and action, people create the environments that in turn determine further action and possible assessments, and that constrain what will subsequently be seen as acceptable discourse or rational decisions.'* (Dekker, 2008, p. xi.)

Therefore, the focus is on the creation of rationality within groups, not just on their eventual presence. In this sense, the systems approach is 'a model of processes, not just a model of structures' (Dekker, 2005, p. 200). In particular, this approach emphasises that, in addition to the availability of resources, including intangible resources such as training, knowledge and time (Woods & Hollnagel, 2006), workers' behaviour can be influenced by 'goal conflicts', missing knowledge or misconceptions (Dekker, 2005; Rasmussen & Svedung, 2000; Woods & Cook, 1999) and by bounded rationality (Simon, 1969, p. 38). The latter refers to the finding that human beings do not see everything all the time. For example, an inappropriate mind-set may take hold and persists in the face of evidence that does not fit the assessment (Woods & Cook, 1999). On this point, Author's own (2005) has pointed out that while the safety engineering literature has focused on cognitive elements of performance it has done so with little attention to emotions. Yet the emotional dimension is inevitably present in working with families. Workers can become emotionally involved in family dynamics and they also bring their own experiences (both constructive and not) to their work (Author's own, 2005).

The safety engineering systems emphasis on the importance of exploring the conflicting goals which workers may need to manage (Dekker, 2002; Reason, 1997) was particularly important

in our case study as it led to innovative findings, which challenged previous research on child contact centres. As Woods and colleagues point out in relation to goal conflicts, 'multiple goals may be relevant, not all of which are consistent. It may not be clear which goals are the most important ones to focus on at any one particular moment in time' (Woods et al., 1994, p. 94). This approach does not assume that organisational goals are necessarily explicit in written documents nor that the messages received by workers about the organisation's goals will be those that management acknowledges (Woods & Cook, 1999).

Previous research on supported child contact centres had identified problematic child protection practice, including not listening into conversations, not closely monitoring behaviour and not ensuring that volunteers were aware of case histories (Aris et al., 2002; Harrison, 2008; Thiara & Gill, 2012). Our research provided a new explanation for this behaviour and challenged previous research which had, for example, suggested that volunteers were not informed of case histories due to time constraints (Thiara & Gill, 2012, p. 128) or concluded that this practice was "less understandable" than other aspects of practice (Harrison, 2008).

As described in-depth elsewhere (Author's own, 2015) our focus on 'local rationalities' and goal conflicts' demonstrated that these practices were not accidental, but intentional, based on the meaning workers attributed to actions in the context of organisational goals. Workers were aware that child safety and protection was 'everyone's business' and they were knowledgeable about their responsibility to refer child protection concerns to Children's Social Care and the procedures for doing so. However, supported services also placed heavy emphasis on other goals: they emphasised the need to provide a 'welcoming' service, to

facilitate contact between parent and child, to be ‘non-judgemental’ and ‘neutral’. It was found that the simultaneous emphasis on these goals could present a goal conflict (Woods et al., 1994, p. 94) for workers. It influenced the meaning they attached to their actions, and could make child protection practice seem destructive rather than helpful.

Socio-technical systems

The tools used by actors are a particular concern in safety engineering systems (Dekker, 2008; Hoffman & Woods, 2000; Hollnagel, 2003; Leveson, 2004; Wilson et al., 2003; Woods & Cook, 1999). Tools can be conceptualised in a broad sense (Autho’s own, 2005b) and in our case study, the systems concept of tools was applied to the forms that were used: Protocols for Referral to child contact centres and the Standard Referral Form. These had been introduced nationally to address problematic child protection practice, and their use was made compulsory as a requirement for contact centre accreditation.

In keeping with the systems approach, we did not assume that these tools would have a positive effect, so long as actors used them. Instead, we assumed that these tools could have unexpected effects and investigated how the tools might influence and be influenced by factors on the ground in potentially unexpected ways. While earlier approaches in engineering took a dualist approach to workers and tools, this study adopted the more recent systems conceptualisation, recognising the interdependence between tools and workers and the influence they have on one another (Bockley, 1996; Dekker, 2008; Hoffman & Woods, 2000; Hollnagel, 2003; Pool, 1997; Reason, 1990; Woods & Hollnagel, 2006). Indeed the tools and the staff using them were conceptualised, not as separate units, but as a human-tool system. This moved the analysis away from how well staff used tools to a focus on how well

tools and users interacted with each other (Hoffman & Woods, 2000; Hollnagel, 2003; Leveson, 2004; Woods & Hollnagel, 2006). In other words, we focused on the interactions within the entire socio-technical system, rather than the parts taken separately (Leveson, 2004, p. 249). The study investigated to what extent these tools were 'user-centred' (Norman, 1993): whether they are designed with the capacity of users (both referrers and centre staff) in mind and how the interaction of design and user impacts on practice.

This systems concept enabled us to take a different approach to previous research (Thiara & Gill, 2012), which had not positioned the reforms themselves as a focus for investigation. Indeed, our approach contrasted starkly with the perspective characterised by an official who was uncritically reported in previous research to have suggested that child protection problems remained in child contact centres because some centres struggled to get 'their staff to accept and use those procedures in a planned and coordinated way' (Thiara & Gill, 2012, p. 129).

Our conceptual approach led to new findings that helped to explain a worrying phenomenon of high-risk cases being inappropriately referred to supported contact centres, which were not equipped to provide the level of supervision that was needed to protect the child. As outlined in detail elsewhere (Author's own, 2014), the study illustrated that inappropriate referrals persisted because attempts to address the issue have focused on providing technical aids to referral (the Protocols and Referral Form) but have not ensured that the appropriate level of professional training is in place to use them. Our study found that both referrers and those receiving the forms had varied perceptions of each other's role. Moreover, among referrers there were significant deficiencies in the skills needed to complete the form: the ability to a)

effectively collect relevant information about families b) communicate that information to other actors and c) analyse that information to make decisions about appropriate referral.

Referrers often assumed that centres were making, and were equipped to make, decisions about whether the case could be safely managed at that centre. The case study centres in turn assumed that, since they were not equipped to undertake this work, it was being done by referrers before making the referral. As a result, often no actor in the system was undertaking the difficult task of making decisions about what level of supervision was needed to protect the child and so, in the absence of a system to reject them, unsafe cases continued to be referred and facilitated. In this sense, the referral form, a tool developed in in an attempt to improve performance, was 'interacting in such a way that the cumulative effect [was] negative' (Author's own, 2010. See also Hoffman & Woods, 2000; Hollnagel, 2003; Woods & Hollnagel, 2006)

Feedback for Learning

Systems approaches assume that systems are adaptive and so self-organising. In organisations like child contact centres, workers, families, referrers etc. react and adapt based on their own perspective and experiences. There are always many possible reactions to any action and so the sum of these is unpredictable. Sometimes small changes can escalate into large outcomes. Therefore, while leaders and managers can choose, plan and implement a policy, they cannot choose, plan or control the outcomes of that policy (Author's own, 2016; Stacey, 2011). For this reason, systems approaches focus attention on the capacity of the system to receive feedback for learning so that it can adapt to the unpredictability of policy implementation outcomes. Further, the system of feedback itself becomes a focus for investigation, since it

may also influence the system in unpredictable ways (Dekker, 2008; Reason, 1997; Woods & Cook, 2002).

Organisations often have formal mechanisms for feedback. The political culture since the 1980's has seen growing regulation and demand for accountability of publicly funded services (Anheier, 2009; Hood, 1991), exemplified by the rise of New Public Management (NPM) (Hood, 1991). At the same time, the state has increasingly played an indirect role in service provision, relying on the voluntary and private sectors to provide services which receive important levels of public funding (Hood, 1991; Kramer, 1994, 2000; Salamon, 1995; P. Smith, 1993), as in the case of contact centres. These publicly funded (but not publicly provided) services have therefore also increasingly been subject to forms of regulation and accountability to assess their performance (Kramer, 1994; Rhodes, 2000; P. Smith, 1993; R. S. Smith et al., 2010). However, in an effort to limit financial and time costs, trends in systems of accountability have tended to focus on indirect checks or indicators rather than on direct observation of practice (Hood, 1991; Hood et al., 2001; Autho's own, 2004; Power, 2007). There are concerns about the quality of the information collected through such systems and about the extent to which indicators provide a meaningful reflection of practice (Dekker, 2007a; Author's own, 2004; Power, 2007). Moreover, such an approach to feedback may influence practice in unintended and sometimes unwanted ways. Indeed, the Author's own Review (2011) found that in the statutory system, the focus on keeping records to demonstrate compliance with guidelines was diverting social workers' attention and time away from children and families (Author's own, 2011).

A key finding in this case study was that child protection practice in child contact centres was influenced by an ineffective system of feedback for learning. It was found that the national system for quality assessing and accrediting child contact centres was based on determining whether centres had complied with certain rules. The process for accreditation was reported to involve an official interviewing the centre manager at the centre and examining the centre's policies and other documentation. However, the centres' practice itself was not observed. For example, in relation to the process of referring families to centres, the focus was on whether centres were using the Standard Referral Form. As discussed above, the use of the form in itself was insufficient to ensure safe referral and so the feedback mechanism could say little about the quality of child protection practice.

Interviews with referrers suggested that the accreditation system could provide a false sense of security since some referrers assumed that accredited centres would have the capacity to assess whether cases they referred could be safely facilitated. In this sense, the accreditation system could make practice less, rather than more, safe. Moreover, the accreditation system was insufficiently sensitive to pick up on problematic practice or its causes and so there was no means by which the system could identify problems with a view to adapting. This inadequate feedback sustained the role ambiguities for both centres and referrers. It also contributed to gaps in the child protection net, where important aspects of practice, unbeknown to parts of the system relying on them, were omitted or inadequately undertaken.

Discussion and conclusions

This paper sought to demonstrate how a systems approach can be used to contribute new knowledge and understanding to a complex policy problem. All studies, whether consciously

or not, make conceptual assumptions, which affect how the researchers see that which they are researching. Yet much policy evaluation proceeds without explicit reference to the study's underlying assumptions, its conceptual framework (Callaghan, 2008; Sanderson, 2000). Indeed, the dominant evaluation paradigm, characterised by the Evidence Based Policy movement, emphasises methodology rather than theory as the basis of 'good' evaluation. Its lack of focus on the values and interests embodied in the goals and objectives of policies and research methodologies, may encourage the persistence of prevailing assumptions and disempower the voices of those at the front line of service provision (Sanderson, 2000). Along with other theory-based evaluation approaches (Pawson & Tilley, 1997; Weiss, 1995) systems approaches may offer a framework to re-conceptualise evaluation and empower marginalised perspectives (Midgley, 2007).

This article contributes to knowledge in the area of policy evaluation by demonstrating how systems concepts, derived from safety systems engineering, can be used for the purpose of policy evaluation. In this respect it builds on the current literature applying systems approaches to evaluation (Williams & Imam, 2007; Reynolds, 2014; Hummelbrunner, 2011) As we have illustrated, the systems concepts of 'emergence', 'local rationalities', 'socio-technical systems' and 'feedback for learning' provided an explicit conceptual framework for the case study research. This framework ensured that our assumptions were laid bare and provided a lens that was central to delivering new contributions to knowledge on this topic. The study's findings identified, for the first time, that diverse ways of engaging with children were a product, not just of factors within contact centres but of dynamic interactions with the wider Family Justice and Children's Social Care systems. It challenged previous research by demonstrating that organisational goal conflicts contributed to problematic practice in supported centres and identified that unsafe referrals to supported services had not been

addressed by the Standard Referral Form and Protocols for Referral because of poor tool-user design and interaction: the skills required to use these forms effectively were not in place amongst either referrers or centres. Finally, the study demonstrated that the accreditation system provided inadequate feedback for learning and contributed to problematic practice as accreditation misleadingly implied to some referrers that centres had adequate support to safely facilitate difficult cases.

While it has been argued that systems approaches are too abstracted for the purpose of evaluation (Pawson, 2013) and that they struggle to account for micro-level action (May, 2006) this argument would seem to belie the diversity of systems approaches. While some approaches focus on explanation at the aggregate level, others engage directly with the agency of individuals and collectives. We would suggest, after Peters (2014, p. 2), that different systems models are appropriate for different research questions. As we have demonstrated, the systems safety approach adopted in this study retains a distinct focus on micro-interactions, particularly through the focus on exploring 'local rationalities' and directly observing actors' behaviour. At the same time, the approach situates micro-level behaviour within a systems framework, enabling a systems-level explanation for observed patterns of behaviour.

Questions of accountability are intrinsically linked to policy evaluation, particularly in the current context of New Public Management (Hood, 1991). Concerns have been raised that systems approaches diminish accountability (Aveling et al., 2015). However, system safety studies have challenged this assertion, illustrating that punitive, blame-focused approaches are problematic, not only because the line between blameworthy and un-blameworthy acts is

often blurred, but also because punitive approaches may not be effective in changing behaviour (Dekker et al., 2010; US Institute of Medicine, 1999). Rather than punitively enforcing compliance, systems approaches focus on understanding why workers do not comply and on critically evaluating whether the policy that has been introduced is appropriate. Systems approaches therefore stand in contrast to the dominant 'black box' approach to evaluation, which observes outcomes in the absence of understanding the mechanisms that produce them in particular contexts.

This case study further illustrates the complexity of the policy evaluation process in terms of multiple agents (contact centre workers, solicitors, social workers, judges) in multiple systems (family justice system, child welfare system, child contact centre system) interacting dynamically to produce unpredictable patterns of behaviour as they interpret and react with the policy context. This calls for policy evaluation frameworks that seek to acknowledge and address complexity and the inherent unpredictability that emanates from it (Barnes et al., 2003; Byrne, 2013; Author's own 2016; Author's own 2011; Callaghan, 2008). The systems framework, focusing on empirically investigating how policy is interpreted as it interacts with other systems, provides a means to critically evaluate the policy in context and to pinpoint any unexpected (and unwanted) effects. Therefore the assertion that the approach may lead to paralysing inaction (May, 2006, p. 2) would seem to miss that systems approaches do not discourage action, rather they encourage action followed by learning. While policy actors tend to assume that the policy is appropriate and so respond to unsuccessful implementation with yet more prescription and control of practice, systems thinking acknowledges that in complex systems unpredictability is inherent and so policy makers cannot assume to have the 'right' answer for every context. Hence, the importance of learning how the policy is

interacting. In this sense, it challenges the dominant top-down approach, striving for humility and learning rather than espousing certainty and control.

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The authors declare that they do not have any competing interests

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