

Participatory information governance: transforming recordkeeping for childhood out-of-home Care

Abstract

Purpose (mandatory)

In this paper, we examine the recordkeeping governance requirements of the childhood out-of-home Care sector, with critical interlaced identity, memory, cultural and accountability needs. We argue that as we enter a new era of participation, new models for governance are required to recognise and dynamically negotiate a range of rights in and to records, across space and through time. Instead of recordkeeping configured to support closed organisations and closely bounded information silos, there is a need for recordkeeping to reflect, facilitate and be part of governance frameworks for organisations as nodes in complex information networks.

Design/methodology/approach (mandatory)

The paper reports on a key outcome of the Setting the Record Straight for the Rights of the Child National Summit held in Melbourne Australia in May 2017, the National Framework for Recordkeeping in Out-of-Home Care, and the research and advocacy agenda that will support its development.

Findings (mandatory)

We argue that as we enter an algorithmic age, designing for shared ownership, stewardship, interoperability and participation is an increasing imperative to address the information asymmetries that foster social disadvantage and discrimination. We introduce the concept of participatory information governance in response to social, political and cultural mandates for recordkeeping. Given the challenges associated with progressing new participatory models of recordkeeping governance in the inhospitable environment of existing recordkeeping law, standards and governance frameworks, we outline how these frameworks will need to be re-figured for participatory recordkeeping.

Practical implications (if applicable)

The National Framework for Recordkeeping for Childhood Out-of-Home Care seeks to address the systemic recordkeeping problems that have been most recently highlighted in the 2013-17 Royal Commission into Institutional Responses to Child Sexual Abuse.

Social implications (if applicable)

The National Framework for Recordkeeping for Childhood Out-of-Home Care will also address how a suite of recordkeeping rights can be embedded into networked socio-technical systems. This represents an example of a framework for participatory information governance which can help guide the design of new systems in an algorithmic age.

Originality/value (mandatory)

The proposed National Framework represents a new model for recordkeeping governance to recognise and enact multiple rights in records. Designed to support the lifelong identity, memory and accountability needs for those who experience childhood out-of-home Care, it aims to foster the transformation of recordkeeping and archival infrastructure to a participatory model that can address the current inequities, and better enable the design and oversight of equitable algorithmic systems.

Introduction

Emerging discourses on governance respond to a number of political, societal and technological changes. As faith in monolithic hierarchical bureaucracies has broken down, network forms of delivering public services have emerged in which governments co-ordinate public, private, commercial and not-for-profit actors. While not necessarily new, growing concerns with how these networks operate in a transparent, inclusive, responsive and participatory manner is reflected in increased interest in governance, not just as a buzz word, but as it applies across all kinds and layers of societal organisations and systems (Bevir, 2012). For example, the following UNESCO definition highlights the role of governance frameworks in distributing power for fairness, equity and justice, and the need for accountability and transparency in and across management and operational systems.

Governance has been defined to refer to structures and processes that are designed to ensure accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment, and broad-based participation ... Governance systems set the parameters under which management and administrative systems will operate. Governance is about how power is distributed and shared, how policies are formulated, priorities set and stakeholders made accountable (UNESCO, 2015).

In Australia, a major focus of recommendations of the recent Royal Commission on Institutional Responses to Child Sexual Abuse (RCIRCSA) is the development of a National Framework for Child Safety (RCIRCSA, 2017a, p. 317), to co-ordinate cross-sectoral and interdisciplinary action. The Commission (2017a, p. 316) was critical of the domination of existing governance frameworks by government child protection agencies and outsourced service providers, finding that child safety requires national leadership and 'a coordinated interdisciplinary response across multiple sectors and all jurisdictions' – justice, child protection, health, education, disability services, out-of-home care, the faith-based sector, and community services¹. It recommended mandatory implementation of ten Child Safe Standards to ensure institutions fulfilled their responsibility to uphold the United Nations Convention on the Rights of the Child (UN General Assembly, 1989) and to always act in the best interests of the child (Article 3). The Australian Human Rights Commission has subsequently developed the Standards into a suite of National Principles for Child Safe Organisations, currently with COAG (Council of Australian Governments) for endorsement (Australian Human Rights Commission, 2018). The Royal Commission also recommended five high level principles for recordkeeping (RCIRCSA, 2017b, pp. 22–23) to supplement the Child Safe Standards, as illustrated in Figure 1.

¹ Child welfare in Australia has a long history of involving a range of providers –government, non-government, commercial, private and faith based organisations running orphanages, children's Homes, other institutions and administering foster and other alternate care services.

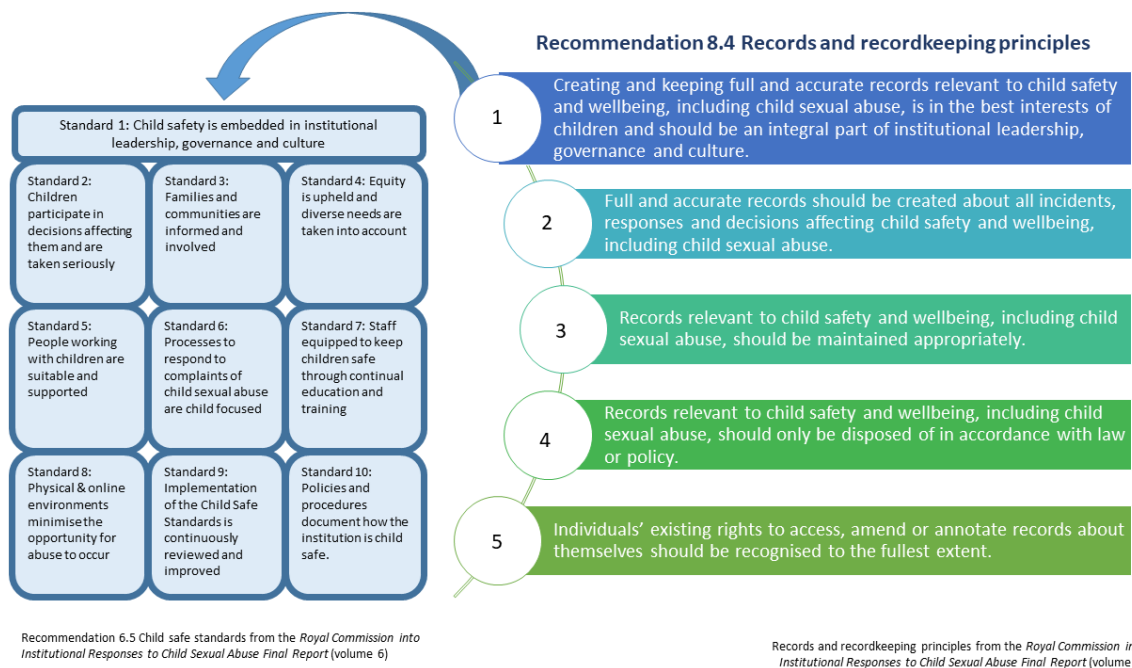


Figure 1: Recordkeeping Principles for Child Safe Organisations

The Commission viewed recordkeeping principles as particularly relevant to Standard 1 and embedding child safety in institutional leadership, governance and culture. Quality recordkeeping is equally critical to decision-making, engaging other stakeholders, providing authoritative sources of information, and supporting complaints processes. Specifying the elemental role of comprehensive high quality recordkeeping in good governance, particularly in the out-of-home Care sector, the Commissioners stated:

They help promote consistency of practice, retention of organisational memory and institutional accountability. They also help institutions to maintain descriptions of their processes, decisions, activities and responses to critical incidents, providing a level of transparency and evidence of practices that can be relied on in the future (RCIRCSA, 2017b, p. 38).

They also acknowledged that:

Creating and keeping accurate records about children, and the care and services provided to them, promotes the best interests of the child by fostering accountability and transparency and recognising individuals' character and experience. Importantly, these records matter to individuals when they are adults – to satisfy their essential human needs in relation to identity and personal history and for practical reasons, including in relation to redress and civil or criminal proceedings (RCIRCSA, 2017b, p. 62).

The Commission's findings on the role of recordkeeping in good governance, transparency and accountability align closely with the views of records continuum scholars. The records continuum is predicated on the role of quality recordkeeping (encompassing archiving) in governance frameworks as instruments for individual, group, corporate, and collective accountability, identity, memory, and authoritative resource management in and through time (McKemmish, 2001; Reed et al., 2018). How well recordkeeping systems and their role in governance are designed for 'accountability, transparency, responsiveness, rule of law, stability, equity and inclusiveness, empowerment and broad-based participation' is a professional, transdisciplinary and ethical challenge. It is essential that recordkeeping governance frameworks and systems are themselves accountable and

transparent. The Royal Commission found many instances of poor or absent recordkeeping frameworks and practice in child welfare and out-of-home Care. Allied with this is growing concern about the lack of transparency and accountability in IT and data governance which is particularly critical to the design of accountable recordkeeping frameworks, infrastructures and systems for an algorithmic age.

Participatory Information Governance

In contrast to the definitions of governance above, definitions of information governance focus narrowly on the frameworks for managing information within organisations and from organisational perspectives (Hagmann, 2013; Lomas, 2010). For example:

IG is the art of trusted interaction between the major stakeholders of an IG programme (IT, Business, Legal and Compliance, RIM, Security and Privacy). They aspire to joining up in order to minimise information risks to the enterprise while maximising the value of information assets through building desirable behaviours and enabling cross-functional decision making (Hagmann, 2013, p. 231).

Here information governance is conceptualised as a subset of corporate governance where information is an asset, singularly owned by the organisation, and managed for organisational liability and risk. Recordkeeping governance frameworks as reflected in international and national standards and legislation are largely driven by the concerns of government, corporate enterprises and collecting archival institutions. They embed and perpetuate the construct of a singular records creator with ownership and control over the records created and managed in their systems, and very limited rights for the powerless subjects of the record.

The focus of information governance is often on internal accountability and organisational self-interest, self-protection and self-preservation, with societal obligations filtered through this lens. The goal is legal compliance rather than direct engagement with concepts of information equity, inclusiveness and empowerment. For example while freedom of information and privacy laws reflect some of the information rights of those with whom an organisation interacts, such laws are restricted to rights of access and consent to information sharing as opposed to being frameworks for shared ownership and control. ISO 15489-1: 2016, *Information and documentation – Records management* presents a digital-ready set of recordkeeping principles, as well as key techniques, tools and processes for the creation, capture and management of records in all forms. However, although it references organisational recordkeeping in collaborative and multi-jurisdictional contexts, its main focus is on the design of accountable recordkeeping policies and systems in siloed organisations in government and corporate contexts. It acknowledges the ‘increased expectations of transparency of decision-making from business and government, the general public, customers, users of services, records’ subjects, and others with an interest in how records are created, captured and managed’ (ISO 2016, p. v), but the recordkeeping requirements of the ‘subjects’ of the records are largely ignored. Notions of multiple provenance and agency in records; the human rights and social justice roles that recordkeeping might play; the potential for networked recordkeeping governance models; and the recordkeeping accountability of the organisation to the multiple parties in business and recordkeeping transactions are mostly absent. Similarly missing are considerations of equity and inclusiveness, empowerment, affect, and broad-based participation.² The emergence of data science and automated decision-making using machine-learning models as core planks of

² Authors Evans and McKemmish were both directly involved in the development of ISO recordkeeping standards, particularly metadata standards. As we have become more engaged with participatory, community-centred research, we have reflected critically on the issues raised here about the development and content of global standards in the field.

information systems design (Metz, 2016) is an additional imperative for adopting participatory information governance.

Organisational culture also impacts on how liberally or narrowly governance frameworks are implemented. As Wanna (2018, p. 11) argues:

Good governance flourishes not only where citizens have *rights* of access to information, procedures and documentation, but also where a *culture* of openness and accountability permeates the relations between government and citizens.

This paper therefore departs from narrow organisation-centred views of information and recordkeeping governance as the frameworks in which one particular kind of entity in societal systems (i.e. an organisation) manages its data, information flows and recordkeeping practice, for a more holistic discussion. In records continuum terms, this represents a shift from focusing on third dimension perspectives to privileging fourth dimension ones – from recordkeeping regimes that service organisational requirements to those that carry records beyond the boundaries of individual organisations in response to social, political and cultural mandates for recordkeeping (McKemmish et al., 2010). We align with what Terry Cook identified in 2001:

"Governance" includes being cognizant of the interaction of citizens with the state, the impact of the state on society, and the functions or activities of society itself as much as it does the inward-facing structures of government and its bureaucrats. ... This citizen-state interactive relationship, I should note here, would be reflected in other jurisdictions by interaction of members with their church or union, students with a university, customers with a company, and so on - this broader "governance" perspective is not only for government archivists, but all archivists. The challenge for archival science in the new century is to preserve recorded evidence of governance, not just of governments governing. ... Archivists serve society, not the state, even though they may work for an agency found within the state's bureaucracy (Cook, 2001, p. 19).

Again, as continuum scholars, we substitute the term recordkeeping professionals for archivist 'as being concerned with the multiple purposes of records' and taking 'current, regulatory and historical perspectives on recordkeeping simultaneously not sequentially' (McKemmish, 1997).

Recordkeeping for Out-of-Home Care

Out-of-home Care is the term used in Australia to describe temporary, medium, or long-term living arrangements for children and young people who cannot live in their family home due to concerns regarding physical, sexual and emotional abuse or neglect. As in many other countries, through various waves of reform we have gone from children growing up under quite frightening and brutal conditions in Children's Homes, Orphanages and other residential institutions to placement in foster family or other supervised care when it is deemed not safe for them to live with their parents. Supervised group housing facilities are now a placement of last resort once other options have been exhausted (Commission for Children and Young People, 2015).

There have been a myriad of inquiries into Australia's state based child protection systems with the Royal Commission is thus the latest in a long line of inquiries into 'systemic and enduring' recordkeeping problems. They have all highlighted the lifelong identity, memory, cultural, accountability and information accessibility challenges for those caught up in child welfare and protection systems in the 20th and early 21st centuries. Past and present recordkeeping regimes and archival access frameworks have failed to provide answers to fundamental questions such as:

- Where do I belong?
- Who took me from my family and why?

- How were decisions made about where I ended up? How were other decisions made about my time in care? How were decisions made to keep me in care?
- What about my family while I was in care?
- What was I like as a child and young person?

Testimonies, submissions and other reports have described how Care leavers find government, organisational and institutional archives wanting when they turn to them to make sense of the dislocation, disconnection, neglect, trauma and abuse suffered during childhood out-of-home Care. The Royal Commission heard from abuse survivors that the damaging effects of the absence or poor quality of records and recordkeeping included:

- disconnection from family and community
- lack of knowledge about personal and family medical histories
- loss of ethnicity, language and culture
- loss of childhood experiences and memories
- diminished self-esteem and sense of identity (RCIRCSA, 2017b, p. 43).

Current standards in child welfare emphasise the need to put the physical, emotional, spiritual and social health and wellbeing of children and young people at the centre of service provision (FaHCSIA, 2011). However, their implementation is constrained by recordkeeping infrastructure and cultures from previous eras of child protection and welfare, and the kind of information governance structures mandated in extant legislation and standards.

Elsewhere we have explored how Australia's child welfare systems and their recordkeeping have been indelibly shaped by colonisation (McKemish et al, under review). Although many may consider colonisation a matter of history, society in former colonies continues to be structured by colonial institutions, legal frameworks, policies, practice, and philosophies. In Australia, classist, heteropatriarchal, sexist and racist colonial constructs of child welfare, the neglected and criminal child, and Indigeneity persist into the 21st century in principles and values embedded in recordkeeping.

[A National Framework for Recordkeeping in Out-of-Home Care](#)

The immediate and lifelong recordkeeping needs for childhood out-of-home Care cannot be addressed by incremental improvements. Extant laws, standards and infrastructure designed for a different age, different values, and a different technological paradigm, puts the rights of the organisations, institutions and governments responsible for child protection and welfare ahead of those of children and their adult selves.

The future lies in moving to a participatory recordkeeping paradigm (Evans et al., 2015, 2017):

- Transforming frameworks, processes and systems around respecting, representing and enacting multiple rights in records,
- Taking advantage of affordances in digital and networking technologies
- Re-imagining, re-designing and re-building an integrated child/person centred recordkeeping infrastructure driven by the experience and expertise of stakeholder communities, and Involving a range of community, professional, and disciplinary stakeholders in gaining deeper and better understanding striving for innovative solutions, and transcending the current limits and boundaries of any particular stakeholder's knowledge and expertise.

Faced with the size, scope and nature of this challenge, we have been working with community advocacy organisations – Care Leavers Australasia Network (CLAN), an independent, peak membership body to represent, support and advocate for people who were raised in out-of-home Care; the Child Migrants Trust, which supports and campaigns for the rights of children deported

from Britain to Australia and other countries; Connecting Home, a Victorian advocacy and support service for Stolen Generations survivors; the CREATE Foundation, a national, peak advocacy organisation representing children and young people in statutory care, and supporting young Care Leavers – and allied research units – the eScholarship Research Centre at the University of Melbourne, and the Collaborative Research Centre in Australian History (CRAH) at Federation University Australia – to establish the Setting the Record Straight for the Rights of the Child Initiative. In May 2017, the Initiative held a National Summit to set an agenda for recordkeeping advocacy, action and research over the next decade. This participatory design approach (Spinuzzi, 2005) has identified the key elements of a National Framework for Recordkeeping for Childhood Out-of-Home Care and associated strategies to transform legislation, frameworks and resourcing models, theories and practice (Evans, 2017; Reed et al., 2017; Setting the Record Straight for the Rights of the Child Initiative, 2017).

The proposed National Framework for Recordkeeping for Childhood Out-of-Home Care aims to address the 'full gamut of identity, memory and accountability needs for all those who experience childhood out-of-home Care' building on the **Recordkeeping Principles for Child Safe Organisations** from the Royal Commission. At its heart is the idea of **Independent Lifelong Living Archives** as a secure, distributed, participatory recordkeeping network, in which children and young people share in their recordkeeping and have access and control of the records of their childhood experiences throughout their lives.

Rights to agency in recordkeeping is defined through a **Charter of Rights in Childhood Recordkeeping** in alignment with the UN Convention on the Rights of the Child, and the emphasis on the active participation of children in decision making that impacts on their lives (FaHCSIA, 2011). It builds on research identifying a more extensive suite of rights in records to address the social injustices embedded in existing archival infrastructures (Gilliland and McKemmish, 2014).

Participatory governance is built into the framework through a **Recordkeeping and Rights of the Child Advocacy Body** with development, auditing and oversight responsibilities, to oversee the design and implementation of a national cross-jurisdictional, cross-sectoral legislative and policy framework to promote efficient and accountable recordkeeping by all agencies involved in child care services. A **Network Governance Model** will provide oversight of the technical infrastructure and accountability for the network as a whole.

An integrated **transdisciplinary research and development agenda** aims to identify, progress, support, evaluate and monitor transformations, including interoperable infrastructure and legal and standards frameworks at state, national and international levels which better accommodate participatory recordkeeping, co-design approaches and multiple rights in records (Evans et al 2015, 2017). The ultimate goal is to support the development of the Framework by:

repositioning of children in out-of-home Care and Care leavers from passive subjects of records owned and controlled by government, Care organizations, and archival collecting institutions, to 'active participatory agents' with an extended suite of rights in records and a role in decision-making relating to records of their childhood (McKemmish et al under review).

A related **action and advocacy agenda** seeks to embed participatory values and constructs of co-creation and archival autonomy in recordkeeping governance and systems in the sector, and in relevant national and international frameworks, laws and standards. For example, while the 2011 *National Standards for Out-of-Home Care* (FaHCSIA, 2011) emphasise the meaningful participation of children and young people in decision making that impacts on their lives, there is little evidence of their participation in contemporary recordkeeping. The inclusion of impacted communities is also

recognised in the requirement for Aboriginal and Torres Strait Islander peoples to 'be involved in the design, development, implementation, monitoring and evaluation of all programs, policies and legislation that affects us' (Australian Human Rights Commission, 2010, p. 25).

Current records management frameworks, processes and systems lack the capacity to adequately monitor recordkeeping for the childhood out-of-home Care.³ A major design challenge is to model participatory recordkeeping governance that can effectively account for recordkeeping practices, not just within organisations, but also across the network of institutions involved in the provision of out-of-home Care. As evidenced by the Royal Commission and other inquiries, the absence of such governance has seen many records fall through the cracks, particularly when responsibilities for childhood Care ceases, organisations exit the sector, government contracting arrangements change and the services within providers are re-configured. At these moments there is little advocacy for the 'subject' of the records, and for resourcing of quality records and archives management as part of ensuring continuity of care.

Rights instruments and standards in the sector, and more generally instruments and standards relating to children at global and local levels (for example, in the UN Charter of Child Rights and local rights instruments based on the Charter), often include references to identity, memory and cultural rights; agency or a degree of participation in decision making; and information accessibility as essential requirements. In most cases the recordkeeping requirements to support such rights are not specified. The Royal Commission's explicit linking of recordkeeping requirements to Child Safe Standards is a rare example. In relation to Indigenous children and children from marginalised ethnic communities, cultural safety is also a major issue. The Royal Commission formed a view, based on research findings, that:

Empirical data now supports the idea that connection to culture is associated with improved emotional, social and physical health for Aboriginal and Torres Strait Islander peoples. Positive cultural connection can increase the protective factors available to Aboriginal and Torres Strait Islander children by helping them to develop their identities, fostering high self-esteem, emotional strength and resilience. Our commissioned research also highlights that positive cultural connection indirectly increases protective factors by supporting the social conditions necessary for all adults in a kinship placement to be available, responsive and protective of children in the community (RCIRCSA, 2017c, p. 327)

Recordkeeping requirements relating to cultural safety have not as yet been established but are being explored by Kirsten Thorpe in her Monash PhD thesis *Culturally Safe Recordkeeping and Archival Places* (McKemmish et al under review). Another critical challenge is to ensure that the role of quality recordkeeping in governance and accountability is explicitly acknowledged in related sector frameworks, rights instruments, and standards. Explicit statement of relevant recordkeeping rights and explanations in implementation guidelines of the recordkeeping requirements associated with various rights and standards instruments in the out-of-home Care sector are essential.

Information Governance in the Data Age

As egregious as the inequities inherent in conventional socio-technical recordkeeping systems may be, the emergence of data science and automated decision-making using machine learning models as core planks of systems design is an additional imperative for exploring and adopting participatory

³ An example is the 2015 investigation by Victoria's Commissioner for Children and Young People into the adequacy of responses to sexual abuse or exploitation in residential care services (Commission for Children and Young People, 2015). The inquiry's file audit found little to no evidence of the raising, progress or status of quality of care investigations in the case files reviewed, and other major deficiencies in currency and quality of recordkeeping.

information and recordkeeping governance models. The technical characteristics of machine-learning approaches has led to decision-making automation that:

- can manifest at orders of magnitude greater than previous, function-oriented design;
- is essentially inscrutable, resisting easy inspection and explanation of decision-making rationales (though possibly amenable to labour-intensive post-hoc analysis); and
- unchecked, can form tight data/decision/effect/data feedback loops that serve to entrench social biases and inequities (O'Neil, 2017).

Conventional recordkeeping systems can exhibit these characteristics. Those in, or having left Care, are never beyond the reach of the documented surveillance that is often used for control and decision-making beyond the original Care context. For the Care-affected, recordkeeping has an all-encompassing scale, opacity of purpose and utility, and can be the source of continual affect and effect over multi-generational timescales (Mendes, 2009; Wilson and Golding, 2016). Nonetheless, the sheer scale, opacity, emergent nature, and capacity for negative sociological reinforcement of emerging data-driven technologies demand additional scrutiny and oversight of their application. The risks and ambiguity inherent in data-science techniques are at odds with the popular, technologically deterministic conception of such automation as 'objective', 'comprehensive', or 'beyond reproach'. While the phenomenon of 'silver bullet' solutions is as old as the industrial revolution (Smith and Marx, 1994) it is surprising how lay-people and professionals alike defer uncritically to application-mediated information or decisions (Van Dijck, 2014). Moreover, the ever-shifting foundations (Stone et al., 2016) of data-driven application necessitates close attention to its governance.

In this section, we address four recordkeeping aspects of the governance of such applications. The first concerns the use of the data that forms the basis of decision-support analysis or visualisation in general, or the training of automated decision-making models. This data – or, rather, these records (as they must constitute authoritative records or they would not be useful as the basis for decision-making) – need to be obtained in an ethical manner. There are real questions about the transparency of both the collection of data and the downstream uses to which it may be put. Governance in this context involves not only demonstrable mechanisms that ensure the free and prior consent for the collection and use of data in recordkeeping systems, but participation in systems development and use. Without such governance, we are left with a recordkeeping landscape reminiscent of a totalitarian surveillance state; moving through essentially unregulated cyberspace, never knowing what is being recorded, accessed and used, or who is informing about our movements, transactions, and expressions (Wolle and Selwyn, 1992). The shift of surveillance technology from the state to the private sector has sharpened this discourse (Van Dijck, 2014) and altered notions of privacy and the possibility of individual and collective consent to the collection of data.

The shift becomes more problematic when coupled with the outsourcing of service and IT provision as is the case in the out-of-home Care sector, and particularly to those with for-profit motivations and obligations. Regulatory frameworks do not manage service delivery recordkeeping or data management well – particularly where authority and decision-making has been delegated to either a human agent or automated application (Carney, 2018; Dickerson, 2018; Powles and Hodson, 2017). Nonetheless, some jurisdictions are addressing these challenges. For example, the European GDPR (European Commission, 2018) legislation is an attempt to shift power back to the subjects of records and propose new contours of privacy. However such regulation focuses on generalised notions of privacy and the treatment of data as a resource for exploitation. This treatment glosses over individual and collective evidence, identity, memory, and accountability affordances of recordkeeping and the ways this data could systemically be used adversely for documented people. Concern over 'consumer rights' over data (NTIA, 2018) misses the point of the role that records play in a wide range of rights. Governance must involve mechanisms of proactive disclosure of (a)

collection and (b) use, even if this happens at some distancing spatially or temporally from the activity of participants.

This governance is applicable not only within the public and private sectors where much of the data gathering takes place, but also to research institutions where investigation of data-driven techniques cannot happen in a data-vacuum. Sufficient recordkeeping regarding the use of data beyond its immediate transaction utility is essential for accountability in the child protection sector— especially where it is used for research purposes (Wilson et al., 2018). This accountability is further complicated by the gathering of information without an explicit use in mind, acknowledging the emergent application of data science. Such purposeless data gathering is difficult to protect through regulation. Nonetheless, governance in the research context needs to make explicit the processes for proactive disclosure and participation.

The second aspect to be considered is the problem of bias (Eubanks, 2018; O’Neil, 2017). An obvious source derives from the automation of sociotechnical systems. If one goal of data-driven analysis and decision-making (often with an economic/efficiency rationale) is its ‘objectification’, then how are ‘good’ decision-making cases identified from the body of historical data? Information governance must include the critical analysis (Evans et al., 2017) of the end-to-end sociotechnical system that is being improved and acknowledgment of flaws, biases, and long-term affect. If not, there is the danger of simply redoubling the problems.

Another, more subtle reason for this bias are the limitations of datafication (Van Dijck, 2014). Not every facet of a given application domain is amenable to measurement and/or recording. Data science, therefore, must rely on proxy measures of aspects of human behaviour – for example, using residential location as a proxy for economic risk. Such proxies can exhibit more or less nuanced and hidden biases. In fact, one must be particularly diligent about data features to ensure they are not proxies for proscribed decision-making – e.g. race, age, gender, marital status, and so on. For example, Eubanks has shown how the measurement proxies used for the automation of child protection assessment in Allegheny County in the US, exhibit bias against those families already documented in the system – assessments that are at odds with actual observations by case workers. Furthermore, she concludes that “the activity that introduces the most racial bias into the system is *the very way the model defines maltreatment*” (Eubanks, 2018, p. 255) (Author’s emphasis).

Additionally techniques that limit the inputs of decision-making to only that which can be routinely or automatically captured and quantified decreases the possibility of participation and self-determination, increasing the possibility of the tight feedback loops described above. For example, a loan decision based on credit score and other collated data, may lead to increased and entrenched poor economic circumstances, that may, in turn, inform future welfare, housing, and employment prospects (O’Neil, 2017, p. 149). Information governance must identify the limitations and potential biases of datafication, making explicit what is not being taken into account in the new system.

A third aspect of information governance is an imperative to subject the end-to-end development, deployment, and maintenance of data-driven applications to formal oversight and active governance. If un-biased training data can be ethically obtained and refined for a given application, any proposed data-driven application must be demonstrably fit-for-purpose, exhibiting both efficacy and minimal adverse side effects across space and through time. As with other regulated enterprise, this involves the consideration of benefit and affect beyond the immediate transactional context to make explicit the through-time consequences of its use. It requires multiple phases of testing from a variety of participant perspectives together with critical analysis of test results, and comprehensive recordkeeping of the development process.

Thereafter the deployment and ongoing use must be monitored through time to ensure that the application remains within pre-established bounds of tested-for contexts, and that any emergent deleterious impacts are identified and amended. Data-driven applications are inherently brittle with

respect to changing use contexts (Marcus, 2018). The risk of unforeseen biases and socio-technical feedback, or the drift of the domain with respect to the application model due to external economic, societal or other structural change (Tsymbal, 2004) means that such systems must be subject to ongoing scrutiny.

The final aspect is the use of data science techniques in recordkeeping governance itself. This may seem circular, however, it is difficult to conceive of any information system that does not need to provide authoritative recordkeeping for at least one stakeholder in some context. Importantly, this explosion of heterogeneous diversity in recordkeeping has become another 'wild frontier' (McDonald, 1995); decentralised and fractured, and subject to pressures that include increasing data volumes, reliance on commercial and proprietary systems, and evolving forms of records and formats (Cumming and Picot, 2014).

Faced with dealing with this maelstrom of data, we must trust that 'innovative techniques for mining, recovering, and reusing digital materials and their traces' (Gilliland, 2014) may eventually be found to separate out the good oil⁴ of meaningful records from vast quantities of information sludge (Upward et al., 2017, pp. xix–xx). The use of data-science techniques for the creation, capture, organisation, and pluralisation of authoritative records has commenced and is subject to the same biases, limitations and risks as any other data-driven system. Therefore, recordkeeping itself must embrace all of the foregoing governance as well. Put simply, without appropriate oversight (and automation techniques), we will drown in the sludge.

Information governance in the twenty first century means confronting the biases, datafication, and, perhaps, blind faith in provenance and authority that has led recordkeeping systems and the records they contain to become weapons of affect for marginalised communities (Wilson and Golding, 2016). Governance must involve the equitable participation of all parties in the design of recordkeeping frameworks that have the potential to affect their lives.

Conclusion

In Australia, the only national or state-level recordkeeping frameworks established in legislation and standards lie within the government or corporate sectors. There are no holistic, pluralising recordkeeping frameworks for contemporary or historical recordkeeping. We have argued in this paper and elsewhere (Evans et al., 2017) that government and corporate recordkeeping privileges the needs of the singular creator of the records and information elites, and that recordkeeping processes are driven by and designed for the operational needs of government agencies and business organisations. Community advocacy groups representing the 'subjects' of recordkeeping have not as yet been invited to participate in the development of standards at national or international levels. Nor has their development or recordkeeping and archival law reform as yet been informed by human rights and social justice frameworks and instruments, the testimony of the 'subjects' of recordkeeping in a number of sectors including child welfare, the findings of royal commissions and inquiries based on that testimony, extensive engagement with stakeholder communities, and research findings.

Values and principles that could inform the development of recordkeeping governance frameworks for participatory recordkeeping that fit UNESCO's definition of governance quoted earlier in this paper include:

- Enabling pluralisation in recordkeeping that facilitates self-determination as defined in UN instruments relating to human rights, child rights and the rights of Indigenous peoples.
- Embracing Hurley's concepts of co-creation, multiple simultaneous provenance and parallel provenance (Hurley, 2005a, 2005b) and Evans, McKemmish and Daniels' (2015) concept of archival autonomy

⁴ Attributed to Clive Humby and, perhaps, first quoted in (Palmer, 2006).

- Prioritising the lifelong identity, memory, accountability and cultural recordkeeping needs of those whose lived experience is captured by recordkeeping processes
- Prioritising the recordkeeping requirements of those who have been the victims of human rights abuse and social injustice
- Valuing the long term and affective functions of recordkeeping rather than focusing mostly on transactional and operational utility
- Designing flexible, rights-based and person-centred recordkeeping, recognising that one-size-does-not-fit-all.

Embedding these principles and requirements in governance frameworks is a vital step towards participatory recordkeeping that can fully address the lifelong identity, memory and accountability needs for childhood out-of-home Care.

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