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Social Policy and Society / *FirstView* Article / March 2014, pp 1 - 12
DOI: 10.1017/S1474746414000098, Published online: 24 March 2014

Link to this article: http://journals.cambridge.org/abstract_S1474746414000098

How to cite this article:

Rebecca French and Larry Stillman The Informationalisation of the Australian Community Sector .
Social Policy and Society, Available on CJO 2014 doi:10.1017/S1474746414000098

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The Informationalisation of the Australian Community Sector

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Based on research in Australia, this article offers explanatory concepts about how welfare workers deal with contradictions between the rationalising 'informationalisation' of welfare system governance and the demands of people-centred welfare practice, or 'technologies of care'. While the situation in Australia with respect to the relationship between government, funders and welfare workers may not be mirrored in other places, the concepts are relevant for the development of local research, insights and practice. Suggestions are also made for further action to bridge the gap between information systems design and welfare practice through the adoption of a dialogic and representational system for more effective interoperable design that reflects the needs of the major parties involved, including funders, designers and particularly welfare workers.

Keywords: Social-technical systems, data doubles, electronic children, bricolage, informationalisation, governmentality, electronic welfare work.

Introduction

The article discusses the informationalisation of welfare work and offers some explanatory concepts for its effects. It uses the outcomes of ethnographic research to explore the 'informationalised' work culture that increasingly affects front-line welfare staff. The findings can be utilised in a variety of different forms of information systems design, as well as developing new forms of policy and practice discourse within the welfare industry itself that have been referred to as 'technologies of care' (Stillman, 2010).

When we speak of 'informationalisation' we mean the imposition upon welfare work processes of standardised systems for reporting, accountability and decision-making, in which systems design and user requirements have increasingly focused on managerial, rather than front-line imperatives (Garrett, 2005). Consequently, there is not only an 'electronic turn', as described by Garrett, but there appears to be a more fundamental 'informational turn' in welfare work practice, dictating strict policies and protocols in ways that represent another manifestation of governmentality and informational control (Habermas, 1972; Foucault, 1988; Rose, 1999). This can narrow the focus of welfare work from a relationship of flexible support and care to one that is informationally constrained, goal-driven, problem-focused and short-term (Parton and Kirk, 2010). Even though workers may use professional discretion and judgement to bypass or interpret rules to support clinical decision-making (Shaw and Clayden, 2009), restrictions are often imposed, for example through workflow reporting requirements and proscribed databases (White *et al.*, 2009).

Behaviourally, the informational and often mundane focus has also resulted in increased auditing of performance of programmes in developing what Power (1997) calls ritualised institutional 'certificates of comfort'. This certification is a form of risk reduction, in which technical or artefactual performance is assessed without necessarily leading to reflection on whether traditional welfare performance – that is, fulfilling client rather than organisational outcomes – is improved though such forms of control. Workers are not only required to undertake detailed data collection about their clients and the work they do, but to keep detailed records justifying this work, dictated by strict policies, protocols and workflows, using particular standardised assessment tools in tick-box formats, as well as imposition of a formalised administrative language in the production of datasets (Peckover *et al.*, 2008). As a consequence, under the electronic control of language, process and interaction, the complex stories of clients can be lost as they are transformed into formulaic data for decision-making or reporting via electronic checklists, dialogue boxes and spreadsheets.

Why has this change in the conceptualisation and practice of welfare work occurred? When speculating on the antecedents of what Parton regards as an 'informational turn' in welfare work, researchers have pointed to a greater concern about risk in both decision-making and outcomes, and the need for accountability measures in an attempt to minimise risk and promote transparency in the welfare industry (Parton, 1996, 1998; Calnan and Rowe, 2008). Typical mechanisms include strategies to formalise governance structures, financial accountability, quality assurance, risk assessment and risk management, as well as auditing (Sawyer, 2009). The increased emphasis on accountability and reporting, particularly for outsourced agencies, reflects the neo-liberal or economic rationalist approach to government that has taken effect since the 1980s throughout the world (Rose, 1999). There has also been an expectation that ideas from management theory (for example, regarding the return on investment and measurement) can be applied wholesale in the government and non-profit sector, including the management of complex client interactions (Bamford, 1989), even though the resulting assemblage may be something of a hybrid that does not match the hype of efficiency through technology. The culture of accountability and risk-aversion can also result in 'informational exclusion' (Sen, 2001), in which only certain forms of information are regarded as legitimate, and, in turn, these restrict the capacity for practice or decision-making freedom.

The dominance of system design focussed on technical-rational thinking rather than social processes has been highlighted in the welfare industry (Harlow and Webb, 2003), and more generally is a concern of some areas of information systems research, such as social and community informatics (Kling, 2000; Stillman and Linger, 2009). From this perspective, it is understood that the technical agenda of Information System Development (ISD) can be over-privileged when designing systems that have a people-focus (Stillman and Linger, 2009). Non-technical viewpoints, such as those coming from the frontline of service delivery, are downplayed or bracketed, and there is an 'insensitivity of technical ISD [Information Systems Design] approaches to social cultural, and political issues' (Rose, 2002: 243). This in turn privileges the viewpoint of developers concerned with solving technical problems, rather than allowing the discourse and framings (Goffman, 1997) of the welfare front-line to determine system design that is responsive to social ambiguity.

The Australian context

Lyons (2001) defines the community or welfare sector in Australia as locally based organisations providing services including, but not limited, to children's services,

supported accommodation, family support, counselling, disability support and youth work. Although other terms and descriptions, such as 'non-profit sector', are used, the community sector is identified by its commitment to supporting communities' welfare whether they have a geographical basis or come together because of a shared interest group or culture.

While government departments still play a key role in the delivery of many services (for example, child protection and disability services), many of these tasks have been devolved to the community sector (or in some cases, for-profit companies). This has led to a shift in focus from direct service delivery to regulating contracted services, from 'rowing to steering' (Sawyer, 2009). Known as 'responsive regulation' (Braithwaite, 2000), this form of regulation devolves responsibility from government to delegated service providers (Hood, 1998) with strong control mechanisms

In the case of the two key parties here, government and welfare workers, two very different views of the world are consequently at play. The first domain of activity (which is dominant) involves the design, implementation and management of stochastic systems for conducting, managing, and accounting for all forms of government, including welfare outputs (money, client relations, categories of approved decisions, discourse forms, results). The second domain is the one of welfare practice, with its particular forms of discourse and methods of problem-solving with clients, but it is a domain that has become increasingly dominated by the first.

Recent government activity in Australia confirms this trend. The Commonwealth of Australia Productivity Commission report into the contribution of the not-for-profit sector touched upon ICT issues as part of a more broad-ranging inquiry into the social and economic capacity and contribution of the sector to the Australian economy and society (Productivity Commission, 2010). The report took the view that better systems design is needed to ensure that monitoring, accountability and evaluation frameworks are consistent, perhaps through the use of a standard measurement framework and increased system interoperability. But the report did not take up the potential tension between informationalisation and client-centred work, or how such design processes should be conducted.

Research with the community service sector in Victoria, Australia

The thematic findings from two studies based in the Australian state of Victoria will be used to focus attention on a number of themes which may enrich the debate on the tensions and intersections between welfare work practice and technology.

The community-sector-focused *Doing IT Better* project (Stillman *et al.*, 2009, 2010) was a three-year action-research project (2007–10) in the Victorian community services sector. It provided a clear picture of challenges facing the community sector from a bottom-up perspective. It identified the increasingly complex information environment in which community sector organisations were operating, their lack of knowledge and confidence to make decisions around IT planning, implementation and training, as well as a lack of concepts and vocabulary to describe and discuss the problems they had. The project also observed problems that agencies had experienced with mundane duplication of data entry, increased reporting requirements to funders and a lack of interoperability between information systems and datasets. These problems were contextualised within the need for a more holistic and comprehensive understanding of the particular nature

of the social-technical culture of community service agencies, where client service is a primary goal.

Doing IT Better also identified a range of potential data and information management issues that warranted deeper observation of information practices of welfare work, and the role of technology in supporting, or potentially hindering, practice. A further ten-month ethnographic study was undertaken at a small community organisation which works with culturally and linguistically diverse groups in Victoria, Australia. The study focussed on the daily welfare work practices of individuals or small teams of workers, and the information practices embedded within them (which included technology use). The fieldwork consisted of eight ninety-minute semi-structured interviews with nine staff members, together with thirty-six hours of participant observation with fourteen welfare workers and two clients. A range of tasks were observed, including direct face-to-face contact with clients, completing referral forms, advocacy, case consultation and client problem solving. There was also observation of workers completing mundane administrative tasks, such as data entry and reporting. Journal and document analysis also made up part of the study.

Key research findings

The ethnographic study identified a range of findings related to the information practices and technology use of welfare workers. Of particular interest to the current discussion was the identification of fluid information practices embedded in everyday work practices. Boundaries between tasks and clients were blurred, and workers approached their work flexibly, with limited pre-planning. Welfare workers in the study had a spoken, collaborative culture, and freely shared their deep knowledge of clients and the community context, as well as knowledge of any suitable support for clients. They used a personal set of resources that surrounded them, their 'box of tricks', as their primary information source, together with their own knowledge and the knowledge of their network.

In light of these findings, we now consider four explanatory concepts, which can be characterised as 'theories of the middle range' (Merton, 1968: 6), as a means of analysing and commenting upon the effects of informationalisation as seen in the study. These in turn help to identify strategies to improve the relationship between welfare work and electronic systems. These concepts are processual narratives, data doubles, fluidity and bricolage.

Concept 1: The tension between informationalisation and processual narrative

The series of interconnected stories that a client may tell a worker (and indeed that a worker may construct about a client) have traditionally been captured in the narrative form of case notes, and these have been used to create the overall service response. Over time, these form a complex picture of a client and their issues, together with the stories of the interactions and strategies that the worker has used to improve the situation of the client, and, in turn, are used by others involved in the welfare system.

Welfare workers reported that verbal discussion between colleagues and with their clients, and the subsequent production of case notes, were key ways in which they chart a client's progress, and remember what has happened. The following interview excerpts

from this research illustrate this preference for verbal discussion, and the importance of case notes as clinical tools.

The longer I work here, the more information I just know myself. I am way more likely to just ask someone in my office, or, if it is something about a specific area, like education, I would ring a colleague who is now a school social worker and ask her. (Interview with a Case Manager)

I find that when I am writing case notes, I am going through a process of getting clear in my head what has happened. Like I said before, my days are incredibly busy, and I might be working on lots of different things for lots of clients. Or I may be helping a client in crisis, so doing lots of work all day, and not getting an opportunity to do anything but take really basic notes. I reflect when I do case notes, what happened, what did I do and what was the outcome? But I think it also helps me reflect after a week, or a month, too. (Interview with information and referral team)

The story of a client *in vivo* was seen to be not only the essential record used, but also a way of easily communicating to others about the client's needs and progress towards goals. Even when comprehensive case management systems were provided to workers, many of them continued writing up personal case notes for each client outside of the formal system. They saw the notes as a way by which they could capture what happened in a session, and also reflect on what happened. Such interactions cannot be easily summarised into a simple formula or formatted 'record', because standardising human and often delicate complexity is almost impossible. Flyvberg, using Bourdieu's insight, describes such activity as a kind of virtuoso performance that cannot be easily quantified or recognised through metrics (Flyvbjerg, 2011). This form of expert 'performance' or knowledge is undervalued in rationalising systems because it is not easily countable, and the 'smoothing' out of the bumps in real time and real interaction can lead to distortions in the record and decision-making by those who do not know the total personal context.

Concept 2: The Emergence of Data Doubles

Via informationalisation, clients are reconfigured through data requirement into a new persona as 'data doubles' (Haggerty and Ericson, 2000) or 'electronic children' (Peckover *et al.*, 2008). Other terms which have come into use are 'digital personas' or 'capta [stored data] shadows' (Kitchen and Dodge, 2011: 90). The data double is an informational surrogate, used in ways that the original subject of the data abstraction may not even be aware of. This assemblage of partial features may range across multiple systems and multiple formats, and is often seen as a rational and reasonable picture of the real person by funders and decision-makers. However, the data double or electronic child may actually be a narrow, partial view (thus, a form of 'informational exclusion', as suggested by Sen (2001)), less than the totality of its parts, with a sometimes distant relationship between the real person and multiply mediated and filtered electronic representation, a constructed and governed electronic persona that meets institutional ends. This means that attempts by welfare workers to gain a picture of a client's complex and multi-levelled needs, distanced by time and space from actual encounters, may be fraught with problems, and a host of ethical issues can be seen to arise from such a limited picture of a person where critical issues can be lost or excluded in 'the system'. Only a prescribed sketch, linked to an informational system, may be captured, rather than the depth needed to know a

person's full life and the development of strategies to assist with more complex changes (Howe, 1996). The following excerpt from the research illustrates this difficulty:

Well, I kind of see it [using a funder provided case management system] as something I have to do, I have to use because [funder] makes me do all these reports and updates, and recording how many hours I have worked, and with who. I feel like it is a government thing, not mine to use to really help me with my work, which is hopefully helping clients with their problems (Interview with a complex case manager).

Interviewer: A few people have talked about feeling like they could be restricted, and that these procedures or computer systems don't really help them do their jobs, or reflect what they really do.

I guess I would agree and disagree with that. I think that they certainly can make you feel hemmed in sometimes, and filling in all the forms or boxes or whatever is a pain, and not really what I signed up for when I became a social worker. I want to help people find a job or education, you know? Sometimes what we have to write up about them feels more about numbers, how many people have a job this month? Some of it, unfortunately, feels like spying. (Interview with a youth employment consultant)

As the informational turn continues with its determinism, there is a danger that 'data doubles' and abstractions, rather than the 'real person', can become the preferred version of clients in welfare work data collection and reporting across very large welfare systems. The words used to describe clients (and the words they use themselves) must be shoehorned into data structures with prescribed terminology or limited check and comment spaces (Aas, 2004). In contrast, unstructured narratives are not so easily codified or depersonalised, even if shared across time and space electronically (such as by email).

It is still to be determined to what degree welfare workers rely on these undocumented 'data doubles' in their work. Do they utilise parallel narrative representations, which may be housed in case notes, emerge in conversation or reside in workers' heads, to better picture the client and their world? Furthermore, given the uncertainty about the status of 'data doubles' as an adequate picture of a client, how reliable are they as an artefact to be used in communicating with information systems specialists in the development of more responsive and socially interoperable systems?

Concept 3: Fluidity

How can information systems begin to capture the mobility of welfare work while continuing to track the data that funders require? In supporting welfare workers, it would seem vital to acknowledge that actual practice is complex, and not all aspects of practice lend themselves to being captured in a traditional database. Ferguson (2008) used the term 'liquid' social work to describe this, arguing that social work is made up of complex, interconnected streams of activity. This takes up a theme found in Bauman's characterisation of modernity as one of fluid identities and practices not bound by traditional boundaries (Bauman, 2000). Social work needs to embrace metaphors that express the mobile, liquid, and even uncertain nature of real practice. The fluid nature of practice is exemplified in this data excerpt, from an interview with a community development worker:

Interviewer: What is your typical approach with working with clients day to day?

I find that I don't do things in set steps. I know which clients I have to work with, and the tasks I have to do and the urgency, and then I just work through them. I guess all the parts, like assessing what's going on with them and how to help them, happen, but they feel like they are all happening at once, and changing as urgency changes, rather than happening one step at a time. I usually have a sense of what I have done by the end of the day, and for who, but not always exactly how I have done it.

(Interview with a Community Development worker)

The use of information systems to track the supposedly logical trajectory of a particular case or client may require a deliberate but inaccurate smoothing of the recording of actions, providing cursory summaries rather than contextual stories. Workers may not be able to easily describe the meanderings that led to a particular outcome for a client in speech, so converting them to text or data fields would seem to be particularly difficult. In addition, the interpretative nature of dialogue may not suit the precision required for an exacting and externally designed case management or reporting system. For example, whether or not verbal recordings kept as part of databases would be acceptable, or even intimidating, for some workers needs to be explored. When we speak of the need for fluidity, we are again looking at interoperability and mediation between two very different technological cultures and systems – that of the dialogical skills and procedures inherent in welfare work, and the technologies required for technical (that is artifactual) forms of governance and administration. Both sides reflect very different ontologies and emphases around the social-technical relationships that are played out through informationalisation. The resultant tension is not surprising.

Concept 4: Bricolage

While the use of the metaphor of fluidity provides a way of acknowledging the complexity of social work, additional concepts are needed to assist in the description of these practices. Considering welfare workers as bricoleurs may be useful. Bricolage is the art of making something new using materials that are around you. It derives from the French term 'bricoleur', which refers to a handy man or odd job man, who is skilled at using supplies to hand to build functional objects (Levi-Strauss, 1966). The bricoleur does not formulate a plan to guide his action, but gradually brings disparate materials and prior tacit knowledge together to meet a need (Harper, 1987). Bricolage rests not on breakthrough innovations, but rather on gradual accumulation of knowledge about tools and materials, as well as an ability to re-use objects for purposes for which they were not originally designed. For example, a bricoleur may use a fence post to repair a floor (Baker and Nelson, 2005).

The concept of bricolage can be applied to welfare work in a number of ways. The work often involves building on prior knowledge (often tacit and culture-specific) of techniques and services, rather than engaging in intensive information seeking and evaluation (Day, 2007). Limitations of time and resourcing may add to the tendency of welfare workers to rely on what they know, or what family members can assist them with technologically. The knowledge of workers (and many clients) often encompasses not just information about what services and supports exist, but will include process knowledge

such as how a referral should be made, which services are suitable for a particular client, and which services are trustworthy (Sheppard, 1998; Westbrook, 2009).

In addition to the concept of bricolage explaining collaboration and incremental action, it may also explain the way in which a creative welfare worker responds to the situation at hand, and harnesses tools, resources and techniques which they already have to create a unique combination of assistance for a particular client. Prior knowledge of the service environment is essential (much of this is tacit, or might be in the worker's personal 'bag of tricks' or 'toolkit'). Workers therefore work with what is to hand, using any tools and resources necessary (which may be people, other services, pamphlets, counselling techniques, the internet, the telephone, knowledge about service quality, accommodation vacancies, or money).

Bricolage is also a way of working and a pattern of resource usage, and potentially, a way of bypassing the rules. The flexible, collaborative nature of bricolage ties in well with observations of workers in organisations that have oral cultures and frequently use storytelling as a way of communicating about clients. A reliance on tacit knowledge and personal sets of resources, as well as knowledge drawn from workers own networks, also fits with patterns of resource usage in other sectors where bricolage is practiced, such as nurses (Gobbi, 2005).

The nature of bricolage in welfare practice is pertinent when considering the tensions between the reality of welfare work practice and the tendency for informationalisation. Duymedjian and Ruling have described instances of bricolage which led to effective outcomes, but were often hidden or masked by practitioners, as bricolage was not formally accepted by their employer organisation (Duymedjian and Ruling, 2010). This can, of course, also be considered as a form of tacit institutional resistance to regulation, but there is a limit to how far this can go in regulated environments such as mandatory child protection. Non-bricolage solutions, which involve standard planning, processes and training, are preferred to the flexible improvisatory approach of bricolage, even if it may be highly effective, because the former can be more easily institutionally controlled.

Final observations

Currently the response of welfare workers to informationalisation is one that features tension between data and processual narrative: the emergence of data doubles, bricolage, and fluid practices in increasingly hybrid settings. How can such features of informational work be incorporated into more effective system design? Can changes reduce the tremendous loss of expertise in an already very expensive welfare system, such as that found in Australia? Consequently, if welfare work is accepted as ultimately dynamic and fluid, then we perhaps need to take a more process-oriented and fluid approach to system design. This would mean far more emphasis being placed on an evolving and negotiated view, and the acceptance of cultural changes on how to make systems of all sorts (human and technical) more in tune with each other. Therefore, the emphasis on dialogue between stakeholders, and gaining shared understanding of how they work, how systems work, and how they can work together, would be vital to designing information systems that met multiple needs without losing sight of client and worker needs. Yet, even attempts to incorporate a sensitised approach to user-needs via soft-systems approaches, such as that developed by Checkland and Holwell (1998), can still face a cultural problem which

privileges artefact and system orientations. We suggest that the 'technologies in practice' approach described by (Orlikowski, 2000), which focuses on the interactions between users and technology, has been applied with some success to the social work sector (Gillingham, 2013).

In contrast to the practice of narrow informationalisation in welfare work, a broader conception of information systems should be flexible and responsive to both simple and complex client needs. In particular, welfare work incorporates 'technologies of care' (Stillman, 2010). Technologies of care include the practices and techniques, incorporating a body of tacit and discursive skills, knowledge and practices which can be complemented with, but not necessarily replaced by electronic processes. This harkens back to more traditional understandings of the concept of 'technology' as processual skills in particular (speaking, listening, affirming, collaborating, deciding and so on).

Capturing the true nature of work which is often narrative-based is more of an art or craft than a structured, lineal process (Sheppard, 1998). It can be also characterised as a 'technology of care' in which ICTs used for accountability are only one part of an overall set of skills and technologies used in the welfare system (Stillman *et al.*, 2009). This broader understanding of 'technology' as a basket of many skills and procedures is a return to an understanding of the term as a relationship between people, skills and tools (Bell, 1980).

We cannot offer a detailed model for a new system at this time, but we conclude by referring to the work of Hirschheim and his colleagues as an initial framework for developing a new taxonomy of welfare work as it relates to informational transactions in light of the key activities that exist in information systems design. An attempt has already been made to map out the basic dimensions of such a new taxonomy (Hirschheim *et al.*, 1996; Stillman *et al.*, 2009). Such a system would recognise that social workers, as many other professionals, are inherently and 'simultaneously enabled and constrained by the socio-technical affiliations and environments of the firm, its members and its industry. They often have conflicting and ambiguous requirements about the activities they perform, and the socially legitimate ways in which to perform their work' (Lamb and Kling, 2003). What is critical for the inclusion of the real practice of welfare workers is recognition by expert system designers, and those who determine policy with bureaucracies, that the socially oriented problem-solving agenda, driven through dialogue, narrative and non-verbal activity, is legitimate and valuable. It should be given formal and strong systems recognition and systems credibility. Acknowledging the need for innovation, bricolage, and fluidity also needs to be built in as a functionality and characteristic of such a system, along with a greater responsiveness to the mobile and fluid nature of social welfare practice. Once it is realised that system design innovation may come from experimentation and interaction with another valid ontology, effective design can begin that moves beyond prescription or control mechanisms to one that works towards better interaction with problem solving in welfare work. Indeed, given the power of contemporary search engines, or representational software to recognise the significance of particular words in qualitative data, it would now seem very possible to design a welfare information system that gave greater recognition to the potential for using unstructured data in welfare work information systems.

As a thought experiment, consider a computer programme designed to set in place more effective system requirements, particularly taking into account the narrative fluidity of how welfare issues are discussed or traditionally documented. It is assumed here

that all parties are open to use of such a dialogic system, and that power or funding dynamics are not at play. Given the increasing difficulty of bringing together people for face-to-face meetings, the system could in fact be used as a distributed tool, with video interaction as an extra functionality. In this system, based upon Habermas' ideal of communicative rationality and the ideal speech situation, a decision-making system could utilise the functions suggested for effective argumentation and 'for handling . . . differences of opinion and managing conflicts' (de Moor and Aakhus, 2006; de Moor and Weigand, 2006). The capabilities of software could be used to 'transduce', as Kitchen and Dodge put it, social complexity into a more malleable and responsive dialogue and then to the design of effective systems for welfare work (Kitchen and Dodge, 2011).

The system could make visible in the design and construction processes the enabling and constraining conditions of particular social and technical ontologies (managerial, accountability, documentation, data doubles, welfare in all its complexity), the vocabularies and signifiers (including unstructured data) used to make sense of very different views of information or welfare work, and the political dimensions and relationships between the different parties. Ideally, through the functionalities of the software, instead of domination or privileging by 'technological' or 'governing' forms of thinking, the very different cultures that interact with the practice and management of welfare work in the modern era could be brought together in a more responsive fashion.

References

- Aas, K. F. (2004) 'From narrative to database: technological change and penal culture', *Punishment and Society*, 6, 4, 379–93.
- Baker, T. and Nelson, R. E. (2005) 'Creating something from nothing: resource construction through entrepreneurial bricolage', *Administrative Science Quarterly*, 50, 3, 329–66.
- Bamford, T. (1989) 'Discretion and managerialism', in S. Shardlow (ed.), *Values of Change in Social Work*, London: Routledge, pp. 129–48.
- Bauman, Z. (2000) *Liquid Modernity*, Cambridge: Polity Press.
- Bell, D. (1980) *The Winding Passage: Essays and Sociological Journeys, 1960–1980*, Cambridge, MA: Abt Books.
- Braithwaite, J. (2000) 'The new regulatory state and the transformation of criminology', *British Journal of Criminology*, 40, 2, 222–38.
- Calnan, M. and Rowe, R. (2008) 'Trust, accountability and choice', *Health, Risk and Society*, 10, 3, 201–6.
- Checkland, P. B. and Holwell, S. (1998) *Information, Systems, and Information Systems*, Chichester: Wiley.
- Day, R. (2007) 'Information connecting people with services: the information and referral role of community service organisations', *Australasian Public Libraries and Information Services*, 20, 3, 103–17.
- de Moor, A. and Aakhus, M. (2006) 'Argumentation support: from technologies to tools', *Communications of the ACM*, 49, 3, 93–8.
- de Moor, A. and Weigand, H. (2006) 'Effective communication in virtual adversarial collaborative communities', *Journal of Community Informatics*, 2, 2, 116–34.
- Duymedjian, R. and Ruling, C.-C. (2010) 'Towards a foundation of bricolage in organization and management theory', *Organization Studies*, 31, 2, 133–51.
- Ferguson, H. (2008) 'Liquid social work: welfare interventions as mobile practices', *British Journal of Social Work*, 38, 3, 561–79.
- Flyvbjerg, B. (2011) 'Case study', in N. K. Denzin and Y. S. Lincoln (eds.), *The Sage Handbook of Qualitative Research*, Thousand Oaks, CA: Sage, pp. 301–16.
- Foucault, M. (1988) *Technologies of the Self: A Seminar with Michel Foucault*, London: Tavistock.

- 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, 4, 529–53.
- 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, 3, 430–45.
- Gobbi, M. (2005) 'Nursing practice as bricoleur activity: a concept explored', *Nursing Inquiry*, 12, 2, 117–25.
- Goffman, E. (1997) *Frame Analysis*, Harmondsworth: Penguin.
- Habermas, J. (1972) *Toward a Rational Society*, London, Heinemann.
- Haggerty, K. D. and Ericson, R. V. (2000) 'The surveillant assemblage', *The British Journal of Sociology*, 51, 4, 605–22.
- Harlow, E. and Webb, S. A. (2003) *Information and Communication Technologies in the Welfare Services*, London, Philadelphia, PA: Jessica Kingsley Publishers.
- Harper, D. (1987) *Working Knowledge: Skill and Community in a Small Shop*, Chicago: University of Chicago Press.
- Hirschheim, R., Klein, H. K. and Lyytinen, K. (1996) 'Exploring the intellectual structures of information systems development: a social action theoretic analysis', *Accounting, Management and Information Technologies*, 6, 1–2, 1–64.
- Hood, C. (1998) *The Art of the State: Culture, Rhetoric and Public Management*, Oxford: Oxford University Press.
- Howe, D. (1996) 'Surface and depth in social-work practice', in N. Parton (ed.), *Social Theory, Social Change and Social Work*, London: Routledge, pp. 77–97.
- Kitchen, R. and Dodge, M. (2011) *Code/Space. Software and Everyday Life*, Cambridge, MA: MIT Press.
- Kling, R. (2000) 'Learning about information technologies and social change: the contribution of social informatics', *The Information Society*, 16, 3, 217–32.
- Lamb, R. and Kling, R. (2003) 'Reconceptualising users as social actors in information systems research', *MIS Quarterly*, 27, 2, 197–235.
- Levi-Strauss, C. (1966) *The Savage Mind*, Chicago: University of Chicago Press.
- Lyons, M. (2001) *Third Sector: The Contribution of Nonprofit and Co-Operative Enterprises in Australia*, St Leonards, NSW: Allen & Unwin.
- Merton, R. K. (1968) *Social Theory and Social Structure*, New York: Free Press.
- Orlikowski, W. J. (2000) 'Using technology and constituting structures: a practice lens for studying technology in organizations', *Organization Science*, 11, 4, 404–28.
- Parton, N. (1996) 'Social work, risk and the "blaming system"', in N. Parton (ed.), *Social Theory, Social Change and Social Work*, London: Routledge, pp. 98–114.
- Parton, N. (1998) 'Risk, advanced liberalism and child welfare: the need to rediscover uncertainty and ambiguity', *British Journal of Social Work*, 28, 1, 5–27.
- Parton, N. and Kirk, S. (2010) 'The nature and purposes of social work', in I. Shaw, K. Briar-Lawson, J. Orme and R. Ruckdeschel (eds.), *The Sage Handbook of Social Work Research*, London: Sage, pp. 23–36.
- Peckover, S., White, S. and Hall, C. (2008) 'Making and managing electronic children: E-assessment in child welfare', *Information, Communication and Society*, 11, 3, 375–94.
- Power, M. (1997) *The Audit Society: Rituals of Verification*, Oxford: Oxford University Press.
- Productivity Commission (2010) *Contribution of the Not-for-Profit Sector*, Productivity Commission Research Report, Canberra: Productivity Commission.
- Rose, J. (2002) 'Interaction, transformation and information systems development – an extended application of soft systems methodology', *Information Technology and People*, 15, 3, 242–68.
- Rose, N. S. (1999) *Powers of Freedom Reframing Political Thought*, Cambridge: Cambridge University Press.
- Sawyer, A.-M. (2009) 'Mental health workers negotiating risk on the frontline', *Australian Journal of Social Work*, 62, 4, 441–59.

- Sen, A. K. (2001) *Development as Freedom*, Oxford: Oxford University Press.
- Shaw, I. and Clayden, J. (2009) 'Technology, evidence and professional practice: reflections on the integrated children's system', *Journal of Children's Services*, 4, 4, 15–27.
- Sheppard, M. (1998) 'Practice validity, reflexivity and knowledge for social work', *British Journal of Social Work*, 28, 5, 763–81.
- Stillman, L. (2010) 'Technologies of care in community based organizations: agency and authenticity', *AI and Society*, 25, 3, 309–20.
- Stillman, L., Kethers, S., French, R. and Lombard, D. (2009) 'Adapting corporate modelling for community informatics', *VINE: The Journal of Information and Knowledge Management Systems*, 39, 3, 259–74.
- Stillman, L., Kethers, S., French, R. and Lombard, D. (2010) *Doing IT Better Project: Final Report*, Melbourne: Centre for Community Networking Research-Victorian Council for Social Service, <http://www.doingitbetter.net.au>.
- Stillman, L. and Linger, H. (2009) 'Community informatics and information systems: how can they be better connected?', *The Information Society*, 25, 4, 1–10.
- Westbrook, L. (2009) 'Crisis information concerns: information needs of domestic violence survivors', *Information Processing and Management*, 45, 1, 98–114.
- White, S., Hall, C. and Peckover, S. (2009) 'The descriptive tyranny of the common assessment framework: technologies of categorization and professional practice in child welfare', *British Journal of Social Work*, 39, 7, 1197–217.