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Morgan, Wendy and Ryan, Michael (2003) Rendering an Account: An open-state archive in postgraduate supervision. *Higher Education Research and Development (HERD)* 22(1):pp. 77-90.

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Rendering an Account: An Open-state Archive in Postgraduate Supervision

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Abstract

The paper begins with a brief account of the transformation of research degree studies under the pressures of global capitalism and neo-liberal governmentality. A parallel transformation is occurring in the conduct of research through the use of information and communication technologies. Yet the potential of ICTs to shape practices of surveillance or to produce new student-supervisor relations and enhance the processes of developing the dissertation has received almost no critical attention.

As doctoral supervisor and student, we then describe the features and uses of a web-based open state archive of the student's work-in-progress, developed by the student and accessible to his supervisor. Our intention was to encourage more open conversations between data and theorising, student and supervisor, and ultimately between the student and professional community. However, we recognise that relations of accountability, as these have developed within a contemporary "audit revolution" (Power, 1994, 1997) in universities, create particular "lines of visibility" (Munro, 1996).

Thus while the open-state archive may help to redefine in less managerial terms notions of quality, transparency, flexibility and accountability, it might also make possible greater supervisory surveillance. How should we think about the panoptical potential of this archive? We argue that the diverse kinds of interactional patterns and pedagogical intervention it encourages help to create shifting subjectivities. Moreover, the archive itself is multiple, in bringing together an array of diverse materials that can be read in various ways, by following multiple paths. It therefore constitutes a collage, which we identify as a mode of cognition and of accounting distinct from but related to argument and narrative. As a more "open" text (Iser, 1978) it has an indeterminacy which may render it less open to abuse for the technologies of managerial accountability.

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Introduction

The paper begins with a brief account of the transformation of research degree studies under the pressures of global capitalism and neo-liberal governmentality. In this context, supervisory relations have become more complex: at once still characterised as a “pedagogy of privacy” (Johnson, Lee and Green, 2000), and yet marked by institutionalised practices of surveillance. A parallel transformation is occurring in the conduct of research through the use of information and communication technologies. Yet the potential of ICTs to shape practices of surveillance or to produce new student-supervisor relations and enhance the processes of developing the dissertation has received almost no critical attention.

As doctoral supervisor and student, we then describe the features and uses of a web-based open state archive of the student’s work-in-progress, developed by the student and accessible to his supervisor. Our intention was to encourage more open conversations between data and theorising, student and supervisor, and ultimately between the student and professional community.

To situate this archival practice in a contemporary higher degree context, we analyse relations of accountability as these have developed within an “audit revolution” (Power, 1994, 1997) in universities. We recognise that particular kinds of human subjects are formed by the accounts they and others ask for or provide; and that the peculiar accountability practices in current higher degree supervisory practice create particular “lines of visibility” (Munro, 1996).

The open-state archive may help to redefine in less managerial terms notions of quality, transparency, flexibility, accountability and so on, and may also enable a supervisor to intervene at an earlier stage, should the student’s work in progress begin to go off the rails. But the archive might also make possible greater supervisory surveillance. How should we think about the panoptical potential of this archive? We argue that the diverse kinds of pedagogical intervention it encourages, as well as (in our case) the variety of interactional patterns, means that we have shifting subjectivities in relation to one another – and to the archive. Moreover, the archive itself is multiple, in bringing together an array of diverse materials that can be read in various ways, by following multiple paths. It therefore constitutes a collage, which (following Ulmer, 1992) we identify as a mode of cognition and of accounting distinct from but related to argument and narrative. As a more “open” text (Iser, 1978) it has an indeterminacy which renders it less open to abuse for the technologies of managerial accountability.

1 The transformation of research degree studies

In this current phase of global capitalism with its peculiar cultural and economic imperatives, neo-liberal forms of governmentality have come to prevail in many sites of corporate and public life in the western world, including universities. Given these changes it is not surprising that many new patterns are emerging in postgraduate education. (For a summary of research on supervisory relations see Grant, 1999; for an overview of supervision in Australia see Johnston, 1999; and in Britain and Canada, see Acker, 1999.) Chief among these emerging patterns is a more diverse population of research students, who are therefore seeking more flexible supervisory interactions, more open and industry-oriented research and learning environments, and more mobility – all of this creating increasingly diverse, not yet stable, even hybrid patterns of attendance and enrolment (in Australia see Pearson, 2000, Evans and Pearson, 1999; in the UK see Burgess, 1997; in the US see Haworth, 1996, and Council of Graduate Schools, 1998). Thus students may alternate between part- and full-time enrolment, on- and off-campus study, off-shore programs and workplace or industry placements.

Given such increasingly complex patterns of study and supervisory interaction, the role which has become most problematic is that of the academic supervisor, argues Pearson (2000: 115): “supervisors are caught between the pressures generated by a growth in research student numbers and the complexity of conditions and relationships; and *pressures for quality defined as efficiency and shorter completion times*” (emphasis added).

Complexity is matched by ambiguity in these supervisory relationships. On the one hand, doctoral studies, at least in the humanities and social sciences, are argued to be “more private than any other scene of teaching and learning” (Johnson, Lee, and Green, 2000). Thus, despite the new “audit culture” in universities (a point taken up below), student-supervisor interactions characteristically take the form of fixed and finite conversations bounded by time and the “closet” of the supervisor’s study. As we shall see, the open-state archive creates doors that enable these enclosures to remain at least partly open.

Those “studied” conversations are to lead to a thesis which is also closed – completed as a study, perfected through being honed, and static in form. It is a work that conceals the traces of those shaping conversations and the processes of thinking and drafting. This may be inevitable in the final product, but as supervisors we are aware of the problems that may arise en route from these splits and concealments while the thesis is being conceptualized, arguments are developed, data is analysed, interpretations are emerging, conclusions are being drawn and the text is being constructed. Each of these stages requires different, finely calibrated pedagogical intervention. Yet in common practice students may present only a relatively finished text which is not “transparent” – does not permit the supervisor to track the processes of exploration, conceptualization, argumentation and the life which gave rise to that text. Any weaknesses in those concealed processes may emerge only later, when more elaborated structures of conception and argument are in place and when repair may take much back-tracking and unravelling. As we shall demonstrate, this potential problem can be partly overcome by means of our online archival practice.

Now while on the one hand privacy and concealments are at work in the supervisory relationship, on the other hand, paradoxically, supervision carries hints of a “panoptics’ of pedagogic power” (Johnson, Lee, and Green, 2000). This entails “overseeing” the production of academic knowledge and identity, a process which is increasingly ritualised through accountability processes. Yet this in turn may be offset by those hybrid patterns of enrolment and location, in which “the pretence that supervision can be understood as ‘peering over the shoulder’ of the student has long gone” (Evans and Pearson 1999). These complex and contradictory points are taken up below as we explore issues of surveillance in relation to the open-state archive.

ICTs in higher education

There are implications in these changing postgraduate pressures and practices for the use of information and communication technologies (ICTs). Certainly ICTs are often linked with the “massification” of undergraduate education, and with “borderless education”, even with “virtual universities” (Cunningham et al., 1997, 2000; Bates, 2000; Daniel, 1996; Rossman, 1992). These networked technologies are often thought to be most suited to lower level training (but cf. Shedletsky and Aitken, 2001, for a critical appraisal of the costs of online teaching for academics). The work of academic teachers can therefore be relocated at the higher levels of education “on a more customized and more face-to-face basis” (Cunningham et al, 2000: 128). While ICTs may have the capacity to enhance open and distance undergraduate education as “conversations” (Laurillard, 2000), they are certainly changing the face of higher education in first degrees, contributing also to the commercialization of knowledge (Katz, 1999; Pietrykowski, 2001).

Almost no studies have been published concerning the use of ICTs in research degree education (but cf. James and Beattie, 1996, and Barrett and Lully, 2000, on postgraduate coursework). This is not surprising, given the more uneven patterns of supervisor-student interaction noted above. So too the very ubiquity of ICT “tools” for the conduct and dissemination of research may have persuaded us that we do not need to comment on the digital revolution in research. Yet even the common practice of a student’s emailing the supervisor a draft as an attachment (and perhaps the supervisor’s making annotations by electronic highlighting and tracking changes), mundane though it may seem, is more than a matter of efficiency. It amounts to a silent transformation of research when combined with many other digitised processes, such as searching the literature, conceptualizing and creating models, manipulating and analysing data, discussing ideas with colleagues at a distance (by a/synchronous means), posting news on bulletin boards or to lists, composing reports, distributing articles prior to print, convening and participating in electronic conferences and so on.

Yet perhaps more radical than these practices is the potentiality of the web-based practice of the archive.

2 The open state archive

In these times in which quality and accountability, efficiency and performance are the new mantras, what other possibilities are there for ICTs in postgraduate research

supervision beyond “tools” for the student’s research and the means of communicating with supervisor and other academics? Given this emphasis on “progress”, it is the production of the final product which tends to be the focus of the interactions of student and supervisor, rather than the processes through which the thesis is composed (many of which involve ICTs as both a resource and a context). Indeed, as noted earlier, that focus on the emerging thesis can work to hide the behaviours associated with conceptualising and theorising, developing a research design, gathering, organising and analysing data, writing, drafting, editing and the like.

The open state archive developed by Michael Ryan opens up many of those processes to view. It is an available representation of his work in progress towards a research degree – “available” because it is selectively published on the world wide web, and because it is organised around his current activities. At a particular time, the thesis work in the archive will contain completed thesis chapters, partially completed chapters, and outlines of work yet to be written up in discursive form. It will also record a bibliography of works consulted and referred to (see figure 1).



Figure 1: A fragment of the open state archive web site, showing sections of the developing thesis on the left and links to written elements on the right.

While this may seem to differ very little from the established practice by which a student brings along drafts, in material form, to the supervisory meeting, it sets the scene for other representations. The archive also contains work of a more essentially procedural nature, such as a research diary (in web-log form) and plans which detail the timeline for tasks completed or awaiting completion; and a record of communications with the supervisor, including meeting dates, and notices of incremental change or annotations. Here too are commentaries and speculations emailed by the supervisor in response to the student’s work. The archive also encompasses cumulative research data, with ongoing analyses. And it includes fragments of text from drafts now superseded or sections of work which have yet to find a place. Note that the archive can be organised in such a way as to set up an “audit trail”, earlier phases being preserved and indexed, to present snapshots at various points in time. (See figure 2.)

1. Introduction
1.1. The Context of Technology in/as Higher Education Pedagogical Practice
1.2. The Problem of Making Choices
1.3. Assumptions of This Study
1.4. Structural Organisation
2. Theoretical Framing
2.1. Studying Technology
2.1.1. The Technological Rationality of Modernity
2.1.2. Social Construction of Technology
2.1.3. Actor-Network Theory
...
3.8. The Research Plan
3.8.2 The Pilot Study
4. References
5. Appendices
PROC: Quality Questions
PROC: Good Style
...
FRAG: Critique of Laurillard's Conversational Framework
FRAG: ATN Synopsis
REF: Personal Sites
REF:Portals
...
Timetable
Research Diary
Superlog
Glossary
Bit Bucket
Weekly Report
ToDo

Figure 2: Some headings from the open state archive. Note some classification of contents (eg. FRAG: refers to a fragment of text which might have lost its home – become superseded- or is some speculative writing looking for a home).

None of this may seem remarkably different from the contents of any research student's filing cabinet, hard drive, diary and so on. But here is precisely the difference: in the archive all the digitised content is held in the one web-space, organised by an index and hyperlinks, and available to authorised viewers. (See figures 1, 2).

A note on the practicalities of access. The materials are published on a web site that allows access only to authenticated viewers. At its simplest, the archive can be restricted to permit read-only access to the supervisor(s). More complex arrangements are possible, with selected parts of the archive being "opened up" to cooperating peers, co-writers or wider audiences. Further access rights for writing to selected sections may also be granted to certain others. In any such cases, it is important to ensure the anonymity or privacy of any participants in the research study, particularly where these have given permission only to the research student to read and explore their words and actions.

If it is not to be so cumbersome that it becomes *the* work itself, any archive needs to be easy to establish and maintain and to set access rights. For example, it is possible

to use an automatic system that captures work in progress texts and produces an indexed web page without further intervention. (And it should be remembered that the time taken to build the archive is not necessarily time taken from developing the final thesis product, particularly where the digital processes are relatively straightforward, even automatic. After all, a thesis, like other scholarly writing, is composed of blocks of text sewn together – and often recycled in a patchwork. In the archive these blocks of text are readily available for incorporation into final products.)

3 Potentials of the archive: changing relationships

The archive has peculiar potentials for changing the practice of research degree supervision, for better or worse. In our experience, the archive alters three broad aspects of the process and product: the nature of the textual materials; the supervisor-student relationship; and relations between author, text and broader audiences. In what follows, we do not claim experience of all the potentials we see in the archive.

Being digital and online, the resource facilitates the inclusion of materials other than print, such as concept maps, videos of field observations and the like. Hypertextual in organization, it lends itself to other kinds of exploration than are possible if the supervisor is reading only the latest draft (though this will also be archived). Writers and readers of the archive have a changed relationship to the heterogeneous textual materials (conceptual notes, field notes, incipient theorizing notes, “raw” and “cooked” data and so on), since these are always available, at any stage in their transformation to final product, for ongoing re-examination, reconceptualising, and trialling of diverse analytical methods.

For example, student and/or supervisor can ask “what if...” questions, can generate theoretical perspectives through theoretical sampling, and by this means can expose prior assumptions, faulty lines of hypothesising and the like. In particular, since the archive reifies the student’s procedural understanding and actions (which may often be hidden or presented in a reworked and sanitized form for the final text), these procedures can become the focus of the supervisor’s and student’s attention, augmentation and remediation. (It is after all part of the lore of supervision that the supervisor is to “oversee” the processes, not the product as such.) All supervisors know how important it is to identify emerging problems early. The archival practice facilitates this, and encourages the supervisor to give more informed advice and redirect the student at an earlier stage if a particular path looks as if it will lead to trouble further down the track.

These affordances seem useful as well as benign to both student and supervisor. However, other potential uses may not be necessarily quite so innocent. Certainly, as we have seen, the archive encourages a form of ongoing accountability to the data, shared by both supervisor and student. However, the archive also permits the supervisor at any time to draw off a sample of the student’s work-in-progress and analyse its scholarly quality, perhaps in company with the student. At this point, accountability of a “proper” kind might slide into surveillance, for instance if the supervisor were to use this information to “tell on” the student.

Nonetheless, there are legitimate uses here too. If a supervisor must entrust the supervisory role to another, or if several supervisors are involved (as in the diverse patterns of location and enrolment mentioned above), the archive allows the newcomer to trace the lines of the research picture to its present point. And beyond supervisors, wider audiences can be invited in to view and respond to certain parts of the archived materials. Such respondents might include participants involved in validation through member checks and triangulation, student-peers, colleagues on a larger project, or visiting experts. To write for such a widened audience may encourage the student to go beyond pleasing – or appeasing – the supervisor alone (who often stands in also for judge and examiner). This sense of a broader audience can encourage the student to take that first step towards publication of scholarly work from the developing dissertation. Indeed, the very availability of the materials in an integrated data base also makes it easier for the student (perhaps with the supervisor, as in the present case) to assemble a paper or presentation. Finally, the archive may become a teaching resource: supervisor and/or student could re-use parts of it to induct novice research students into the various processes involved in developing a thesis.

As the above actual and potential patterns of use suggest, the archive may help to redefine in less simply managerialist terms those catchwords of quality, transparency, flexibility, accountability and the like. Nonetheless, some readers may have shuddered at the potential in this archival practice for new forms of surveillance. (Indeed, we authors have been taken aback to realise how easily the archive could be aligned with audit practices, how readily we could have been coopted by the new zeitgeist of accountability – whose outlines we will sketch shortly, in drawing out the broader implications of this archival practice.)

Where virtually all of the materials of head work, field work and text work are open to view, where successive layers of drafts can be inspected, students may be appalled to think that all the messiness entailed by these processes could be scrutinised, since this may not accord with their desire to maintain the appearance of organized, efficient and elegant working. And supervisors may be reluctant to poke around in the bottom drawers of their students' files, for fear of what they may find – or may never be able to locate. (If the very bulk of materials acts as a disincentive to the supervisor, or might detract from the student's latest work, it is however possible to provide abstracts of files of information and hyperlinks to these.) Thus the contractual accountability of both student and supervisor to each other could thus paradoxically be compromised by the very availability of materials.

On the other hand, it may be that for some supervisors and students the potential disincentives of panoptical surveillance are outweighed by the advantage mentioned above, of eliminating dangerous splits between developmental processes and developed product in that “pedagogy of privacy”. Whether this advantage is realised will depend on how sturdy the relationship of trust is between the two, and how much that relationship has already been reconceived in terms of accountability. The fact that we are academic colleagues who write together (drawing on the resources of that archive), as well as supervisor and student, could make our interactional patterns more fraught with the need to maintain face through the concealing of processes. But it also means that each of us cannot be identified with one position of status and power in

relation to the other, and we bring to our doctoral meetings the respect developed in other interactions.

There is another kind of multiplicity in the archive too, which has some bearing on this diversity of subject positions. Two distinctive modes of cognition have been identified by Bruner (1986). These are the paradigmatic and syntagmatic, or argument and narrative respectively. Boland and Schultze (1996) argue that the two modes can be traced also in forms of accountability: on the one hand there is computation or calculation (coded representations, records, often in the form of numbers), and on the other there is narration (those stories, explanations and reasons given for conduct). Each mode actively and continually mediates the other. Most significantly, however, in a postmodern context a third mode of cognition has been identified, of *collage* (Ulmer, 1992), that form of dis/organisation of materials which makes meaning by their juxtaposition in space, not the sequencing in time of narration or the logically cohesive relations of argumentation. Ulmer finds one instance of this mode in the spatial organisation and multilinear pathways of hypertext.

As Figure 2 above makes clear, the archive takes the form of a collection of sometimes disparate materials whose relation to each other cannot be read simply according to the logical structures of an argument or the cause-and-effect or chronological sequencing of a narrative. Each of the components may of course take the form of a chronicle (diary, timeline) or argument (chapter sections), but the archive as a whole cannot be read as a coherent, sequential account. The materials are amenable to a range of readings and uses, depending on the reader's purposes and the hypertextual trail being followed (Landow, 1997). That is, a hypertextual collage of this kind is a more "open" text, in Iser's (1978) terms, with a greater indeterminacy than is invited in more "closed" texts. Thus no single audit trail has been set up through the geological strata of the archive: any reading depends on the reader's decisions about what to access.

Consideration of politics can never really be excluded from the networks of relationship that include student and supervisor. For example, reports are the technologies of auditing made "durable" for examination (to use a term current in actor-network theory: Latour, 1991; Strathern, 2000). And the archive can certainly be read as a series of reports whose hypertextual links make more extensive data visible for the purposes of accountability. New electronic technologies make accounts not only durable but also "mobile" (to use another actor-network theory term) – transferable to other contexts. For example, a conversation – say between supervisor and student – is usually informal, context-bound and ephemeral; in electronic form, it is available for transfer to other contexts and for transmutation into a more formal record that can be put to various uses, including those of rendering an account.

It is to the broader contexts of accountability in higher education that we now turn, to situate the political implications of this archive.

4 Accountability relations in postgraduate supervisory practice: the archive as potential panopticon

Tertiary education was once a sphere whose autonomy was taken as a guarantee of its “standards” of scholarship and research. In recent years however there has been a concerted push to redefine higher education in accordance with the newly dominant discourses and organising principles of marketisation and managerialism (Jary and Parker, 1998; Readings, 1996; Shore and Selwyn, 1998). This has been most notable in universities of the United Kingdom post-Dearing and of Australia post-Dawkins (Smyth, 1995; Coaldrake and Steadman, 1999) though it can also be seen elsewhere (e.g. Canada, the US: Wellman, 2001). Such neo-liberal governance has entailed the development of an “audit culture” that has amounted to an “audit revolution” (Shore and Wright, 1999; Power, 1994, 1997).

A number of key terms of this discourse of business, finance and human relations management have colonised tertiary education. Terms like “quality” (as in “quality assurance”), “accountability”, “transparency”, “flexibility”, and “performance” (Shore and Selwyn, 1998; Shore and Wright, 1999) are helping to create a new culture in universities. This audit culture, with its “technologies” of accountability, inevitably affects postgraduate study and supervisory relations. The critics of this culture argue that the professional relations between teacher or supervisor and student are thereby reduced to crude, quantifiable and inspectable templates (Strathern, 1997). Our experience with the archive, described above, indicates that such relations may be rather more complex: they may certainly be dangerous but may also be benign.

Many universities have instituted a series of checkpoints as research students progress through the various stages of application, enrolment, identification of study area, course work (if any), determination of the research question and methodology, seminars and presentations, six-monthly or annual reporting, and eventual submission of the dissertation for examination and oral defence. One could say that these are the means by which a student is awarded a learner’s permit and ultimately a driving licence: in these days enrolling in a doctoral program does not give one an open licence to explore the terrain.

“Progress” is deemed to be satisfactory if each of these stages is passed by the student’s presenting appropriate evidence – preferably in the minimum time allowed. An “audit trail” can be traced in the student’s record. This is one major means of ensuring “quality”: the checks, measures, records, and reports are all ways in which the institution assures itself and its postgraduate funding bodies that no wayward students go undetected and no substandard work slips through the net. So too in a litigious environment, the “transparency” of these procedures is intended to render an account in order to demonstrate that the university and supervisors are properly accountable, and to absolve them of failing to follow due process. Accountability takes on a particular urgency in cases where postgraduate students are partly funded by industry in partnership with universities. The “performance” of such research students may be judged in terms of performativity, in Lyotard’s (1984) terms; as he put it, presciently, the question is not “Is it true?” but “Does it work?” (for the “end users”).

Like poststructuralists and actor-network theorists, we argue that human subjects (supervisors, students, research centre directors, university bureaucrats and so on) are formed within and by networks of discourses, rules, resources and the like – now, particularly of those which maintain an audit culture. Within such networks of

interaction the giving of accounts is a crucial means by which individuals of particular kinds are fabricated (Rose, 1988). It is not that autonomous, “sovereign” human subjects organize, present and act on those accounts, but rather that “our conduct, and indeed our sense of agency, is mobilised by frameworks of accountability” (Wilmott, 1996, p. 36). Not only human subjects, but also technologies and other material and conceptual resources are created together in the business of asking for and giving of accounts. To recognise this is not to accede to a simple determinism: in our inventing and using of the archive (itself a series of ongoing accounts) lies our *situated* agency: an agency in which we have collaborated with the available (im)material devices. Our agency and our intentions, however, do not govern all the uses which might be made of the archival record, as we have indicated above.

The accountability and measurement practices now mandated for higher degree studies create “lines of visibility” (Munro, 1996) into which participants such as supervisors and students are drawn by being held accountable. Indeed, these threads or lines encourage them to align themselves with the story-lines (of progress, quality and the like) that are on offer. It is a paradoxical visibility: in the very act of eliciting, giving and examining accounts (for example, in a supervisory meeting), research student and supervisor tend to forget the accounting and want to see “through” those accounts to the signs of progress, quality and so on. Yet one can only see *through* – that is, *by means of* – such accounts, which produce the multi-layered representations called the research project (Usher and Edwards, 1994; Scott and Usher, 1996). By contrast, as we have argued above, the less unified, more heterogeneous collage form of the archive draws attention to its status as a representation and encourages a reading practice which is more alert to the textuality of the archive.

The visibility of accounts also encourages self-examination; as Boland and Schultze argue (1996, p. 63), “accounting provides forms of visibility and techniques of measurement and comparison that create a calculable space within which the ‘free’ responsible human is increasingly governed through self-regulation”. In a form of Benthamite Panopticon, made notorious by Foucault’s (1979) analysis, external subjection and internal subjectification come together as individuals increasingly govern themselves in terms of the norms through which they’re governed.

If it is true that we become characters in the accountability stories we tell and the stories that are told of us, then our archive both brings student and supervisor within those lines of visibility and makes us less single: we change over time, as the archive does. And as “characters” we change according to the variety of our roles and dialogic exchanges. We are writers and characters; we are also readers. Paradoxically, the very availability of all the material in its richness may render it less directly useful for the technologies of accountability and the domination of transparency. Where there can be no one order of reading, no one use, no one interpretation, there may be appropriations which could be oppressive; but the archive cannot be made to serve a single fixed, dominating practice.

Herein lies one source of comfort, as the makers and users of an online archive in this newly vigilant audit culture in research degree supervision. And while it remains a resource and context for a supervisory relationship of trust and discretion, we believe its benefits far outweigh any potential abuses.

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