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Deferred expertise: The groundless ground of datafication and the shift to recessive technologies

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ABSTRACT

This paper explores how the conditions for leadership are produced in datafied schooling regimes by the data infrastructures developed and utilised in departmental systems of education. Drawing on Hong's (2020) theorisation of *recessivity*, this paper considers those tools and instruments as *recessive technologies*: technologies that know for us in quantified ways that are beyond the comprehension available to humans alone. This paper interrogates two specific data platforms used by Australian state departments of education as key examples of recessive technologies: *i)* the Victorian Department of Education's *Panorama*, and *ii)* the New South Wales Department of Education's *Scout*. Using a Deleuzian-Guattarian framework of assemblage, I provide an analytical discussion that considers, first, the epistemological foundation of datafication on which recessive technologies reside, before, second, attending to the implications this has for how educational leadership can be enacted. Finally, I conclude by arguing the need for further critical research around recessive technologies.

Introduction: Data, data everywhere ...

Data. It has without doubt become a highly loaded term across a range of settings, not least of which is education: data-informed, data-based, drawing on data are all common phrases within education discourse (Bradbury & Roberts-Holmes, 2018; Hardy & Lewis, 2017). While there is still contestation about what constitutes data in terms of the tensions between quantitative and qualitative forms (see Prøitz et al., 2017), there is an increasing tendency today to focus on data as pieces of information represented in a numerical, quantified format. Such a representation is referred to as *datafication*, which sees all aspects of social life rendered down to simplified, measurable representations (Bradbury & Roberts-Holmes, 2018) on the premise they offer a more neutral, objective and comparable view of how things are (Hartong, 2019). The allure of numerical data is derived from their 'aura of disinterestedness, impersonality, objectivity and universality that lends *legitimacy*' (Piattoeva & Boden, 2020, p. 6; emphasis added). Numerical data come with a promise to aid in sense-making tasks in our world (Hardy, 2021), allowing us to know in ways that are simpler and more effective than human sensibilities could ever allow. However, the mobilisation of data also requires technical infrastructures, or 'complex assemblages of technology, people and policies' (Sellar, 2015, p. 766) to facilitate their enactment. Within

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this urge to know the world *as* and *through* data, this paper seeks to examine the generative nature of data platforms as technologies and their associated policy in producing (as well as being produced by) key foundations for how school leadership can be enacted in educational settings.

While processes of data collection have a long-standing place in education (Thompson & Sellar, 2018), current methods of schooling are now established around a productive engagement with *digital* forms of data (Selwyn et al., 2021). This has caused shifts in how we both conceptualise and enact 'learning' in schools (Knox et al., 2020), which alters not only the process of schooling itself (e.g. in terms of pedagogy, assessment and leadership), but also reshapes how schools become known *through* and *as* data (Hardy, 2015; Sellar, 2015). Methods and logics of data involving the quantification of information have now come to dominate schooling practices (Hardy & Lewis, 2017) and subsequently affect policy in systems of education, at both the level of policy (e.g. state education departments) and the level of practice (e.g. the individual school and classroom). Of particular importance are regimes of accountability, where discourses of school improvement permeate policy and practice and are primarily linked with quantified ways of knowing (Sahlgren, 2023). This effectively describes how 'what counts' is that which can be counted in Australian schooling systems (Lingard et al., 2016; Mockler & Stacey, 2021).

Functioning under the guise of representing an objective reality, data also aid in the movement of information within and across wider education systems (Lewis & Hartong, 2022; Williamson & Piattoeva, 2019), which requires technologies and techniques (and frequently specialised personnel) to be deployed alongside policies and practices as part of complete digital data infrastructures. Such infrastructures require a multi-faceted approach to understanding the entangled arrangements of more *tangible* aspects of the infrastructure (i.e. platforms, dashboards, policy documents, etc.) with more *intangible* elements (i.e. subjectivities, social practices, habits of thought) (Gulson & Sellar, 2019). While many aspects of datafication and their associated technologies have been explored in recent research, including data infrastructures (see Clutterbuck et al., 2023; Hartong & Förschler, 2019; Lingard, 2019; Sellar & Gulson, 2021), critical data platform studies (see Decuypere et al., 2021; Pangrazio et al., 2023; Perrotta et al., 2021) and the platformisation of education more generally (see Kerssens & van Dijck, 2022; Lewis, 2022), there has arguably been less in the way of explicit studies that attend to the reshaping of professional identities through digital platforms and their broader data infrastructures (Hartong & Decuypere, 2023). Much of the scholarship in this area has so far focused largely on the (re)professionalisation of teachers (see, for example, Holloway, 2021; Manolev et al., 2019), however this paper aims to specifically build on the work of scholars interested in exploring the datafied conditions around educational leadership (see, for example, Heffernan, 2018).

This paper presents the viewpoint that the intense desire of quantified knowledge under a datafied regime creates conditions whereby educational leaders require tools and instruments to effectively conduct their practice. Drawing on Hong's (2020) theorisation of *recessivity*, this paper considers the tools and instruments used in datafied regimes as *recessive technologies*: technologies that know for us, or know on behalf of us, in quantified ways that are beyond the capacity available to humans alone. This paper interrogates two specific data platforms used by Australian state departments of education as key examples of recessive technologies: *i)* the Victorian Department of Education's *Panorama*, and *ii)* the New South Wales Department of Education's *Scout*. After providing some contextual information about the broader policy landscape in Australia and introductory details around the two platforms, I theorise the epistemological foundation of datafication and analyse how this facilitates a turn toward recessive technologies, resulting in a deferring of expertise of those in positions of leadership over to the platformed technologies. I conclude by arguing the need for further critical research around recessive technologies in relation to educational leadership.

Contextualising the research

The establishment of the 'education revolution' as part of the federal Labor government's 2007 political campaign to align education practices and directives across Australia intensified the focus on standardised metrics in Australian education in an unprecedented manner (Savage, 2021). The framing of education as a crisis in preceding years—largely due to Australia's steady decline on the OECD's Programme for International Student Assessment (PISA)—meant that this campaign held strong popular appeal: education was in need of 'fixing' and a national approach was presented as the most effective solution. While education would remain under the specific political authority and constitutional responsibility of the states and territories, this would be complemented with a major policy reform to overhaul the Australian schooling system *nationally*. With the formation of a broad suite of interconnected national reforms, including the National Assessment Program—Literacy and Numeracy (NAPLAN), the *MySchool* website for reporting school performance and the National Schools Interoperability Program (NSIP), the importance of consistent mechanisms for collating profile data and reporting achievement information at a national level was instilled (Savage, 2021). Since then, more Australian states and territories have begun using and/or developing their own data platforms to provide schools with a specific subset of information pertaining to their performance.

One such data platform, *Panorama*, is used by the Victorian Department of Education and Training (DET) for understanding and comparing the performance of Victorian government schools and networks. Panorama is provided as an accessible digital data platform for principals and school leaders and contains quantitative data of a pre-selected range of data sets, including achievement, attendance and opinion survey data (DET, 2024). The platform operates under a comparative framework, structuring the data using algorithms to compare a school's performance to 'similar' schools, as well as offering network- and state-level comparisons (see Figure 1). The interactive dashboards are complemented by two static reports that schools receive annually: the *School Performance Report*, which 'provides a summary of the school's overall performance
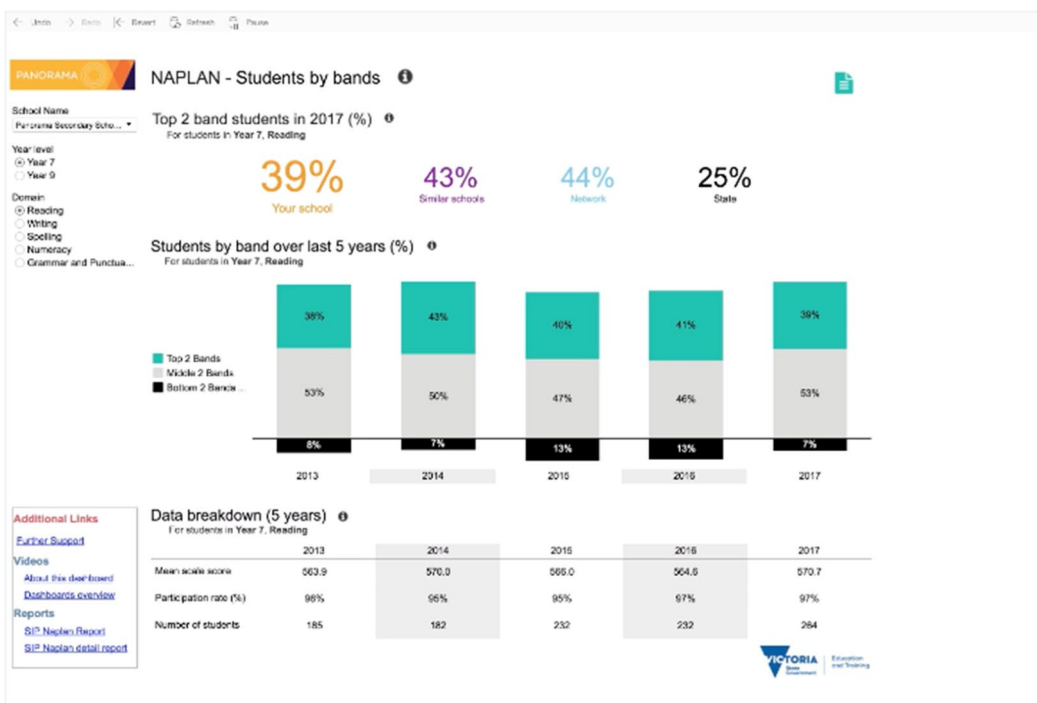

Figure 1. A static visual of a webpage from *Panorama's* online dashboard. *Source:* https://vimeo.com/248088163/263f387ca6

and performance in each domain' (DET 2023c, p. 84) of reading, numeracy, school climate, attitudes to school, engagement and participation; and the *Panorama Supplementary Report,* which 'is designed to demonstrate how the school is performing against the four main Education State targets' (DET 2023c, p. 91). In the latter, comparisons are made with both 'similar schools' and state averages by drawing on a pre-developed formula known as the Differentiated Schools Performance Method (DSPM).

Similarly, the New South Wales Department of Education's (DoE) *Scout* offers a range of school performance information, hosting achievement, attendance and opinion survey data. Scout is overtly described as the NSW 'Department of Education's platform for data and analysis' (DoE, n.d.). Like Panorama, Scout also provides schools with copious data in a single location, formulaically aggregating data sets for access by teachers, principals, school leaders, directors and corporate staff members. Scout draws on data sets internal to the Department of Education (i.e. those obtained by schools), as well as external data sets from government departments and national education bodies (DoE, 2023d). Positioned as a 'one stop shop for data analysis' (DoE, 2023e), Scout hosts a library of over thirty different apps and report types for schools and associated personnel to access and use in school decision-making and governance (DoE, 2023a). One prominent component is the *school data dashboard* (DoE, 2023c), which is a specific focus of my analysis due to its strong comparability to Panorama (see Figure 2).

Both Panorama and Scout are intricately connected to overarching policy documents within their respective state; the *Framework for Improving Student Outcomes* (FISO 2.0) (DET, 2023b) in Victoria and the *School Excellence Framework* (SEF) (DoE, 2023d) in New South Wales. These two documents standardise school performance for all departmental employees, including school leaders and teachers, and set the conditions for continuous improvement agendas through relevant 'cycles' of practice. Such cycles involve evaluating current performance through self-reporting processes and setting future goals in the form of school-level strategic plans that align with their relevant Department's overarching vision. These reporting and planning processes are deeply imbricated in engagement with the data platforms of Panorama and Scout, as well as other interrelated platforms, like the Strategic Planning Online Tool (SPOT) in the Victorian context and the School Planning and Reporting Online (SPaRO) platform in the New South
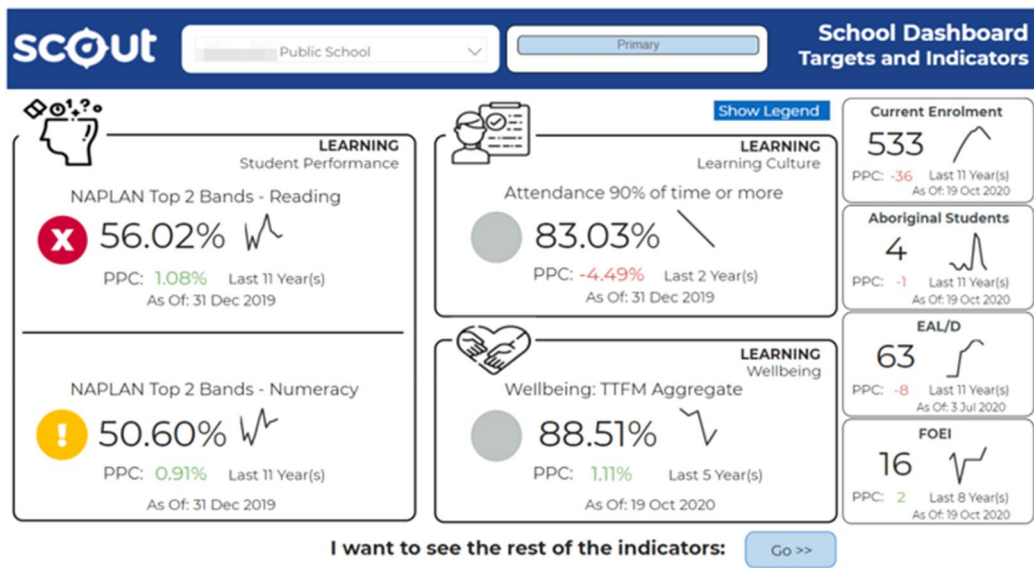

Figure 2. A static visual of a webpage from *Scout's* online dashboard. *Source:* https://education.nsw.gov.au/about-us/educational-data/scout/scout-overview/apps-and-reports/school-dashboard/school-dashboard/school-dashboard1

Wales context, which both facilitate the development of policy-mandated strategic planning and reporting documentation practices for schools.

In order to investigate these platforms and their broader infrastructures, specifically the leadership conditions that they are producing, I drew on a Deleuzian-Guattarian framework of assemblage as theory and method to focus on the *productive* nature of platforms. While there has been an uptake of assemblage in policy analysis in recent years (see, for example, Gorur, 2011; Savage, 2021), its invocation is generally used to describe the complexity of policy and the multitude of interrelated 'parts' that come together in any given policy assemblage (Thompson et al., 2022). An overtly Deleuzian-Guattarian approach, however, views assemblages as complex arrangements that *produce* specific events and realities (Deleuze & Guattari, 1987). Hence, the purpose of deploying assemblage is to focus on *why* a particular assemblage produces what it does and to investigate the underlying *conditions* that enable such production (Buchanan, 2021).

This is by no means a thorough account of the intricacies of a Deleuzian-Guattarian assemblage approach, but rather an articulation of what is conceptually necessary to carry with us throughout the rest of this paper (for an extended treatment, see Buchanan, 2021; Lewis & Spratt, 2024). In conjunction with assemblage, I also adopted a 'critical platform gaze' (Decuypere et al., 2021), which views the platform as a 'methodological entry point' (p. 2) for considering the socio-technical assemblages pertaining to platforms that shape educational subjectivities. This is somewhat atypical of educational leadership research, which generally centres the data collection around the lived experiences of leaders using interviews as method. This was an intentional methodological choice to contribute to an emerging body of work that *decentres* the leader, acknowledging that leadership is far more complex than the actions or capabilities of any one individual (Grice et al., 2023). In practice, this meant beginning somewhat 'in the middle' (Lury, 2012); that is not seeking a definitive beginning moment, but rather searching from within.

The first stage of data collection and analysis involved conducting Internet searches for publicly available materials pertaining to the *platforms* of Panorama and Scout on the relevant department of education websites. Each of these core websites hosts a significant amount of information including infographics and visual stills depicting each platform's graphical user interface (GUI) and information that outlined key functions of the application programming interfaces (APIs) of each platform. This included webpages, multimedia 'training'[1] resources and artefacts, which helped to forge a sense of the platforms, their functions and their broader remit without encroaching on strict department boundaries around accessing the actual dashboards themselves. Another core site of information on the department websites was their policy libraries, which host the *policy documents* pertaining to all government schools in their remit. Scouring these documents for specific mentions of each platform and following the subsequent policy trail led to the collection of *policy artefacts* from individual school websites, such as strategic planning documents and annual reports (see Table 1). I read through these materials multiple times, while collecting analytic memos (Saldana, 2016) in relation to the theoretical and conceptual framework of assemblage, specifically considering how and why these materials are facilitating the conditions for educational leadership. Given the similarities between the states as well as the federal homogenisation of datafied practices, an interrogation of the epistemological foundation is necessary prior to delving into the conceptualisation of data platforms as recessive technologies.

Table 1. An overview of the data sites used to conduct the analysis.

Data Site 1: *Platforms*	Data Site 2: *Policy Documents*	Data Site 3: *Policy Artefacts*
• The graphical user interfaces (GUIs) and the application programming interfaces (APIs) of Panorama and Scout, examined through relevant Department training and policy materials.	• Department-level policy documents relevant to Panorama and Scout through shared language and/or data use and practices.	• Documents gathered from school websites, including SIPs/SSPs, AIPs, Annual Reports and Panorama Performance Reports.

The 'groundless ground' of datafication

It is important to acknowledge that our current ways of understanding school performance through datafied regimes are essentially grounded in a particular set of conditions. Datafication, or quantified methods of measuring school performance, have formed the epistemological foundation on which we base our understandings of performance. This is evident when examining how deeply intertwined the discourses of data-based school performance measures (and, consequently, data platforms) are with the various department-led improvement frameworks. The SEF in the New South Wales context offers a clear example of this entanglement. Within the policy implementation advice for the SEF, principals and school leaders are required to provide an 'authentic and rigorous assessment of a school's current state' (DoE, 2024, p. 6) to inform the next iteration of the school's Strategic Improvement Plan (SIP). The SEF implementation advice includes guidance around 'best practice' for conducting this rigorous assessment, with the first item suggesting using the 'School Dashboard in Scout…to provide a snapshot of the current status of the school for each of the five focus areas' (DoE, 2024, p. 6) of wellbeing, student performance, human resources, finance and enrolment. Here, we see the basis for understanding school performance ingrained within datafied discourses.

Wittgenstein (1969) proposed that such a foundation should be considered as a *groundless ground*; an understanding that all knowledge is based on an ontological grounding that is contingent upon the available ways of knowing at a particular time and place. Over time, such propositions form a kind of epistemological bedrock, 'propping up knowledge' (Braver, 2014, p. 174) while concurrently melding into the background and becoming largely invisible (Hong, 2020). In the above example, we see how the datafied metrics from Scout's dashboard form a part of this foundation for measuring school performance and driving improvement agendas. To uphold such a knowledge system, certain propositions must remain *hinged* (Ramón Cámara & Vega Encabo, 2022); that is, there must remain a level of fixedness of some ideas in order for others to flow and activate around them (Wittgenstein, 1969), thereby making certain ideas possible and legitimate. This creates an inability to question how some things can and are known, as to problematise such a foundation too forcibly 'shakes too much of the edifice built above it' (Hong, 2020, p. 23). This threatens to collapse the entire epistemological foundation into the proverbial abyss. Scout's data representations need to remain uncontested because to do so threatens the foundation on which the entire SEF is based and legitimised.

Following Wittgenstein (1969), Braver (2014) draws on the term groundless ground to describe how we can and do make sense of the world:

> We must appreciate both parts of the phrase, 'groundless grounds'. On the one hand, these understandings of Being do in fact ground an age. They constitute the deepest level of intelligibility we can access, and they determine and support the thought and action of an epoch. These ways of understanding constitute a ground by allowing us to experience anything, and by shaping how we experience almost everything. (Braver, 2014, p. 211)

Such an understanding is critical to problematising phenomena through the lens of this research; accepting that the underpinnings of any philosophical thought can only take us so far because all epistemologies are grounded in logics relevant to a particular time and place. But, while the bedrock of the groundless ground forms a solid foundation on which further thought is rendered possible, it is critical to remember the ground's inherent fragility. Braver (2014) continues, saying:

> … on the other hand, these grounds are themselves groundless. They cannot be justified or legitimated because they are the source of our ways of justification and legitimation (p. 211).

The groundless ground suggests that forms of knowledge, or ways of knowing, become buttressed by their own virtue (Holloway et al., 2023); that is, they become incontestable because they are the very source of their own legitimation.

Connecting this to the rationale of data as neutral and objective as discussed at the outset of this paper, for example, means that such an understanding is contingent on the collective acceptance that an objective reality exists in the world and it can be mined, extracted and utilised for knowledge creation (Hong, 2020). The datafication of schools and their performance are deeply embedded within this foundation (Holloway et al., 2023) and builds upon the earlier fundamental acceptance of numbers as a form of authoritative and trustworthy truth (Porter, 1995). Those working in and for schools and broader education systems are faced with conditions in which their acceptance of the datafied metrics presented in digital technologies, like Scout and Panorama, as a measure of success (or lack thereof) are necessary to their fulfilment of their roles as produced by the platform-assemblages.

The rise of 'recessive' technologies

The pressure to perform on the groundless ground of datafication produces an inherent *need* for data technologies. There is a practical utility for their enactment, in which technologies close the gap forged by datafication between one's own sense-making abilities and the type of datafied knowledge that is valuable in the moment. This is true of many different forms; for example, examining the amount of 'impressions' my post has received on LinkedIn as a measure of my reach and influence within a community of people. It is 'impractical for me to gather such information and compute it myself, especially when the technology is readily available, so I know *through* LinkedIn's analytics instead. Similarly, a principal working in a school is unlikely to personally gather millions of data points and manually compute these to produce a specific subset of data for a performance report, particularly when such information is readily available on a data platform's dashboard. We draw on the technologies at our disposal to participate effectively in regimes that are predicated upon the existence of said technologies. This influences how we *see* and *understand* the world around us.

In a short informative video on student attendance and engagement available on the DoE's website (DoE, 2023b) as part of the Scout training materials, there are numerous references to technological, or machine-like, thinking for Scout users (namely, leaders) to consider. In the opening lines of the video, getting down to core contributing factors influencing attendance is expressed as a key component of work for schools to build student engagement. However, the language in which they express this indicates the need to deploy technology-oriented thinking:

> But before we start to engage with the factors influencing attendance, we need to consider the *headline metrics* of *attendance rate* and *distribution of attendance* (DoE, 2023b, transcript – emphasis added).

Defining attendance rate and distribution of attendance as *headline metrics* specifically prioritises datafied representations. Further to this, attendance rate is described as enabling the establishment of a 'clear baseline position' (DoE, 2023b), while the distribution of attendance can 'identify specific opportunities for growth in attendance' (DoE, 2023b). Like the LinkedIn example from above, these are not beyond the human capacity to calculate, but they are perhaps beyond the capacity of the school leader to calculate *in a timely manner*, given the enormity of their role already. At the conclusion of the video, this datafied thinking is once again explained as being necessary to consider student attendance and engagement:

> In summary, the headlines help us find where the opportunity or priority might be. The sub-trends help us better understand who the students are, the type of absence, and when it is occurring, bringing specific focus to the area of improvement we are hoping to achieve. Once we have that information, we can understand the contributing factors that might influence the attendance of a known group of students. (DoE, 2023b).

There are two very distinct moments here where the recessive technologies are positioned as 'helpers' that can (and should) influence the work of the leader: the *headlines* (or summary

page within the platform) that point to an area that can be prioritised, and the *sub-trends* that can be used to unpack the headlines.

As explained by Andrejevic (cited in Sadowski, 2021, p. 2), 'machines can step in to take on the information load that has become *too heavy* for humans to bear' (emphasis added); that is, datafied technologies can better withstand the requirements of a metric-driven world. Hong (2020) theorises this as *recessivity*, or 'the bargain of knowing but not knowing for myself' (p. 57). In the above example, school leaders still 'know' about attendance and engagement in their school, but they only know this *through* Scout data representations. The platform here serves as a type of lens through which specific elements of school performance can be known. In order to know through the platforms' analytics, there is a need to adopt the kind of sensibilities that the platform itself engages with; datafied thinking that is just beyond scope of general human sense-making. The logics of learning analytics are premised on the very rationality that insights into learning are unattainable without data and their framing platforms (Knox et al., 2020). Using such a logic, insights into school performance relative to the current stratified conditions are equally unattainable without these data first being filtered through digital data platforms for human consumption. Such technologies, like Panorama and Scout, then become mechanisms *via* which knowledge can be known *through*, rather than known *with*.

Creating conditions for deferred expertise

Drawing on Gerrard and Holloway's (2023) assertion that expertise is a political and social construct embedded in complex constructions of power, we can then theorise that datafication and the turn towards recessive technologies are producing the conditions for a deferring of expertise. The data from Panorama is used in schools' *Annual Report to the School Community*, a principle document generated annually as part of the school's reflective process for determining strategic improvement. It is a legislative requirement of all Victorian government schools to publish this report on the Victorian Registration and Qualifications Authority (VRQA) State Register; they are also *encouraged* to publish this report on their school websites as a mechanism for community distribution (see DET, 2023d). Within the first part of this report, principals and school leadership teams can demonstrate their school's progress towards strategic goals, outcomes and engagement through the provision of written summaries, with many schools also opting to draw on data sets available within Panorama to bolster their reflective comments. As such, we see an example of deferring expertise here; even though surrounding policy does not stipulate that data sets from Panorama *must* be engaged with in this section of the report, a sample of these reports obtained for analysis demonstrates that many principals *do* include data sets available in Panorama to substantiate their claims.

The second part of the report is a computer-generated 'Performance Summary', which purportedly provides stakeholders with a succinct overview of how the school both contributes to Education State priorities and compares with other Victorian government schools. The performance summary privileges this representation over that of the principal's perceptions; they cannot change or alter how this is presented, or which parts of it are presented, to their school communities. In this way, principals are passive recipients of their Performance Summaries and are encouraged to use this report to 'consider how this may inform the 'About our school' commentary' (DET, 2023d). Interestingly, the Performance Summaries are auto-generated by the SPOT platform, whereas principals and relevant leadership staff are specifically named as being responsible for delivering the commentary for the required section. In other words, since the Performance Summary cannot be altered, (because it is auto-generated by associated platforms, like Panorama), it makes sense to defer expertise to Panorama's analytics, as it is a sure-fire way to generate alignment between the human-produced commentary and the platform-generated report. This is encouraged in policy guidance, which stipulates that schools should use the

written commentary to 'give further context to data contained in the Performance Summary' (DET, 2023d), not to mention the alignment of colours within the Panorama dashboards and the Performance Summaries, with the very same shades of yellow and purple being used for comparisons across both formats.

Recessive technologies encourage the deferring of expertise through their broader assemblages. In an implementation advice document (DET, 2023a) for developing the School Strategic Plan (SSP), guidelines for writing targets are provided. Within the general advice section, Panorama is listed once as a source schools can draw on, in addition to a number of other points that suggest the use of Panorama through their connection to numerical measures:

> Targets are expressed as a proportion of students (e.g. X% of Year 7 students) and should include a baseline figure and a numerical target.

> Schools are encouraged to use the FISO 2.0 system measures where appropriate for their context, as these measures have been identified as having the largest impact on and correlation to positive learning and wellbeing outcomes. (DET, 2023a, p. 3)

Given that percentages feature heavily as a component on the Panorama dashboards, and that the FISO system measures are all available within Panorama, it would be a rational assumption that deferring expertise to Panorama to develop these targets is a likely occurrence. This document also offers advice regarding 'things to avoid when developing targets' (DET, 2023a, p. 3). This section entails three core pieces of advice in what should be avoided when preparing targets (DET, 2023a, p. 3):

> Expressing targets without a numerical Figure (e.g. 'improve NAPLAN benchmark growth', which lacks a baseline figure and target figure).

> Using phrases like 'state average' or 'similar schools average' as a target (e.g. 'will be at the same level as the stage average'). This should be avoided as state averages and similar school averages change each year. If schools wish to reference similar school or state averages, they should do this using a baseline figure drawn from that dataset, and then set their own target (e.g. 'increase NAPLAN above-level benchmark growth from 20% (2022 similar schools average) to 37%').

> Using only one data source (e.g. NAPLAN) for all targets in one goal. Multiple sources of data support schools to build a more accurate and holistic picture of progress towards a goal, as well as allowing schools to triangulate data so that they can verify their progress.

Here, the advice is clear that when developing targets schools should use numerical (datafied) figures, refer to baseline averages that are contextualised and to draw on multiple sources of data for each goal. Again, engagement with Panorama becomes a necessary part of the strategic planning work without the need to mandate it; there is enough entanglement between discourses and procedures to ensure that it is remembered and drawn on as a useful tool. While school leaders ultimately formulate the final words in the targets, the conditions produced here by the platform-assemblage encourage them to defer the numeric expertise over to Panorama. This is not to imply that leaders are passive or complicit through a lens of agency; rather this research contributes to the reshaping of principal professionalism. That is, how recessive technologies, like data platforms, serve as legitimate representations of schools and their performance. They thus require a deferring of human expertise by those in positions of leadership over to the recessive technology to 'know' school performance in line with the epistemological foundations of datafication.

Conclusion

This paper has demonstrated how the pressures to perform on the groundless ground of datafication is producing the conditions for a deferring of expertise by school leaders over to digital

data platforms. Both Panorama and Scout serve as examples of what Hong (2020) would describe as 'recessive technologies', which enable school leaders working within and with schools to understand and know school performance *through* the technology. However, the mere presence of the platforms does not necessitate their use. Their enactment is far more entangled in their broader data infrastructures, hence my deploying assemblage as heuristic to understand how they are (re)arranged and how they make certain knowings and practices possible. This enables a focus on understanding *why* a particular assemblage produces what it does and the underlying *conditions* that enable such production(s) (Buchanan, 2021).

While we are indeed living in a time where it is difficult to imagine a departure from a datafied life, this does not negate the need for criticality of digital data techniques, platform technologies and their broader infrastructures within educational systems. Gillespie (cited in Williamson, 2016) reminds us that research into data platforms needs to 'unpack the warm human and institutional choices' (p. 8) that underpin such technologies. While leaders are indeed being encouraged to defer their expertise, it is crucial to remember that these technologies and their interfaces and algorithms have been designed by people, as have the related policies. A Wittgensteinian interpretation argues that 'our classifications don't mirror the way things are, not because they're wrong but because there is no *Way Things Are*' (Braver, 2014, p. 177, emphasis added). In the context of the platform, the measures of performance made and displayed in the dashboard are not precise measurements. They mirror our current ways of *understanding* educational performance, not the educational performance itself. So critically questioning *what* is being known, *how* such knowledge is being facilitated and by *whom* remain key lines of further inquiry.

Note

1. Training videos and information guides are available from the relevant state departments of education for engaging with the digital platforms. These are presented as 'how-to-use' resources to offer guidance to leaders and other stakeholders (e.g., members of School Council) on the use and implementation of the technologies.

Notes on contributor

Sarah Langman is a Ph.D. candidate at the Institute for Learning Sciences and Teacher Education at Australian Catholic University. Her Ph.D. examines datafication in spaces of educational leadership, with a specific focus on the digital data techniques and technologies utilised by those in positions of leadership. Her research uses post-structuralist theory to critically explore the logics that shape the policy landscape in Australian education as a result of the processes of data infrastructuring.

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