

Digital media, the body and agency in a South African education institution from the perspective of narrative research

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In developing countries, digital media have created uneven nexuses of literacy, power and societal adjustment. Whilst literacy and power have been the subject of much research in South Africa, often supporting a conception of digital media as a resource (the access to and advantages of specific devices or applications), this study also sought to reflect on personal and societal change as bodily and ontological experience. The aim was to contribute to redefining what the digital media represents in education, and to do so through an exploration of the journey of a tertiary education student who used digital media to negotiate his academic and interpersonal environment. This constituted a local, ethnographic investigation into digital media through the narrative analysis of a series of accounts told by the participant over 2 years. The accounts were firstly examined in terms of the three axes of gesture, gaze and audition, and instrumentalisation. These three axes had resulting implications for conceptions of digital media as resource or as bodily and ontological experience. The agentic implications of the accounts were then discussed in terms of the same three axes in order to question orality and community, gestural experimentation, embedding and the co-constitution of the human and the technical. The findings were that digital media engage the body and that aspects of one's being in the world, such as culture, community and disorders such as attention deficit hyperactivity disorder (ADHD), can fundamentally inform and transform what digital media mean and how we interact with them.

Keywords: digital media; embodiment; narrative research; agency; Africanism; orality; attention deficit hyperactivity disorder (ADHD).

Introduction: Digital media and agency

This study explores the use of digital media from the perspective of gesture and agency. It does so through narrative research that takes as its subject narrative accounts told over 2 years by a participant at a tertiary education institution. The focus of the article is on how digital media engage the body and how aspects of one's being, such as culture, community and disorders such as attention deficit hyperactivity disorder (ADHD), can fundamentally inform and transform what digital media mean and how one interacts with them. This is to say that the embodied and the gestural (Noland 2009) prompt a reframing of questions of agency. Whilst typically agency, or 'the socio-culturally mediated capacity to act' (Ahearn 2001:112), is couched in terms of structure and identity, new media are in the process of changing our bodily dispositions. In doing so, they are also changing the conditions of possibility of our being in the world and in the institution. In order to better understand what digital media represent to students, and to better inform their adoption, the assertion of this article is that these conditions can best be understood locally, transformationally and interdisciplinarily, by using narrative research to bring the focus in tightly on the particular and the individual. This is therefore an academic literacy investigation in the sense of Coffin and Donohue (2012).

The sections that follow briefly recap the field of research into digital media and distinguish between digital media as resource and digital media as bodily and ontological experience. Thereafter, some of the basic tenets of narrative research and its benefits for an interdisciplinary inquiry are outlined. Following this, the research project and the participant narrative accounts are introduced. The accounts are then analysed in terms of three axes: gesture, gaze and audition, and instrumentalisation. These axes shed light on the place digital media have in the participant's negotiation of his personal and academic environment and are discussed in relation to digital media as resource or as bodily and ontological experience. Following this, the analysis moves to

the agentive implications of these accounts and examines orality and community, gestural experimentation, embedding and the co-constitution of the human and the technical.

Background

In South Africa, in Africa and in the broader, global academic community, there is a strong questioning of the institution and an expressed desire to work towards pedagogies that are more inclusive, more responsive to local conditions of knowledge production and that take into account difference and diversity. Sefa Dei (2007) frames this as a fundamental task and as a responsibility of all educators. Mamdani (2018) recognises the role that the institution has to play in efforts to move away from a strictly Western or Eurocentric paradigm. He examines the transformational work that needs to be accomplished in three ways: in defining an African mode of reasoning and in promoting African languages, in reducing the cost of education, and in promoting a local theorisation within and across disciplines. Whereas previous Southern African studies have often looked at the second axis, which is to say the intersection of literacy and inequality (Brown & Czerniewicz 2010; Kajee & Balfour 2011; Lemphane & Prinsloo 2014; Prinsloo & Walton 2008), this article contributes to Mamdani's first and last axes through ontological rather than literacy inquiry. Such an inquiry concerns agency, because agency, framed broadly, is the question of what students do with digital media, what it means for them and their being in the world. The question of agency is dependent on how one conceives of digital media. We can frame the discussion at this point in terms of two divergent conceptions: (1) digital media as resource and (2) digital media as bodily and ontological experience.

Digital media as resource

If one conceives of digital media as a resource – an acquisition, an offer or a service to which one can subscribe – then agency becomes framed in terms of demand, access and affordance. It is on this basis that centres such as EDUCAUSE (Grajek 2016) analyse institutional response in order to better typify the field, noting, for instance, the importance of the cloud, architecture and mobile devices. University studies reproduce this approach wherever use, item accesses and type of module presence on online institutional learning platforms is part of the process of judging system value (Jordaan & Kilfoil 2017; ed. Kilfoil 2017; Scheepers et al. 2018). It is an approach that is also at the heart of the South African Department of Education policy statement (DoE White Paper 2004), which sets out achievables in terms of device availability and use. Studies that refer to practice are also studies of resource. This is because either, as in Dezuanni (2015) and Brown, Czerniewicz and Noakes (2016), the emphasis is on what can be produced with the media, or because, as in Burn and Parker (2001), digital inscription and tool use is related to new semiotic modes.

Digital media as resource is intimately concerned with the question of operationalisation in pedagogic activities. Often, the discussion over pedagogic use concerns a perceived need for innovation, an innovation that is understood as adaptation

to an immanent future (see Hill 2007; Hillman 2014). This is a line of analysis consistently emphasised by many thought leaders in digital media, like Prensky (2001) or Oblinger and Tapscott (see Bennett, Maton & Kervin 2008; Koutropoulos 2011). Fundamentally, it is an argument about resistance (see Haynes 2017) and change, with many contributions on how to navigate competing demands. Bates (2016), for instance, outlines the kinds of materials (webinars, class notes, learning management systems) that one can prepare for teaching. Selwyn, the editor of *Learning, Media and Technology*, typifies this as 'endless variations on describing the potential of "gadget X + classroom Y"' (Selwyn 2014:2). This conception gives sense to monikers such as 'new' media, Web 1.0, 2.0, 3.0 and so on and is in keeping with the generational manufacture of the big information technology (IT) firms such as Apple and Microsoft. It must be noted, however, that any adoption or transformation linked to digital media will be differential and will set up new axes of power, access and exclusion (Kajee & Balfour 2011).

The notion of agency that these visions of digital media prompt is, in some senses, a zero-sum affair. More applications equal more agency. This is because, essentially, what is at issue is a text- and language-based conception of digital media with links to multimodality (Kress 2010). Digital media and technology are conceived of as promoting a literate society. The agency that is discussed and promoted is a discursive (Ahearn 2001; Fairclough 2013 [1995]) and structural (Bourdieu 1989) one that seeks to empower students within a hierarchically organised society by giving them critical and productive capacities (see, for instance, Gillespie 2010). Participation in civil society, employment and education are held to be dependent on this vision of agency.

Digital media as bodily and ontological experience

Digital media enter into specific relationships with the bodies that hold, touch, manipulate or read them. Gesture is a key aspect of any digital mediation. Scrolling, swiping, selecting, expanding and changing between applications and tools within applications are all accomplished through bodily gesture. Noland (2009) explores agency in terms of embodiment and notes how the concept becomes concerned with imitation, repetition and the manner in which the body exceeds its unity and containment in gesture and interaction. The prosthetic is at once an extension of the body and also of the body's senses and orientation to the world. In a parallel fashion, memory and personality are rendered through the instigation and repetition of gesture. Studies that refer to this aspect of digital media often repose on phenomenology (Merleau-Ponty 2012 [1945]) to unpick the links between the body, perception and cognition. Hansen (2006) looks at the introjection of technology into human life and how one can see through the hand, or how digital media change our body image. Like Hansen, Peterson (2008) and Sinclair and de Freitas (2014) examine how the sense of immersion that one feels with digital media is generated by one's own body's movements, and by one's own proprioception.

The interrelationship between the motor and the digital has been exploited in responsive media (Xin Wei 2002), where what is raised is the iterative progression of media that respond to gesture. Similarly, the issue of transmediatic space and perceptual dispersion is particularly germane to portable devices, with their always-on, or 'tethered' nature (Richardson 2007; Turkle 2008). The ways in which digital media serve as an embodiment of practices that rely on memory, and both invest and alter that memory, are examined with respect to inscriptive techniques such as writing (Gibbs & Angel 2013). Studies like these contribute to a wider conception of what we mean when we talk about 'digital humanities' (Finnemann 2014). Such studies also raise questions of gender and race, not only because these categories can be effaced or transformed through digital mediation but also because their agentive performance changes. Hansen refers to this as 'digital performativity' (2006:142).

Digital performativity raises the question of embodied disciplinary practices and one's agency within the ties of the institution (Foucault 1977). This can refer, for instance, to different ways of disposing the body (Dixon 2004). Noland (2009:102) notes the role of mimicry, rather than innovation, in both acculturation and exercise of choice. With respect to the fictional worlds of game play, Wardrip-Fruin et al. (2009) note that even the experience of agency itself can be shaped through interaction with an underlying computational model. What is central to bodily and gestural agency is a move away from a vision of society as structured and hierarchic and towards studies of specific, embodied links between people, artefacts and media. Embodied links generate networks, and these networks involve translations between functions and roles (Latour 2007). Embodied agency involves a questioning of Western values such as the text- and ocular-centrism referred to above. It can give rise to a re-emphasis on the rhythms of oral communication in addition to casting agency in terms of community, shared cultural memory and practice.

Narrative inquiry

Narrative inquiry has been chosen as the means of pursuing this research because of its dual nature. Narratives are not only texts that can be analysed but also instantiations of a mode, an epistemology. Narrative is a means of apprehending the world and engaging in meaning making (De Fina & Georgakopoulou 2008). The longer and more sustained turns at talk that narrative activity supposes allow both participant and researcher to co-construct a story through their mutual involvement (Tannen 2007). A story supposes a certain degree of management, both through omission (Prince 1988) and through selection (Mishler 2004). As a story progresses, a teller can indicate the meaning that it has through evaluation of the events told and couch this evaluation within the story world, in the mouths of the characters, as it were, or in direct statements to the listener (Labov & Waletzky 1997 [1967]:34). The story world itself, its spatial and temporal coordinates, and the superposition of these coordinates on the situation of interaction are also meaningful (De Fina 2003). Through narrative, a participant

aligns or disaligns with their interlocutors and with dominant social processes and discourses. Stories, finally, serve important biographical purposes (Westlund 2011).

From story world to discourse, narrative inquiry can concern: (1) the events of the story worlds and the embedding or nesting of one story world within another, (2) the characterisations and descriptions pertinent to story worlds, (3) the modes used to represent these events and descriptions, which can be oral, written or multimodal, (4) the type of interaction or mediation and its affordances, constraints, roles and positionings and (5) the meso- and macro-social processes and discourses that inform telling. There are thus several possible levels of analysis in narrative inquiry, which in turn emphasise the embedded spaces and events of the story worlds, the characterisation and speech (either reported or direct) of figures involved in those events, and the assessments of the tellers and listeners. The aim of this research is to employ narrative as a means of engaging with participant data. This is a transformative aim that uncovers local and particular aspects of what these media mean in South Africa's tertiary educational institutions. Narrative inquiry will first be harnessed to understand participant relationships to digital media, as resource, or as bodily and ontological experience, and then to understand agentive orientations.

Research methods, participant and data (narrative accounts)

The data presented here are a series of transcribed narrative accounts collected with a participant, who chose to be named Goitse. In some of the accounts, he is joined by two female students, who chose the pseudonyms Sunflower and Smiley. The accounts issue from a broader National Research Foundation-financed project into the digital humanities. The project involves a small cohort of participants who themselves wish to research how digital media form part of their experience of tertiary education. Concerns of power, reliability and bias are addressed by a longitudinal ethnographic approach. Goitse participated for the full 2 years of the project. His interview data issues from both institutional and extra-institutional settings. Through a closer mutual trust and respect, the methodology aims to afford a participant confidence to share counternarratives (eds. Bamberg & Andrews 2004), which is to say narratives that challenge orthodoxies or institutional discourse. Goitse's accounts are necessarily partial (Bucholtz & Hall 2005), but they may be appreciated as being, nevertheless, illustrative of themes and experiences that are often not touched upon in research into digital media. This goes to the heart of what narrative, as epistemology, involves.

The interview recordings were annotated and edited using Audacity (<https://www.audacityteam.org>). The narrative accounts have been isolated, selected and cut from the longer interview data. Transcripts of the accounts have been uploaded into a data set (Kelleher 2020). This allows the reader to appreciate the conversational setting and to

apprehend the timeline of the accounts. All extracts in this article therefore indicate the data set transcript number in addition to the number of the extract. Selection is by genre. As a genre, accounts (De Fina 2009) are stories that participants provide in response to requests for information or because there is a need to rectify, clarify, furnish details or accord to the background expectations that characterise an exchange. A focus on accounts prompts a qualitative interview format that leaves participant response open and that lies between doxastic and epistemic approaches (Berner-Rodoreda et al. 2020).

Goitse, the participant whose accounts will be discussed, has graduated over the 2 years of the project from being a third-year business student to Honours. Goitse can study thanks to the student grants he has managed to obtain from private sources and from the National Student Financial Aid Scheme (NSFAS). Goitse is a male L1 Sesotho speaker. He has studied and interacted in English since primary school. Goitse has ADHD, and his learning routine is adapted to his disorder. From Monday to Thursday, he attends lectures and then spends up to 8 h each day in the study section of the library, where there are freely available computers and a constant Wi-Fi connection. For Goitse, the ability to succeed academically conditions his possibilities for entering a professional firm in the city. South Africa has a high-competition economy. Official unemployment figures for the country are 40%, rising to 70% in those aged 15–34 years (Statistics South Africa [STATSSA] 2016:27).

Analysis and findings concerning the relationship with digital media: Gesture, gaze and audition, and instrumentalisation

Goitse's accounts cover typing, voice-to-text software, viewing of platforms like YouTube, mediated interaction through social media like WhatsApp, use of Concerta medication and Africanism. These accounts can be discussed under three axes: gesture, gaze and audition, and instrumentalisation. In this section, Goitse's accounts will be explored in terms of the relationships to digital media that they suppose.

Digital media and gesture

Goitse's accounts, when arranged in thematic order, rather than the chronological order of the data set, allow one to understand a progression in writing and studying from handwritten notes in first year, to typing in second year, to use of voice-to-text software in third year. Some extracts from stories accounting for these three phases are given below. All the extracts have been transcribed with a simple notation where '·' and '·-' indicate vowel extension or truncation, '(.) (..) (...)' indicate the relative length of pauses, 'h' indicates aspirational sounds such as breathiness, '@' indicates laughter, 'bold', '><', '<>' and '↑↓' indicate increased or decreased loudness, speed and intonative shifts, and '=' and '[' indicate latching and overlap (see eds. De Fina & Georgakopoulou 2015:7).

Extract 1: Data set transcript 6: Account of progression from handwritten notes to typed notes

1. Goitse: like o- uhm (..) let's say fo- for instance the (example) of the >the the the the< like the typing of the notes ·hh so:: (.) I want to so like I would always wonder why certain friends of mine always have time on their hands ·hh
2. Researcher: [mmhhmm]
3. Goitse: like they're al- like they're they're wa- walking their dogs they're doing this they're doing they're doing that and I'm like where do you get the time we're doing the same degree but you're doing this and I'm here
4. Researcher: yeah
5. Goitse: uhm always in the library trying my best to finish my work what is it
6. Researcher: yeah
7. Goitse: a:::nd you know sometimes you'd ask them uhm can you please send me your notes and they would always be on like ·hh uhm they'd always be on like uhm they'd always like send their notes through and they'd always be on digital like they have digital notes so I was like let me just try it so like like for instance that night uhm the night I was uhm under pressure with all- I was writing Business Law so Business Law uhm the slides were very descriptive but you had to add more stuff and I did that I and I studied more and I was very shocked at the mark that I got I think I got like 63 aft- that was the first time I got @@ 63 for Business Law ·hh entrance exam I mean uhm entrance mark I think I got like 42 ·hh I always I never used to do good in it **never** and that was because I could not finish the work it was just a **lot** of work for me
8. Researcher: oh right okay cool
9. Goitse: so:: (..) and also time management as well like you know I'd wanna like like I'd wanna maybe like watch se- watch series and stuff and not give that much time towards the school work so that time I was just like let me try it out hh once I've tried it out revised and I passed and I was very I was very impressed with the fact that let me do that uhm I can do that ·hh so then from there uhm I'd work I'd uhm start typing you know the more you work on something the more efficient you become because you start adapting to where everything is and that's how everything goes so uhm basically it's if

there's a problem I try to find uhm well I try to mimic someone that that's like that do- that's better than you that doesn't have the same problem and then from there u:hm I just start and then like I just find myself like I just find myself becoming more efficient in that process especially with the typing yeah

Extract 2a: Data set transcript 4: Account of progression from typed notes to voice-to-text

1. Goitse: yeah on my laptop (...) so:: **now** uhm::: (...) there were days where I'd become th- then second semester of last year there were days where I'd like (...) hhh uhm have to go to Jo'burg there's som- like I need and there's a party to go to:: (...) hhh so:: I'm under pressure and I started figuring out that if I ty- if I if I if I (...) uhm use the (...) uhm voice to text (...) hhh like I would take instead of taking six hours of typing a chapter
2. Researcher: yeah
3. Goitse: uh::m I'd literally compress it down to two hours
4. Researcher: °that's a lot of time saved°
5. Goitse: so::: two hours:: and then I would like tha- those are my notes and that's there and then a::nd all I have to do **after** typing my notes is once I've got my notes on my: (.) laptop (.) hhh I make sure first that I (.) put them on the cloud so: uhm (.) you know that Microsoft One Drive
6. Researcher: uh ha
7. Goitse: so I use the [...] one (.) the Microsoft One Drive (.) a:nd (.) all my notes are there so:: wherever I go I remember (...) hhh like that day I was typing notes I put them on the drive and on the way to the Gautrain I started like (.) you know editing my notes on the Gautrain with my iPad
8. Researcher: ah [...] (.) **awesome**
9. Goitse: **so:: @@** so:: uhm (.) so:: like (.) I found that like very effective I found that very very very efficient and (...) I mean (.) it didn't compromise my marks (...) like because I've (.) then I figured (.) that (.) uhm (...) it's not the whole typing that makes me pass (...) hhh it's actually revising my notes (.) like (...) thoroughly and continuously (...) hhh that actually makes me like (.) li- like- that that helps me perform at my (.) at my best

A narrative analysis of extracts 1 and 2a can examine events characterisation and interactional achievement. If one takes the progression of events to be the overt content of a story, its text – what, following the Russian structural tradition, is often referred to as the 'fabula' (see Genette 1966) – then one can say that both account extracts have a similar and fairly conventional structure (see Norrick 2000:37–43). In Extract 1, Goitse notices a disparity in work commitment (the orientation or frame), imitates how other students take their notes (main action) and this leads to time savings and good marks on an important test (resolution). In Extract 2a, Goitse is under pressure to complete his notes (orientation), and this leads him to adopt voice-to-text as a new note-taking strategy (action) that also leads to time savings and enhanced performance (resolution). Both these stories align with a conception of digital media as resource. Better use of digital media results in time saving and an evolution in study strategies.

Subjacent to questions of resource are questions of social inequality and differential access (Kajee & Balfour 2011). These can be seen in Goitse's narrative accounts when one introduces other levels of narrative analysis such as characterisation. In Extract 1, characterisation is in terms of self and other. Goitse sees peers who have a very different experience of tertiary studies to his. Whilst Goitse himself must spend up to 8 h in the library per day, studying and preparing notes, other students are outside, in the open air, walking their dogs (Turn 3). In terms of social processes and discourses (see De Fina 2013), this characterisation of Goitse's advantaged peers as walking their dogs indicates a racialised and class-based analysis. In South African tertiary institutions, ownership of a dog is generally reserved to white students who live in houses near campus. Interactionally, in this extract, Goitse takes long, reflexive turns at talk that are interspersed with markers useful to turn continuation ('uhm', inbreaths, etc.).

In Extract 2a, set in his third year of studies, there is a change in Goitse's characterisation and depiction of his social standing. What is emphasised is competition and performance rather than disadvantage. Examples of this change are that he is enjoying his own leisure time and going to a party in Joburg, he is taking notes on an Apple product, and he is travelling on the Gautrain, which is the more exclusive means of transport to Johannesburg. In this second account, he is more assertive and involved in his friendship circle, and, similarly, the interactional accomplishment of the account is more immersive, with shorter turns at talk and more involvement with the researcher, as indicated by laughter and accommodation of back channelling. Linguistically, in this extract, the progressive aspect is employed to depict actions in the course of accomplishment and thus emphasise the agency of the narrator.

These two stories with their differences in terms of event, characterisation and interactional achievement reflect important developments in bodily and ontological experience.

In Extract 1, typing is opposed to handwriting. Handwriting is both individual and cultural, a product of inculcation and of volition with a corresponding difference between mechanical reproduction and calligraphic design (Chandler 1992). Goitse juxtaposes writing and typing as different ways of studying. He emphasises the craft of typing, noting how (in Turn 9) he is honing his typing skills. In Extract 2a, however, gesture is disinvested of the creative and mnemonic function and becomes a mere tool. Goitse states:

I've (..) then I figured (.) that (..) uhm (...) it's not the whole typing that makes me pass (...) hhh it's actually revising my notes (..) like (...) thoroughly and continuously (...). [Goitse, Extract 2a, Turn 9]

This disinvestment and substitution of gesture has two repercussions. In the first place, digital mediation loses differentiation. Although this account is about voice-to-text, at Turns 5 and 7, Goitse refers to 'typing' his notes. Secondly, in a parallel with modified rhythms of the hand, paper or keyboard (Gibbs & Angel 2013) that have occurred as Goitse has taught himself to type (Extract 1), Goitse is now growing used to modified oral patterning. This can be seen in Extract 2b, which gives the occasioning for the account. This occasioning is multimodal and makes use of Goitse's iPad.

Extract 2b: Data set transcript 4: Dictating to voice-to-text software

1. Goitse: okay so let me just like do this (beep of iPad) uhm <(.) top management's view of (.) uh (.) and **conclusions** (.) about the company's (...) long-term direction (..) and what (...) products (..) market customer business mix seems to (.) opt- (...) seems optimal (.) for the road ahead (.) constitute a strategic vision (..) for the company>

As Goitse starts dictating to the machine, his debit slows (as shown in the transcript by '<'), his pronunciation becomes less inflected, and he must make long and frequent pauses [marked '(...)']. The role of the digital interface is more pronounced, because now the computer must interpret and propose text for oral segments, to which Goitse must try to give stable shadings, textures and conditions of production.

As Sinclair and De Freitas (2014:356) state so succinctly, 'our understanding of gesture depends on our bodily configurations'. Goitse, as a character in Extract 2a and b, is portrayed within what Turkle would term an 'always on' environment (Turkle 2008). He dictates the notes, uploads them onto cloud storage and then accesses, edits and memorises them whilst on the way to Johannesburg with the Gautrain. The act of studying becomes (at Turn 9 in Extract 2a) a *continuous* activity, in the same way as carrying and using devices is now continuous in this second extract. There is, in this continuity, also an implied affective link to both the activity and the device, which are bound up with Goitse's friendship group (the party to go to) and his more assertive and confident identity as student.

In this first look at Goitse's accounts, consideration of digital media as resource has been completed by a discussion of Goitse's bodily and ontological experience. Whereas the former emphasised themes of changing access and affordance, the latter allows insight into Goitse's bodily adaptation to the interface. Narrative progression evinces evolving gestures, oral versus textual mediation, an increased tethering to mobile devices and the existence of an affective dimension to digital media.

Digital media, gaze and audition

Extract 3 presents Goitse's account of the first time he had recourse to YouTube tutorials. This extract illustrates embedded story worlds. The basic narrative structure of this account is very similar to that of Extracts 1 and 2a. It consists of a pressing need to do things better and faster (the orientation or frame), followed by a new method involving digital media (main action) and a subsequent sense of achievement at his studies (resolution). The embedding used in this account juxtaposes a virtual lecture theatre in an American university (Turn 1) with the space of the library (Turn 7).

Extract 3: Data set transcript 5: Account of Goitse's use of YouTube tutorials

1. Goitse: [...] and that's what they do in American universiti- cause we we we go to u- like we go to school (.) on campus (.) watch YouTube watch American uhm watch American teachers lecture their class and this is us understanding
[...]
·hh let me just revise it let me get it again and again and again and again I mean in 2016 I was doing economics and yoh economics was hard ·hh but ·hh uhm after discovering tha:t after discovering YouTube and YouTube channels that have uhm uhm
2. Researcher: [yeah (inaudible)]
3. Goitse: yeah yeah like it was amazing it was amaz- it was much more easier
4. Researcher: oh really=
5. Goitse: =yeah I remember there was a time I was panicking ·hh·hh @@ uhm I think
6. Researcher: ·hh·hh@
7. Goitse: this is our final exam I was **panicking** and I was in the library and I'm like cause I didn't I didn't I didn't finish my scope again
8. Researcher: oh [...] wh- wha- when you say you're finishing your scope what does that mean
9. Goitse: like I don't finish the chapters that are required so like if there're twelve chapters I'm pretty sure like I'll only

end up until ten chapters and then the the uh two other chapters I'll just wing (.) you know

10. Researcher: [oh right I get you okay yeah
 11. Goitse: so:: once I figured uhm once I discovered like there's channels on YouTube that actually also discuss (..) the the topics ·hh·hh uhm I remember watching them watching them I was so scared that I'm not grasping anything a:nd wrote the exam I was so confident after writing the exam and I think that I got 87% for the exam ·hh and
 12. Researcher: coo::l
 13. Goitse: I can't really I can't really say that if >what I'm saying< if it was not for YouTube ·hh uh I was not going to get that mark I know that I do know that

From the perspective of digital media as resource, what Goitse's account again emphasises is that a diverse and varied offer of pedagogic materials allows more confidence and comprehension. In this case, the fact that these materials come from North America has value and is thematised in Turn 1. As with Extracts 1 and 2a and b, a further element of what is important for Goitse, who suffers from ADHD, is the repetition that is allowed by a varied offer, 'let me just revise it let me get it again and again and again and again' (Turn 1). From this perspective, YouTube is a tool that can be compared to voice notes, webinars, uploaded presentation slides or quizzes, which enlarge the pedagogic offering. A narrative approach, however, in emphasising the two different and embedded story worlds (the North American lecture theatre and the South African library) allows a deeper understanding of the functioning of digital materials in terms of bodily and ontological experience.

In telling this account, Goitse is providing a multimodal representation of the story, using his phone to show the researcher the YouTube channels that he continues to consult. This establishes a juxtaposition of spaces – the embedding space of the telling as against the embedded space of the YouTube tutorial – that is very similar to the juxtaposition of the North American lecture theatre and the storied world of the library. The effect is to transform the embedding space. In this case, it becomes a pedagogic one. Its field and function change through the introjection of the digital media, what Hansen (2006:144), it can be recalled, refers to as 'digital performativity'. As Jones (2010) further notes:

Spaces are constructed not just through the objects and boundaries that surround us and the habitual ways we conceive of them, but also through interaction with others who are operating in the 'same' space. (p. 153)

The embedding of the virtual in the real sets up a distinction in bodily engagement. In the space of the library, Goitse characterises himself as panicking and as having failed to complete the list of prescribed outcomes for the course:

'I didn't I didn't I didn't finish my scope again' (Turn 7). In the YouTube space, Goitse repeatedly participates in a North American lecture theatre, which, as noted, holds prestige value for him. Participation is enhanced and demarcated from his ordinary day-to-day surroundings. He describes the tutorials as 'it was amazing it was amaz- it was much more easier' (Turn 3). This space is, perhaps, more adapted to Goitse's needs. He is one on one with a lecturer. He is directly solicited. His gaze and his audition are unobstructed. The flow of the lecture in this virtual space, one imagines, is imperturbable and seamless. More to the point, his participation is, in fact, disembodied. He sees but is not seen. He leaves his body behind, or, rather, leaves a certain part of his body, that 'residue' (Hansen 2006:146) that does not fit institutional needs because of his disorder.

In narrative inquiry, particularly strong moments of assessment can occur at story start, in the preface, where the teller must make a case for taking the floor, and at exit, when the point of the story is made. In this Extract 3, one can note Goitse's emphatic, 'this is us understanding' at Turn 1, and similarly, at Turn 13, 'if it was not for YouTube ·hh uh I was not going to get that mark I know that I do know that'. In Data set transcript 1, some 7 months before the account of Extract 3, Goitse refers to YouTube as, 'yeah that's the new form of education like YouTube and stuff yeah'. This comment is made in talk leading up to a description of a YouTube channel, Colors (n.d.), which Smiley describes in Extract 4.

Extract 4: Data set transcript 1: Smiley describes the YouTube channel Colors

1. Smiley: so it's like (.) music (.) it's people (.) different artists coming and then hh ·hh the theme (.) you have to dress according to the theme like you have to blend in to the they they give you a background like let's say your background is like purple hh ·hh and then you'll you have to dress according to the background you have to blend into the background and then yah
 [...]

 2. Goitse: [yeah yeah
 3. Sunflower: [and they've got very great music [yeah

Colors has nearly 4.5 million subscribers. It explicitly caters to the visual and the auditory. YouTube can certainly be understood from the perspective of digital media as resource, in which case it would be an example of multimodal meaning making (Kress 2010). However, in Goitse and Smiley's accounts, the authentication (Bucholtz & Hall 2005:601) that they seem to attach to these channels prompts an interpretation that emphasises the affiliation and projection of the self – an ontology rather than a semiosis.

Digital media and instrumentalisation

Digital media are not value neutral (see Prinsloo & Walton 2008), nor are they neutral in terms of bodily engagement.

Extract 5 is an account that allows insight into Goitse's efforts to adjust his body to the demands of the institution. As such, the account represents an interiorisation of the series need plus digital solution which was relevant to the action of previous extracts. Rather than a need requiring a prosthetic resource, it is the body itself that provides resolution, through its instrumentalisation. Analysis of this extract concerns internal and external evaluation.

Extract 5: Data set transcript 7: Account about taking Concerta to study all night

1. Goitse: so yeah uhm I used to get a prescription every single every single month for f-
2. Researcher: ↑and did it work ↑did it help
3. Goitse: yeah no like eh-
4. Researcher: is it hey
5. Goitse: without Concerta I don't think that I was going to get into Honours because
6. Researcher: [[...] no really hey
7. Goitse: because yeah no because Concerta helps me focus like (.) I've always desired that focus I've always desired I've always asked myself why can I not
8. Researcher: @@@
9. Goitse: @ so:: once @ I had Concerta I like that was the c- that was the focus that I wanted because I used to be so like you know like you know you go:: uhm ·hh like people would go home and they'd come back with like this amount of work and I'd come back with this amount of work [signalling different sizes of work] ·hh and I'd always ask how do you do it like how do you get so much work done a::nd once I was on Concerta I got it like it's it's the pure focus it's the pure no distraction no nothing focus
10. Researcher: (inaudible)
11. Goitse: so::: like I'd cross night and also like it helps me it helps me to stay up till late if I take Concerta (.) normally when I have to cross night I would take Concerta around 12 o'clock ·hh

A narrative allows a teller to assess the subject of a story through direct statements to the listener or through the framing of events and persons in the story world. Labov and Waletzky (1997 [1967]:34) refer to these two types of evaluation as external and internal. Internal evaluation in the account of Extract 5 relies on the depiction of characters. As in Extract 1, there is a distinction between self and other.

At Turn 9, other students have small piles of work while Goitse has huge piles. Goitse sees this difference as depending on his capacities and employs direct speech to question the situation. At Turn 7, the question is reflexive: 'why can I not?'; at Turn 9, the question is addressed to other students: 'how do you do it like how do you get so much work done?'. As in Extract 1, the response to these questions, which constitutes the resolution of the account, profoundly changes how Goitse studies.

Goitse's response is framed in terms of desire, 'I've always desired that focus I've always desired' (Turn 7). Goitse desires concentration in the same way that someone else could desire an object of consumption, or an additional resource. The resolution of the account recapitulates a first time. Extract 5 contains a temporal rupture in Turn 9 that is introduced by the adverb 'once'. The first time taking Concerta is qualified in terms of purity and efficacy: 'it's the pure focus it's the pure no distraction no nothing focus'. It is on this basis that cross nighting, where Goitse stays awake to study all night in the library, has become a regular activity. Extract 5 can be compared with Data set transcript 2, which recounts Smiley's first time smoking marijuana. In that account, both Goitse and Smiley adopt the role of experienced users, who are aware of the dangers and the advantages. They are initiates in an activity that is not only both intimate and bodily, but also shared and discussed. The intimacy of this account, its proximity to the body and bodily functioning, can be felt in the interactions between researcher and participant. There is more laughter, more hedging such as the 'yeah no like eh-' (Turn 3).

With regard to wider social processes and discourses, this account speaks back to the pressure under which students such as Goitse find themselves, in terms of peer group and academic achievement, to adopt behaviours that can be harmful and counterproductive. This account also speaks back to a logic that underlies the conception of digital media as resource. In the same way that resources can be purchased or made obtainable, Goitse, in obtaining concentration, or a high, is treating the attributes of the body as a resource and in so doing espousing a particular ontology. One can compare Goitse's external assessment at Turn 5 ('without Concerta I don't think that I was going to get into Honours') with his assessment of YouTube in Turn 13, Extract 3, of the previous section.

Analysis and findings concerning agency

A discussion of bodily and ontological experience has added depth to a consideration of digital media as resource. This section draws out implications for agency, and does so with a similar focus on Goitse's narrative accounts. In parallel with the progression of the previous section, heads are: gesture (language and text), gesture (tâtonnement), gaze and audition, and instrumentalisation. The question of

agency is one of consequentiality. It looks at how digital media give substance to Goitse's being in the world and in the institution.

Agency and gesture (language and text)

In the previous section, in Extracts 1 and 2a and b, Goitse's relationship to digital media as resource consisted in the successive adoption of typing and voice-to-text technologies. From a standpoint of bodily and ontological experience, these extracts were discussed with respect to what typing and dictating imply as gestures. A first question with respect to agency is how such gestures meld with language and identity, which is to say, how gesture connects with Goitse's own ontology.

Goitse explicitly places language use within a nexus of Africanism and black excellence. Africanism is not incompatible with the modernism that is implied in digital media. On the contrary, it can lead to a transformative approach that values the culture and heritage that students bring to their learning. Goitse sees Africanism as carried through language, and in particular his 'home' (or L1) language, which is Sesotho. For him, the use of his language, and the indexicality of the terms it employs, allows him to take pride in a black identity and aspire to excellence. Extract 6 gives his account of meeting a student on campus allied with the Economic Freedom Fighters (EFF) party in South Africa.

Extract 6: Data set transcript 3: Account about an Economic Freedom Fighters spokesperson and Africanism

1. Goitse: yeah (.) so he was just pumping all this information about like you know black excellence where like the black society's going and whatnot and ·hhh ever since that day uhm I have to like look back within and like I have to reflect like (.) >dude< you were at the brink of losing your identity as an African person ·hhh maybe because the like because even when we speak we're speaking Eng- like uhm
2. Smiley: English
3. Goitse: yeah like we're speaking also the type like most almost all my conversations are in English (.) so:: like ever since then (.) and ever since I've realised that I've just tried to like (.) like bring back you know like (.) vernac and I've tried to bring back my African language and you know like
4. Researcher: which is what which is::
5. Goitse: uhm Sesotho
[...]
6. Goitse: so it's the best way to like uhm

7. Smiley: communicate
8. Goitse: to articulate (.) like wh- like my ideas and my expressions and whatnot so right now (.) all I'm trying to do right now >is just like< bring that like Africanism tha- try to bring back like my home language and you know try to retain my African identity as like an African person ·hhh
9. Smiley: mmmhm

In this account, one can note the complicity and co-construction between Smiley and Goitse. Smiley completes Goitse's turns at 2 and 7 and offers strong signs of affirmation. The EFF student is known to Smiley. Shared knowledge is often the basis of narrational co-construction. Africanism, not only as a theme but also as a practice, is clearly important to both these participants. An emphasis on Africanism allows a reinterpretation of Goitse's bodily relationship to digital media. If Africanism is understood as valuing community memory and face-to-face, oral community practice, as defended by ESKIA Mphahlele (1972, 1993, 2007 [1987]), who grew up in Gauteng, not far from where Goitse studies, then his progression towards voice-to-text can be reinterpreted in this light. Through voice-to-text technology, Goitse is effectively replacing the rhythms and mediation of the keyboard and of the touch screen (Gibbs & Angel 2013; Sinclair & de Freitas 2014) with mediated oral rhythms that build on his verbal memory as valued through his renewed emphasis on his African language and oral tradition. The same could be said of cloud memory, which in being accessible across devices and through different places; it is in fact a more communicable memory than that of an isolated device's hardware.

Agency and gesture (tâtonnement)

Through Extracts 1, 2a and b and 3, Goitse's relationship to digital media from the perspective of resource demonstrated a progressive increase in uptake of the digital offering. Following the example of others, he adopted typing, voice-to-text and cloud storage, favoured more continuous use of his iPad device and incorporated YouTube tutorials as part of his learning strategies. From a standpoint of bodily and ontological experience, these extracts raise the question of how adaptation to practices observed in other students and to behaviours tailored to the needs of the machine can be thought of as agentive.

In Extract 1, Goitse uses digital media in ways that he has learnt from observing the behaviours of others. The formula that is repeated in Extract 1 is 'let me just try it'. Later in the same extract (Turn 9), he refers explicitly to mimicry. In Extracts 2a and 3, the complication and resolution of the stories are provided by the lexemes 'figure' and 'discover'. This discovery through imitation and experimentation is summarised in his exit from the account of Extract 1, which is

given in Extract 7. Goitse explains a little more what he means by becoming efficient in the process of typing.

Extract 7: Data set transcript 6: Exit from account in Extract 1

1. Researcher: so how do you get used to the app then
2. Goitse: uh logic like should be told I use my logic like I would know that certain icons are like digital icons are very similar to each other so if I were to take an example of the like maps .hh I know that that means that we're going to recentre yeah that's going to recentre the plus is a zoom and the minus is a zoom out so because apps have like similar icons you just click and go back click and go back until you get it [using gestures on his phone]

In reference to the work of Leroi-Gourhan, the paleoanthropologist Noland (2009) recalls:

[T]he power of gestures [is] both to *generate* (as opposed to reflect) actions and to shape the muscular structure of bodies modelled over time to execute these actions. The retentive and protentive duality of [chains of gestures] should be recalled at all times. Resulting from the nervous system's confrontation with 'internal and external solicitations', programs are an *effect*, not merely a generator, of performance. (p. 102)

In these terms, Goitse is engaging in a groping or a tâtonnement that can include mime, mimicry, verbal instruction and experiment. Agency, from this perspective, is not just an explicit, conscious orientation to an application, a device or media, but also something that arises from within, from the body, through the accomplishment of different gestures. One is learning with the device, through one's interaction with the interface. The context is given, assumed, but the bodily accomplishment is active and inventive.

Agency, gaze and audition

Extracts 3 and 4 were discussed with respect to the juxtaposition of story worlds in the account and the digital performativity that allowed, on the one hand, transformation of the embedding space, and, on the other, an ontological projection into these spaces through, primarily, gaze and audition. These extracts add to an understanding of the increasingly always-on, tethered, and continuous use of digital media that is reflected in Goitse's accounts.

A more continuous use of digital media assumes a more continuous reliance on devices. In his accounts, Goitse's evaluations are very positive generally and rely on stance markers such as 'very very efficient' (Turn 9, Extract 2a) or 'so confident' (Turn 11, Extract 3). It is interesting to note that, with the exception of YouTube, these evaluations are rarely

linked to a specific application or software per se. In his account about his use of voice-to-text, his demonstration (Extract 2b) uses the basic pre-install on his iPad. What seems to count for Goitse is the solution, and to a certain extent the device, but not how that solution is obtained. His accounts revolve around expedience, and previous studies (see Prinsloo & Walton 2008:107) have highlighted the advantage that big internet firms can draw from that. An example is given in Extract 2a. At Turns 5 and 7, Goitse mentions OneDrive cloud storage without any explicit evaluation. He confirms that the researcher is aware of the cloud storage option, states that he uses it and continues the account. It is this naturalised *absence* of stance that should be remarked upon at this point.

Goitse, therefore, adopts digital media and so places himself within institutional networks. In one respect, he is losing agency. However, through these devices he is also more firmly inserted into his friendship group, as shown by Extract 2, where his possibility of working on the train is what allows him to go to a party. Devices and applications are mediators in complex relationships (Latour 2007). Friendship groups, from this perspective, become networks of actors whose relationships and contacts are mediated. Additionally, digital media have a strong link to face-to-face communication because they include metapragmatic markers that function in the same ways as kinaesthetic cues (Schandorf 2012). Smileys and other gestural transliterations are the most obvious illustration of this. As frequently noted in explorations of the digital, the virtual is augmented and informed by the physical and the real. The friendship group can thus, on some levels, through digital media, be more strongly social and communicable, endowing Goitse with agency through device availability and its tethering on the body (see also Chayko 2008). This would be interpretable in light of Goitse's affirmations of Africanism and the sense of community that was discussed above.

However, although dependant on device ubiquity, the subject of gaze and audition was properly associated with Goitse's watching of, and identification with, alternate spaces embedded into current situations of interaction. In narrative research, this phenomenon is discussed under nesting (De Fina & Toscano Gore 2017). Storylines, events and characters accrue in an exponential way as series of occurrences are imbricated and commented upon, both in the mediated setting (the YouTube platform) and also in other platforms and in face-to-face interaction. Gesturally, the embedded space perturbs the body schema and spatiality of perception (Merleau-Ponty 2012 [1945]:103) by offering other theatres perceived against the experience of other bodies. These other spaces offer the opportunity for an identification, and identity construction, that exceeds the immediate confines of one's physical environment. Thus Goitse watches Colors, which is a German channel. He participates in tutorials broadcast from North American universities. In this very simple act of the gaze and audition, and without the need for membership in online communities endowed with avatars and second lives, agency is the licence, through digital media:

[T]o try on other and multiple representational selves [which] is at the same time a call into being of that heretofore invisible domain of our existence: the life of the body. (Hansen 2006:147)

Agency and instrumentalisation

Extract 5 dealt with taking Concerta. The account was analysed from the perspective of internal and external evaluation and with respect to the temporal rupture that counterposes the first time taking these substances with the position of initiate from which the account is told. Interpretation concerned the interiorisation of the logic of need versus resource that underlies much of the writing on digital media. Any question of agency here must look at the functioning of the body and how it is co-constituted by manipulation of artefacts (eds. Kroes & Verbeek 2014). Goitse augments his ability to act within a system by potentialising his cognitive capacities and in turn increases the intensity and longevity of his interaction with digital media. This alters the prosthetic relation between device and user. There is a paradox here in that the desired body is also a mechanistic one. Agency becomes the mutually informing and constitutive relationship of the human and the technical.

Discussion and conclusion

Narratives are a productive means of accessing practices and processes. Particularly in the data analysed here, one imagines that other collection tools such as questionnaires or online surveys would not have revealed the identity work that this student is accomplishing through his interaction with digital media, nor how essentially this work engages with the body. Goitse's accounts have been examined in terms of gesture, gaze and audition, and instrumentalisation. This investigation has also been an opportunity to discover narrative inquiry. Analysis sections have looked at event, characterisation and interactional achievement (Extracts 1 and 2a and b), embedded story worlds (Extract 3), internal and external evaluation (Extract 5) and co-construction (Extract 6).

The agentic implications of Goitse's bodily and ontological relationship with digital media add depth and complexity to a more conventional analysis of his stories in terms of digital media as resource. As concerns gesture, whilst Goitse initially relied on manual processes in which the digital echoed analogic behaviours, he now relies on documents that he uploads to the cloud and that he produces using voice-to-text applications. Although Goitse places himself in the network of device, application and communication flow in an expeditive way, he is also highly aware of his ontological status and is explicit in defence of an Africanism that he formulates in linguistic terms. This allows a reading of the gestures he adopts with respect to digital media, and their increasing tethering, as acquiring meaning with respect to other cultural values such as orality and community.

Goitse's experimentation with digital media, and what he describes as 'let me just try it' is an agentic process in which gesture shapes interaction *with* digital media inasmuch as it is

shaped *by* the media. This process can be referred to as 'tâtonnement' and reflects other reciprocal systems such as the co-constituting one between the human and the technical. As an actor in a reticular distribution of media and device, Goitse has agency through the embedded spaces offered by platforms such as YouTube. These spaces redefine the situation of their embedding; they also offer the possibility of a disembodied projection and identification. Goitse repetitively emphasises his need for time and concentration because of his ADHD. This disorder leads him to instrumentalise his body in search of what he refers to as focus, and the patterns of immersive use of digital media that he employs to study are one aspect of how he copes with the demands of the institution.

Narrative research has been one lens through which to analyse Goitse's relationship to digital media, one that has tried to take into account the qualitative, local and individual meanings that we carry in us through our gestures, our gaze and our audition, our linguistic heritage and our bodies themselves. Embodiment, which is to say the gestures, dispositions and inscriptions that are a conduit for our relation of self to the human and technical other, reveals how digital media give rise to complex agentic processes.

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Author's contributions

I declare that I am the sole author of this research article.

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