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Constructing the young child media user in Australia: a discourse analysis of Facebook comments

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ABSTRACT

Children's use of screen-based digital media is presently a topic of intense public debate. In this paper we present the results of a discourse analysis of Facebook comments responding to the proposal that iPads be used by children in early years education. We found that respondents typically drew upon one of three core stances to talk about children and screen-based media use. Of these, the most dominant stance posited that children's "screen time" was problematic. This popular discourse is out of alignment with government discourses promoting the use of screen-based devices in education. By illuminating the discord between different constructions of childhood, the role of education, and screen-based media this paper contributes to an ecologically valid understanding of the role of digital media in contemporary childhoods.

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Introduction

Debate about the role of new forms of screen-based media in children's lives plays out in public, academic and political spheres. The effects of children's engagement with screen-based media, on a number of outcomes at individual and societal level is of particular concern (Lemish, 2015). Headlines about how screens are damaging children in a myriad of ways, for example causing addiction (Lambert, 2016), risky online social behaviour (Pillay & Vijandren, 2016), declining academic achievement (Burns, 2015) and obesity (Hagan, 2015) mirror public anxieties about "screen time." Anxiety about children's use of new media has long been prime media fodder (Drotner, 2013) but the debate appears particularly intense at present. In Australia, screen time recently topped the list of child health concerns as rated by members of the public, ahead of obesity, family violence and youth suicide (Rhodes, 2015) indicating that children's use of screen-based media is commonly understood to be potentially pathological. Yet, at the same time, these devices are becoming increasingly prevalent in mainstream teaching practices. The contradiction here is not unnoticed by parents, who are charged with the everyday management of their children's screen-based media use (Dux, 2015; Lemish, 2015).

This paper takes a step back and looks at popular debate about children and new screen-based media. It illustrates, through an analysis of popular discourse on social media, the

“normative negotiations” that take place in (re)defining “what counts as proper childhood and, on a wider canvas, what counts as the proper directions society should take” (Drotner, 2013, p. 20) during periods of social change brought about by new technology and corresponding new media environments. It shows the way that contradictory realities exist in this particular socio-cultural and historical context. A context where screen technology is now part of mainstream early primary education, and technology as means of economic growth is endorsed in political discourse, but the dominant popular discourse is one squarely focused on screens as harmful to children and society in a myriad of different ways. This paper provides a timely account of these contradictions and tensions as a means of informing a contextual understanding of the backdrop for everyday parenting decisions about children and screen-based media.

Background

Research trends reflect public concerns and indeed researchers from diverse fields seek to document children’s use of screen-based media and establish links between this use and varying outcomes (Messenger Davies, 2010). This research builds on longstanding and continuing bases that have asked questions about children’s relationships with other forms of media, particularly television (Himmelweit, Oppenheim, & Vince, 1958; Schramm, Lyle, & Parker, 1961). This body of work is now shifting and adapting to include the unique role of contemporary devices that are mobile, pervasive, internet enabled and that offer a wide range of media content used for both entertainment and education (Lemish, 2015).

Along with this academic interest in the relationships between varying forms of screen-based media and childhood, has come public interest and commentary about the role of screen media in reducing the quality of children’s lives (Palmer, 2015), and their cognitive functioning (Greenfield, 2015). The moral panic about children and newer forms of screen-based media has itself been covered by the news media (e.g., The Guardian, 2017).

However, there has been a dearth of research looking at contextual factors that shape, and mediate, the relationship between child and screen (Vandewater, 2013). One such contextual factor is the role of parent attitudes toward screen-based media. These attitudes impact children’s screen-based media use and associated outcomes (Chaudron, 2015; Cingel & Krcmar, 2013; Lauricella, Wartella, & Rideout, 2015). A number of factors, including traditional and social media, may inform parent attitudes and therefore parental behaviour in relation to screen-based media (Lemish, 2015).

Media representations of childhood contribute to culturally specific constructs of what a good childhood should be and relatedly, what a good education should do (Drotner, 2013). “Childhood” itself is a discursive construct (Selwyn, 2003), that is “interpreted and represented according to historical, social, cultural, political and economic contexts” (Olson & Rampaul, 2013, p. 23). The relationships between screen-based media and the contemporary discursive construction of childhood are poorly understood.

Realities and ideologies portrayed in media discourse have great power in shaping public opinion, in defining the objects of discussion and demarcating boundaries of debate (van Dijk, 2014). Media are also a significant means by which the knowledge and “truth” generated by “experts,” for example on child development, is delivered to parents (Messenger Davies, 2010). When media conforms to the kind of content seen with media panic, as it appears to be in this instance, it is crucial to consider the ways that this may impact parents (and

therefore children) in terms of influencing not only culturally specific constructions of what a good childhood and good education look like, but also the way that the technology itself is represented. The mapping and defining of these varying presentations provides much needed ecological context to attempts at understanding the role of screen-based media in children's development. As Vandewater (2013) laments, "it seems rather obvious to state that children's use of media and exposure to media content does not happen in a vacuum" (p. 51) but research in this area often does not take into account the broader social context and the ways that this may influence family level factors.

Social media comments

Traditionally, these presentations by media have occurred in a largely unidirectional manner, wherein producers and editors select information for consumption by consumers. Social media alters this dynamic, permitting consumer to consumer presentations, radically altering the contexts in which realities and ideologies are shaped by public discourse. Social media allow consumers to contribute to the process of defining the objects of our knowledge by a variety of means including "commenting." This produces content that is publicly available and produced by "the public" but nested within media corporations and delivered via profit-driven, privately owned platforms.

Social media comments have received attention from scholars interested in identity (Sergeant & Tagg, 2014), self-esteem and well-being (Reagle, 2015), the construction of social norms (Carter, Gibbs, & Arnold, 2015) and their function as a site of harassment, particularly of female journalists (Gardiner et al., 2016). However, there has been little attention given to their potential as sites of meaning-making and ideological manoeuvring in relation to children and technology. The current paper looks at a particular form of comment – that is, comments made in response to a post by a formal news agency. In this way, they represent a particularly interesting site. A scene set by a powerful media agency but then handed over to "the public" for debate.

This study gives a situated account of the discursive constructions of childhood, the role of education, and screen-based media, in a sample of the everyday language of Australians on social media in late 2015. It also gives structure to the breadth of ideological stances relating to children and screen-based media present in this genre of discourse in this place and time.

Discourse analysis

The form of discourse analysis used here is underpinned by a social constructionist approach, which sees language as fundamental in the shaping of commonly understood, culturally specific constructs (Yates, Taylor, & Wetherell, 2001). Discourses are sets of language that define and produce the objects of our knowledge, including social groups like children, and give us scope for interpreting and regulating the behaviours of those groups (van Dijk, 2014). Commonly understood, culturally specific discursive constructs change and adapt over time, and discourse analysis asks how language works ideologically in response to social change (Fairclough, 2001). In this case, the contested social change is in the form of challenges to traditional romanticised notions of childhood in the face of increasing technologisation of society.

The data used to provide this mapping and structuring of the discursive constructions of childhood and the role of education in relation to screen-based media, were 711 comments made in response to a Facebook post by the Australian Broadcasting Corporation (the ABC) in November 2015. The ABC is Australia's state broadcaster and produces a range of content including news. The post, attracting this relatively high number of comments, referred to a news story about one primary school in the state of New South Wales that was about to make iPads compulsory for its kindergarten students (children aged 4 and 5). The post asked: "Do you think tablets and laptops should be compulsory in primary school?" (Australian Broadcasting Corporation [ABC], 2015). Comments spanned a wide range of topics related to children, the role of education, screen-based media and technology. It was clear that in answering a question about iPads in classrooms, many people found it necessary to talk about screen-based media in spheres much broader than education and to relate screen-based media to technology in a broader sense.

Procedure

All comments were copied into an online rich-text coding programme called "Saturate.app" (Sillito, 2013). Facebook allows users to alter the order in which comments are presented, and the comments analysed here were presented in "Top Comments" order (comments with the most "likes," and replies to these comments, are presented first). *Replies* to comments were coded in their own right, but with attention given to their interaction with other comments where appropriate (e.g., where meanings of words, or statements of fact were contested between users).

Codes were assigned initially at sentence or lexical item level, based on subject matter, word function or discursive feature. For example, the comment: "when are they going to learn to write? I know a few children in 6th and high school that still print" was coded as: handwriting, mutually exclusive, knowledge validation and role of education. Codes were assigned by the first author and reliability was established through discussion and critique of the codes and coding procedure by all authors.

After this initial coding, authors concurred that the most relevant, timely and interesting dimension of this corpus was the varying and apparently often contradictory ways that children, education and technology were constructed by different commenters. Therefore further analysis focused on those 418 comments which offered some statement relevant to these constructions.

Throughout this pool of comments it became clear that three main stances were being drawn upon when talking about children and screen-based media both in education specifically, as the post had referred to, and in general broader spheres. These stances are conceptualised here as "interpretive repertoires," described by Potter and Wetherell (1987) as: "recurrently used systems of terms used for characterizing and evaluating actions, events and other phenomena" (p. 149).

Results

The repertoires enacted in this data have been labelled: The Status Quo, The Balance, and The Future Focused repertoires. In the following presentation of these repertoires, comments (or extracts from longer comments) are provided to serve as *typical* examples of the way

that childhood, education or technology were constructed in each repertoire. Individual word choice has been detailed in some extracts as a way of unpacking in more detail how varying constructions are formed.

The status quo repertoire

This set of discourse dominated the body of comments, featuring in 269 of them. This shows a persistent dominance of the pessimistic pole of the debate about children and screen media in popular discourse and a desire to maintain the status quo (Drotner, 1999). In this repertoire, clear boundaries were formed around constructs of childhood, education and technology. Screen media was constructed as largely negative and therefore the introduction of screen-based devices to young children was seen as potentially harmful. Childhood was constructed in this repertoire as a phase of human life where tactile, sensory, embodied experiences should be maximised. The following extract is typical of the way that “good childhood” experiences were constructed in the Status Quo repertoire:

Really bad idea. Young children should have hands in dirt, climbing trees, learning to take risks. Play based education should be the norm for this developmental age group.

This comment was posted directly in response to the ABC’s post (it was not a reply to another comment). It prescribes explicitly what children “should” be doing and what form education “should” take for this young age group. Implicitly, it constructs technology as incompatible with “play” and sets up physical contact with “dirt” and “trees” as the *right* kind of experiences young children require. This format where prescriptions about what good childhood *should* involve, with either an implicit or explicit statement made about iPads not offering this, or actively detracting from it, were present in 15 of the Status Quo repertoire comments.

Children here were constructed in line with traditional models of childhood, as dependent on adults for guidance through set universal stages of physical and cognitive development (Marsh, 2010, p. 10). Many comments mentioned negative effects of screen time at a cognitive or neurological level. For example, the following comment was one of 16 replies to a comment asserting that iPads in kindergarten classrooms was a “bad idea” because “Even Steve Jobs refused to let his own kids have an iPad & iPhone.” After this came the comment “And Steve Jobs is the arbiter of all things? His kids don’t need to compete to make a living,” which drew this response:

It’s not about whether Steve Jobs is the arbiter of all things. The point being made is that those people who invented and developed tablets, smart phones, and the like specifically choose not to give them to their own children, because children don’t need them – and all the research shows that it’s detrimental for the development of children’s brains. (If you specifically want details of the research, I’ll hunt it up for you. I just don’t have it in front of me right now.)

Seven comments specifically mentioning harm to “brains” caused by iPads, such as this one, were qualified with reference to “research” in order to provide an expert, epistemologically legitimate (Gieryn, 1999) validation to the reality presented in the comment. In the comment above, the writer’s self-proclaimed knowledge of “all the research” is used to provide weight to their earlier affirmation of the claim that “people who invented and developed tablets” choose to not “give them to their own children.” “Research” saying that technology has not been “proven” to aid attainment of educational outcomes was mentioned in a further 11 comments within this repertoire.

Good primary level education, in this repertoire, was constructed as the teaching of “basic skills.” The most commonly mentioned basic skills in these comments were reading and writing, particularly handwriting. That is, traditional literacies which are understood to be fundamental to later skill and knowledge acquisition. Sixteen comments in this repertoire mentioned the need for learning to be ordered sequentially, with a well understood hierarchy of what skills must be mastered before moving on to higher order skills. The ability to write with pen and paper, and to read, was given great weight and was portrayed as being at risk if iPads become a regular feature of the classroom. The following comments, both made in direct response to the ABC’s post, provide representative accounts of what “the basics” are:

No, they need to learn the basics first, like write(sic), reading and mathematics. So many kids can still not do basic maths or spell properly in high school. We are failing children by not getting the basics right.

Surely little children need to learn basic things like drawing, writing, running around, paying attention, being kind to their fellows rather than using a tablet?

As well as defining “the basics” (writing, drawing, reading, mathematics and so on), and positioning them as a necessary, fundamental base (children “need to” learn these *first*), these comments also exemplify how the acquisition of these skills was constructed in this repertoire as mutually exclusive with tablet use. This is clearest in the second comment where the words “rather than” provide an unambiguous explication of tablets as unable to provide opportunities to learn “basic things.”

Technology and screen-based media devices were generally constructed in this repertoire as monolithic negative entities with agency and great power to change children and society for the worse. The following comment (made in direct response to the ABC’s post and not in reply to another comment), is a particularly illustrative example of this:

Computers in general have done more harm to student learning than good. They have bastardised the research process, shortchanged appropriate proof reading and revision and allowed students to be distracted by other online activities when they need to be doing an assignment. Apart from some very selective activities, I’d get them the hell out of school, especially primary schools. They are time wasters, child pacifiers.

The use of the word “they” and the assertion that “computers in general” have caused harm, illustrates one way that technology used by children was constructed as a single unified entity. An entity that, in and of itself, has “bastardised” and “shortchanged” important elements of a good education. The use of the word “bastardised” is a powerful and telling choice. This is a word that indicates corruption, contamination and ultimately a devaluing of education by technology. In this way the author sets up two countering versions of education, past and present, the former being one that is valued, worthy and correct, and the latter being a lesser, depreciated form. “Computers in general,” in this repertoire, bear responsibility for this reduction in the quality of education.

Apart from this construction of screen-based media, or technology in general, as being harmful to the quality of education, comments in this repertoire also mentioned other forms of harm. These included the causative role of screen-based media in individual level physical harm as well as in marring the quality of social interactions and indeed a diffuse effect on “life” in general. This comment (made in response to the ABC’s post, not a reply to another comment), is notable within the body of comments in the Status Quo repertoire for its extreme and direct implication of technology as a destructive force:

Technology is slowly burning our eyes, destroying social interaction and our normal way of life.

Whilst offering a particularly extreme construction of reality, this comment is not isolated in terms of constructing “technology” (or “screens,” or tablets or iPads) as directly responsible for varying forms of harm to “our normal way of life” – to the status quo. These forecasts of varying forms of harm, coupled with the construction of children as particularly at risk of this harm, make the assertion that children should not be using screen-based media devices in education, and ideally not at all, appear common sense.

Future Focused repertoire

The Future Focused repertoire was the second most dominant repertoire in this data, enacted through a total of 91 comments. However, this repertoire was largely shaped by, and contributed to, by one user who wrote 31 comments in total, some in response to the initial post, and some as part of a string of replies to other comments. The strongest point of difference marking this repertoire, was the way that children, in this version of reality, were constructed as the collective future versions of themselves. This is in contrast to the almost static, immature, “close to nature” beings that were talked about in the Status Quo repertoire for example. The following two extracts are taken from longer comments made by one individual in response to two different comments by other users. These extracts are shown as examples of the way that children were constructed in the Future Focused repertoire:

These kids will be creating the next app, the next medicine the next x science breakthrough ...

Our kids are the best to learn and create now, for all our futures. (*sic*)

These two comments are typical of this repertoire in that they made clear direct connections between the kindergarten children of today and the adults of the future who will harness the good of evolving technology to benefit “all our futures (*sic*).” With this futuristic viewpoint, children therefore bear a weight of responsibility that is not evident in the other two repertoires.

Additionally, children in this version of reality were constructed as agentic and in possession of more power than in the status quo repertoire. Rather than passive receivers of experiences provided by adults, they are active participants in their lives who communicate with adults about what “works” and what does not. This construction of childhood is in keeping with new sociological models of childhood, where children are seen as active participants in their own, and broader, “social worlds” (Marsh, 2010, p. 13). The following comment was made in response to another user who had questioned the “unknown Wi-Fi health problems” associated with internet enabled devices:

I do agree that we don't know all health issues, but we don't know that for many things, but that doesn't stop us. Our kids will tell us the problem and solutions if we let them go crazy with science and technology

As this comment illustrates, in the Future Focused repertoire adults have responsibility too. It is up to us to overcome any fear of change in order to allow children to learn how to use technology in effective and innovative ways to solve meaningful problems.

The role of education shifted quite dramatically in this repertoire with focus largely on cognition for solving problems rather than output such as handwriting, which was portrayed as becoming obsolete. There was much less mention of “basic skills” and their importance or relevance was therefore apparently diminished by omission. Education, according to these comments, must prepare children with *ways of thinking* that will be useful in economic

structures that value information and ideas more than physical labour which will be increasingly automated.

Screen-based media use by children was, in this repertoire, not surprisingly, constructed as largely positive. Somewhat ironically (in light of the antithesis in the Status Quo repertoire of technology in relationship to anything “natural”), the use of “new” technology in education was seen here as logical and as part of a natural progression. The below comment was made in reply to a user lamenting the loss of handwriting and outside play:

The times they are a changing ... No one chisels in stone or writes on papyrus anymore, either. And how about that newfangled printing press.

Several comments, like this one, made reference to other technological developments and how, for example, writing on paper, is accepted as appropriate and not harmful to children, but was once “new” technology too. Therefore screen-based media slots into concepts of childhood without the resistance or friction that is evident in the Status Quo repertoire.

Balance repertoire

The interpretive repertoire we have labelled the Balance repertoire, was the least prevalent set of discourse in the data, present in 58 comments. Constructions of childhood, education and technology were fundamentally very similar to those formed in the Status Quo repertoire. The key point of difference was that there was an explicit focus on a construction of a reality where screen-based media use is *not mutually exclusive* with any of the core attributes of good childhood or good education. The construct of childhood here was robust enough to include some screen-based media use without any major degradation. The example comment below came in response to another comment stating that iPads in classrooms should not be allowed because this is akin to not allowing “children to be children.” The meaning of “being a child” was therefore actively contested in this brief, but illuminating exchange:

Children being children doesn't mean being a slave to pen and paper either. The problem is people are acting like one will get rid of the other, having access to technology doesn't automatically negate the desire to go outside, to play or to do anything else.

This captures the premise that, in contrast to the reality presented in the Status Quo repertoire where the introduction of technology necessarily entails the formation of a new, separate and inferior childhood experience, the introduction to technology in classrooms does not wipe out all other pre-existing elements of “good” childhood. It also hints at children having slightly more agency, with the word “desire” being used to explain the means by which valued aspects of childhood such as going outside or playing, are not “automatically” at the mercy of technology.

The construction of the role of education in this repertoire focused on “basic skills” (as in the Status Quo repertoire) but some allowance was made for those skills being developed with the aid of technology. Within this repertoire there was the emergence of discourse about digital skills and digital literacy which were absent in the Status Quo repertoire. The following excerpt, from a longer statement that came near the end of a thread of 20 replies to one comment saying tablets might be acceptable in high school but not in kindergarten years, serves as an example of this. The discussion up until this point had covered varying points of view on whether literacy skills would suffer if tablets were used in classrooms:

No one is saying put down the books and pens but it is quite obvious that if students aren't competent with technology then they will struggle to get jobs in the future which is why it is essential that basic IT skills and programming is taught as early as possible!

Predictions about future careers are linked here with the need for digital skills, particularly "programming," which are constructed as fundamental elements to the role of education today. The comment also illustrates a reflexive stance on the debate about technology in education by putting forward an extreme version of events, where books and pens are abandoned in favour of technology based learning, within a statement that is essentially distancing the commenter from this extreme position whilst advocating for the inclusion of technology in early education.

Other comments in the balance repertoire constructed screen-based media and technology as just one element of effective education and/or as enriching to teaching more generally, without specific mention of digital skills. For example, this statement comes from a longer comment, made directly in response to the ABC's post, and talks of "a range of teaching tools":

I think it is great as long as it is part of a range of teaching tools and if it is used to complement quality teaching.

This particular comment also mentions "quality teaching." In contrast to the Status Quo repertoire, where teachers were portrayed as at risk of being made irrelevant by technology, here the role of teacher exists alongside new devices and methods. In much the same way that "childhood" can adapt to include the use of screen-based media devices, so too can teaching practices. Screen-based media devices were constructed as potentially augmentative to teacher led learning experiences and childhood in general, as in this next example:

We've had them at my children's kindergarten for some time now. They have been an excellent addition to the program, they are rotated in and out of the program at different times, the children have limited time and take turns without a problem. They are no more or less popular than the traditional toys/activities/craft/drawing etc. Technology is an essential and inevitable aspect of education.

Screen-based media in this repertoire was presented as a necessary part of life and therefore as something that should be part of our children's lives – albeit in controlled doses. As the above comment alludes to, children's use of technology was commonly understood in this repertoire to be something that needs parental or teacher regulation and monitoring. Several comments explicitly mentioned that screen-based media devices should only be used for set periods of time, with several specifically referring to the 2 h maximum recommended time limit proposed (and now under revision) by the American Academy of Pediatrics (2013).

Discursive motifs

We have outlined three interpretive repertoires that give structure to the range of stances on children's use of screen-based media present in this sample of popular discourse. Running throughout the entire body of discourse, and used in differing ways within each repertoire, were several discursive motifs. We will now describe two of the most dominant motifs, those mentioning varying forms of *loss* and those utilizing a *virtual versus real* dichotomy.

Loss

Discourse about loss, of varying forms, permeated the body of comments. Loss featured in several ways in the Status Quo stance, often providing an emotional valence to commonly understood consequences of young children using screen-based media. Because screen-based media, in this stance, was constructed as something negative and harmful, particularly to children's physical and cognitive development, the sense of loss appears congruous and appropriate.

The comments as a whole, illustrated that there is a pool of skills and abilities that are commonly understood to be at risk in some way from children's use of screen-based media. This pool of consequences was frequently drawn upon to legitimate a cautious stance on children and screen-based media. These fall into losses of particular skills, such as handwriting and social skills, and physical harm, such as changes to brain structures or damage to eyesight or posture. The attributes at risk of loss were talked about in this data in notably different ways. Neurological and cognitive harm or loss was often supported by mention of "research." Other forms of loss, such as loss of social skills, or damage to eyesight, were left without such validation and were positioned as meaningful and representative of the "truth" in a standalone ideological manner, as in the following example, which was part of a thread of 16 replies in response to a comment saying that iPads should be compulsory in kindergarten classrooms:

I have been mentoring graduate recruits in my workplace. I think many of them have ADHD. I tell them to look up legislation on a particular topic and when I swivel my chair to look at their screen, they are on social media sites. These are smart people but the least productive because they have lost the ability to concentrate thanks to over exposure to technology.

A causative relationship is presented here between "over exposure to technology" and the loss of the ability of otherwise "smart people" to concentrate. This negative consequence is given tangible meaning by linking lack of concentration with lack of productivity. These relationships were stated as a matter of factual knowledge, and the meaning of the comment is certainly clear without any detailing of the mechanism of the relationship between technology and concentration.

Handwriting, the need for it, and the ways its function might change, or assertions about its impending irrelevance, were present in 57 of the total number of comments. In the Future Focused repertoire the loss of handwriting as we know it was not a negative, but a natural kind of process of obsolescence where one skill will be replaced with another.

In the Status Quo stance however, handwriting was given such precedence that the perceived dramatic reduction in its value was notable and often accompanied with emotive negative language, as in this example, written in response to the ABC's post directly:

The beginning of the end to writing and text books as we know it. Eventually we can forget about handwriting altogether! Sadly we are becoming too reliant on such technology.

Despite the lack of any specific mention of children in this comment, talk about how "we" are edging toward "the end," where handwriting will be forgotten, is in keeping with this "loss" motif. This is portrayed as a result of our reliance on technology, which lessens, and eventually will completely erase the need for handwriting. The framing of this scenario within the negative emotion of sadness affirms that this loss is indeed a bad thing.

Relatedly, loss of traditional literacy skills in general was a commonly understood inevitable and upsetting consequence of children using screen-based media for large amounts of time either at home or in educational settings.

Other, more obtuse forms of loss were also mentioned, such as a loss of *childhood itself*, where young children using screen-based media was presented as not allowing “kids to be kids.” Additionally, screen-based media by children was framed as a *loss of time* spent on more worthy pursuits (that is, activities associated with the version of “good childhood” constructed in the status quo repertoire, such as spending time physically interacting with the environment, using a pencil and paper, or engaging in face to face interaction with other people). This notion of displacement, has been a standard feature of debates about children and screen-based media since at least the 1950s (Schramm et al., 1961). As the following excerpt from the current data indicates, loss is not only forecast for individual children as a result of the wrong amounts of screen-based media use, but for society as a whole:

There is limited time in the day. How that is spent takes time away from other things. The guidelines are very clear that no more than 2hrs of screen exposure (tv, computer, tablet etc) is suitable for a child. This must be a factor when deciding these things. And with such a crowded curriculum, increasing use of technology will push out other things, and children and society will suffer.

Comments about this form of loss often invoked the word “generation” to link the experiences of children now to adults of the future. For example, “It will result in an entire generation with poor vision and poor posture.” Use of this generation wide discourse further solidifies the scale of the problem and makes screen-based media use by children an issue for *everyone*.

Virtual vs real

The distinction between “real” and “virtual” interactions and activities featured strongly in the Status Quo interpretive repertoire. Despite the contestation of these categories in academic discourse, in this sample of popular discourse the boundaries around “virtual” and “real” experiences were structured as concrete and unproblematic.

Childhood, as we have seen, was constructed in this set of discourse as a distinct phase of life where closeness to and connection with nature and other people are beneficial to the child now and in the future. The virtual-real dichotomy was used to augment the preference for natural, sensory, embodied and human-human interactions of early childhood experiences that do not involve screen-based media. This version of reality rests on a series of presuppositions, outlined by (Soraker, 2012) about the inherent value of an experience, for example the notion that social interaction with others is a crucial part of optimal childhood development, and that virtual worlds do not offer opportunities for social interaction, or at least social interaction of comparable *value* to real world interactions. The following comment, made in response to the ABC’s post directly, clearly made use of these presuppositions, with an either/or presentation of the relationship between virtual and real worlds:

Children in kindergarten need to spend time building social skills not lost in the ether.

Either, children can be “building social skills” or “lost in the ether.” The preference for the real, where social skills can be built, is made imperative by asserting that children “need to” be doing this and this is reinforced by describing the alternative as “lost in the ether,” which implies that when children interact with virtual spaces they are somehow in another plane

of existence, which is separate and not fully understood therefore “lost.” It also relies on another of Soraker’s (2012) presuppositions, that is, the idea that virtual activity, as well as being inferior to the real, actively detracts from the real therefore representing a kind of doubly undesirable state of affairs.

Discussion

In negotiating social change brought about by technology, children occupy central roles. Selwyn (2003) notes that:

Children and “childhood” have been long established as discursive sites through which adults can conceptualize and (re)construct past, present and future aspects of society. In this way the notion of the “child” acts both as a nostalgic and futuristic device through which societal changes are portrayed and discussed in popular and political arenas. (p. 351)

The temporality that Selwyn notes was strongly present in the current data. Constructions across all repertoires made significant use of idealised notions of present, past or future realities in answering the initial question about whether iPads should be used in kindergarten level education. Romanticised notions of the child innocent being threatened by screen-based media, which is commonly understood to be harmful at an individual level and also at a societal level, jar against futuristic predictions of benevolent technological change and the role that the children of today, and their caregivers, have in ensuring those predictions come to fruition.

The comments analysed here also show an enduring persistence of a binary panacea versus affliction discourses in constructions of children’s use of technology, particularly screen-based media, what Drotner (2005) calls “discursive dichotomies” (p. 40). We see in this sample of the everyday language of social media comment, two distinct and largely opposing constructions of childhood and of technology. Children are at risk of having their childhoods completely erased by technology and simultaneously, are hailed as future masters of the technology that will redeem humankind. This contrasting set of realities gives real-world backing to Jenkins’ (1998) positioning of children as “caught somewhere over the rainbow – between nostalgia and utopian optimism, between the past and the future” (p. 5).

However, the Balance repertoire seen in the current data, which constructed realities not necessarily at either pole of the dystopia/utopia scale indicates some shift away from the binary. Perhaps this is a function of the affordances of social media as a site of discourse. Moral panics of the past have thrived through profit making media outlets and sensationalised newsworthy information. The intersection of news with input from members of the audience, in the current participatory media context, allows not-so-sensational accounts and information, to become a part of the debate.

The current analysis also confirms that the debate about the role of screen-based media in children’s lives is emotional and ideological. This again echoes previous media panics in response to new technology (Drotner, 1999). Media exposure is constructed as something that can and should be controlled by parents, with “good” parenting involving careful management of screen-based media exposure in terms of content and quantity (Willett, 2015). It is also commonly understood that early childhood experiences have significant impact on physiological, neurological and psychological outcomes (Messenger Davies, 2010). This means that parenting is a high stakes endeavour with significant consequences that concern not just individuals, but society as a whole. The strong emotive language used in the majority

of the comments seen here, and the dominance of perceived negative consequences in relation to any positive, gives context to the observation that parents make decisions about screen-based media use by their children with harm reduction a key consideration (Chaudron, 2015).

As Messenger Davies (2010) points out, the debate about children and media is also fundamentally political. The political appears more acutely felt now with technology and screen-based media being used in mainstream *early* education. We now have discourses not only about kids' media use outside of school hours IT classes in the later school years, but also about very young children using these devices as part of their formal education. The perceived inferiority of technological devices as a means of teaching traditionally valued "basic skills" and to some degree concern about the potential reordering of what skills form the foundations for later education, featured strongly in this sample of popular discourse.

Whilst there has been longstanding academic interest in the use of television in early years education (e.g., Schramm et al., 1961), the progression of "new" devices into formal education adds an additional layer of complexity. The interactivity of these devices appears key in the divergence of debates and tensions regarding television and other screen-based media, such as iPads in early education (Radich, 2013). This is different to concern about older children being taught to use computers in later education, in part because younger children are seen as more vulnerable to the ill effects of screen-based media (Livingstone, 2007).

This appears to be not just concern about lack of control over device use, but also an uneasiness about a forecast reduction in *value* ascribed to the kinds of literacy that have for the last several hundred years been seen as fundamental to all other skills. Indeed, this kind of concern is mirrored in discourse about teaching methods and forms part of the "literacy wars" playing out in Australia (Snyder, 2008). Reports of falling literacy levels and what to do about them have become somewhat of a media panic themselves, with discussions of what literacy *means* in the twenty-first century core to the debate (Snyder, 2008).

This discourse about technology and screen-based media infiltrating formal education falls within a broader political context where technology is touted as both something that will foster economic growth (via "innovation") and also something that could potentially provide the means for an alternative economic structure altogether. For example, predictions of a shift toward new economic models such as "postcapitalism" where "cognitive capital" is greatly valued and core to the functioning of a networked society (Mason, 2015). The version of reality constructed throughout the Future Focused repertoire in the data analysed here aligns closely with these broader popular discourses.

The kind of language used in the Future Focused comments analysed here is also very similar to that used by the Australian Government in the promotion of its "National Innovation and Science Agenda" (Commonwealth of Australia, 2016). As Selwyn documented in 2003, children feature strongly in government attempts at promoting technology. Indeed, a video advertisement for the Innovation and Science Agenda features frequent shots of children engaged in varying forms of screen-based activities, and finishes with a zoomed in shot of a new-born infant with the voiceover saying "welcome to the ideas boom." The website for this agenda also has a section called "Embracing the Digital Age," which, under an image of some children peering joyously at an iPad, describes how education focused on digital technology contributes to economic growth:

Ensuring the next generation of students have the skills needed for the workforce of the future is critical to ensuring Australia's future prosperity and competitiveness on the international stage ... (coding) is a powerful and engaging tool that teaches kids to think and problem solve while acquiring an understanding of how technologies can work for them. (Commonwealth of Australia, 2016)

The dominance of the Status Quo repertoire in the everyday language of Australians on social media in contrast with the dominance of the Future Focused repertoire in the language of the Australian government, represents a significant discord that clearly indicates flexibility in discursive constructions and how these serve to promote or restrain varying ideologies in processes of social change.

These contradictory versions of reality have an impact on parents who are told on the one hand by one group of experts, and one set of media discourses, that "screen-time" is something inherently dangerous for children and that it must be monitored and controlled to avoid harm from overuse. And on the other, by another group of experts (teachers, principals, education policy-makers), and politicians, that these devices synonymous with "screen-time" are also crucial components of quality twenty-first century education (AVG, 2014; Green & Holloway, 2014). Media and child development scholars must acknowledge and consider these mixed messages when seeking to decode the relationship between child and screen.

Future directions

These comments and the corresponding realities they contribute to are representative of adult voices. We also must hear children speak about their relationship with screen-based media, their hopes and concerns, their construction of their place in an increasingly technologised world.

Other sites of public and private discourse should also be given attention as a means of gaining further insight into the contextual features of the broader space in which children use screen-based media. Relatedly, the discourse of parents as a group rather than "the public" could be mapped from this perspective.

Conclusion

We have outlined here, through an analysis of the language used on social media, an account of the way children are predominantly constructed as "innocents" in need of protection from screen-based media. Media and technology in general, are correspondingly constructed as responsible for potentially pathological damage to children, and to society as a whole.

We have demonstrated the emergence of new popular discourses of fear and loss in response to changing media and technology landscapes where screens are now common tools in education, including, as discussed here, early primary education. This infiltration of the objects of fear ("screens") into legitimate, highly regulated and policy driven spaces such as kindergarten classrooms, prompts intensified concern related to increased total screen time, as well as new discourses about the predicted decline in focus on traditionally valued skills in education and the reordering of value ascribed to particular skills, both at an individual child and a societal level. This has shown that the debate about children and screen

media is not entirely static. Rather its form morphs according to the socio-cultural and historical context that surrounds and informs it (Drotner, 2013).

The contrast between this popular discourse of concern and the coexisting political discourse of hope and positive change, which informs education policy and practice, highlight the existence of two contradictory realities, which parents must somehow reconcile in their everyday parenting decisions, and which researchers interested in children and media must be cognisant of.

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No potential conflict of interest was reported by the authors.

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