


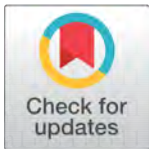
Digital Rights, Digital Citizenship and Digital Literacy: What's the Difference?

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ABSTRACT

Using digital media is complicated. Invasions of privacy, increasing dataveillance, digital-by-default commercial and civic transactions and the erosion of the democratic sphere are just some of the complex issues in modern societies. Existential questions associated with digital life challenge the individual to come to terms with who they are, as well as their social interactions and realities. In this article, we identify three contemporary normative responses to these complex issues –digital citizenship, digital rights and digital literacy. These three terms capture epistemological and ontological frames that theorise and enact (both in policy and everyday social interactions) how individuals learn to live in digitally mediated societies. The article explores the effectiveness of each in addressing the philosophical, ethical and practical issues raised by datafication, and the limitations of human agency as an overarching goal within these responses. We examine how each response addresses challenges in policy, everyday social life and political rhetoric, tracing the fluctuating uses of these terms and their address to different stakeholders. The article concludes with a series of conceptual and practical ‘action points’ that might optimise these responses to the benefit of the individual and society.



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1 INTRODUCTION

This article is about how a triumvirate of terms and concepts ‘digital citizenship’, ‘digital rights’ and ‘digital literacy’ are mobilized as arenas for normative action and intervention in response to the increasing digitalization of everyday life. We approach this challenge as educators and sociologists of childhood and youth, so we are interested in how each of the three terms act:

- as approaches to learning about digital media use and structure;
- as frames for the organization of resistance to the digital;
- as fields of knowledge about citizenship, rights and literacy in the digital age;

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- and as desirable social norms to make civil society somehow 'better'.

Each term contains within it reference to principles of fairness, social justice, and enforcement, notably in regard to regulation and education.

It is unusual to bring all three elements (digital citizenship, rights, and literacy) together in one discussion and as we will show later, each element contains its own complex history and debate. We are however, concerned with the ways that when the term 'digital' is used adjectively in respect of each element, it performs a normative function that has significant consequences for the ways that individuals and educational institutions can respond to the potentially harmful alterations in relationships between individuals, the state and commercial actors.

The proximate cause for our argument is of course the extraordinary range and reach of digital technologies into every aspect of social, economic, political and personal life. This has been covered elsewhere and, in many ways, forms the context for the articles in this special issue and indeed for so much debate in public and personal life.

Although we acknowledge that the boundaries between the three concepts are not strictly defined, this article addresses each term as a distinct 'field' exploring how such normative constructs form the basis for education and regulatory interventions and/or enforcement. We begin the article by considering the 'digital' as an influence within each field (i.e. citizenship, rights and literacy), exploring both its denotative and connotative effects. In the examination of each key concept we tease out how each has been used as discursive 'fortifications' against the digital. In the discussion, we bring the threads of the examination together to consider the reconfiguration of agency in the digital context. We conclude the article with a call to action for more coherent, interconnected and explicit identification of the ways that such rights, citizenship and literacy can buttress and secure individuals in a digital world.

1.1 The Digital as an Adjective

Much of the time using the term 'digital' as a qualifying or descriptive adjective is redundant. It is also invariably an inaccurate qualification. When applied to the concepts, traditions and conventions of 'citizenship', 'rights' and 'literacy' it is often exasperatingly imprecise. It is not the aim of this article to argue for a narrow pedantic closed definition but to try to tease out what comes into play when the term is used. Obviously, it is difficult to find any area of contemporary social life that is not digital, so why is it still important and powerful to use the adjective especially in respect of our three responses?

Sometimes the adjective refers to action in an exclusively digital field. For example, digital rights can refer to rights that simply pertain to activities that are solely digital such as with reference to signing the terms and conditions when using new software. By contrast the term is often used to explain the ways that the digital modifies, expands or extends pre-existing fields. Literacy is a good case for this as literacies precede the digital even if much literate activity takes place through the digital; reading and writing in a pre-digital sense is necessary to be digitally literate; and exclusive digital literacy activities (such as coding, creating or editing musical video online, participating in blogs, forums or chat rooms etc)

are reliant on some form of non-digital literacy. Digital citizenship can refer to both being a citizen of the digital, as if government portals, social network platforms and online shopping were in themselves their own kind of states or empires in which its citizens had several roles, functions and so forth. At the same time, it can also refer to the ways that classic traditional models of citizenship (of a nation state) now can involve citizen actions through new and changing voting systems and civic forums.

The contention of this article is that each time the 'digital' is used as a modifier or as a qualifying term in any of the senses suggested above, it exerts a normative effect. First, of all, the 'digital' signals progress, develop and change. Citizenship, literacy and rights are not fixed properties however they are enshrined in law, social norms, and social practices. When the modifier 'digital' is added, such practices appear to be in flux and cannot now be understood without reference to the digital.¹ Secondly, there is an implicit notion of changes in scale and size at a fundamental level so that the practices themselves are transformed. This is most evident in respect of big data (Kitchin, 2014). The idea of citizenship being digital, for example, carries within it the principles of scale, immediacy and information control that are all immanent in the idea of big data and which thus exert a change in understanding. Third, the idea of previously human dimensions becoming digital invokes the notion of the machinic and of becoming automated and impersonal (Andrejevic, 2020). Fourth, it conveys changes in social norms, assumptions and expectations. When rights, citizenship and literacy become digital it suggests that principles of governance, control, authority and accountability might be notably different because of these new and changing digital dimensions. This suggests a different kind of norm (in the sense of an average or median), meaning *digital* citizenship conveys a different set of practices from simply casting a vote at a polling booth or participating in civil society to participating in online discussion.

It also suggests a different kind of prescriptive ideal, as if somewhat perversely, the nouns –rights, literacy and citizenship– become a way of qualifying the adjective, digital. While it might be more linguistically accurate to talk about citizenship in the digital era, rights in the digital age or literacy with/in digital media the common-sense phrasing shows that key values and traditional ethical practices have a place in the ever-changing free-for-all that the digital has wrought on our society. There are ways in which the responsibilities, rights and obligations of citizenship can still have meaning in the digital age. Individuals and groups can still be protected by law through digital rights and the possibilities that literacy creates for communication can be sustained and expanded when translated into binary code.

2 THREE CONCEPTS FOR NORMATIVE ACTION AND INTERVENTION

The three terms capture epistemological and ontological frames to theorise and enact (both in policy and everyday social interactions) how individuals learn to live in digitally medi-

¹This is one of the key principles outlined in juridical thinking about normative orders of the internet: <https://www.normativeorders.net/en/events/documentation/69-veranstaltungen/5515-normative-orders-of-the-digital>

ated social worlds. While these approaches call on different knowledge and skills sets, what unites them is the attention to how the individual *acts*. However, what is acted upon and how individuals are enabled to act are different. In many respects, the emphasis on differences in approach have hampered efforts by the individual to take control over the digital as they have been developed *in parallel*, rather than dialogically. Each term tends to have addressed different constituencies of interest and thus diverse groups of social actors. In this section, we differentiate the boundaries between the three responses.

2.1 Digital Citizenship

As with all three responses explored in this article, digital citizenship emerges from an older tradition with its own history. Citizenship is traditionally conceptualized as the relationship between people and the nation state. It is based around notions of the 'dutiful citizen', who is informed about issues via mass media and obligated to participate in electoral processes (Bennett, 2007). Individual interests are expressed through membership of political parties and interest groups. This traditional view of citizenship has been critiqued by feminists and diversity advocates for its narrow approach to identity, expression and participation (Vromen, 2017). More recently, new norms for citizenship have emerged based around what Vromen (2017) calls 'personalized life politics' (p. 27) in which democratic participation is as much about choice, consumption and social action as it is about electoral processes. Citizens are mobilized by specific social movements and issues, often of a global nature (eg. climate change).

With the rise of the internet, opportunities to participate in civic, social and political life have increased. *Digital citizenship* can thus be defined as simply 'the right to participate in society online' (Mossberger, Tolbert, & Mcneal, 2007). Early approaches to digital citizenship were most concerned with bridging the digital divide: issues of access, inclusion and communicative rights and liberties were a priority (Shelley et al., 2004; Thrane, Shelley, Shulman, Beisser, & Larson, 2004). However, as social media platforms were mainstreamed, the question of access diminished in importance as Facebook and Twitter become vehicles for civic participation. In the digital context, citizenship is almost a 'given', but it does involve a series of tasks or acts - deciphering news feeds or constructing digital identities. In their landmark book *Being Digital Citizens*, Isin and Ruppert (2015) argue that it is through digital acts that digital citizens come into being. While this might sound straightforward, digital acts involve interpreting multiple streams of local and global information, and, in the age of datafication, anticipating unknown consequences.

Ontologically, citizenship marks our relationship to something *beyond* the individual - be that the community, platform or the nation state (McCosker et al., 2016, p. 2). In this way, digital citizenship is not just about civic responsibilities or self-responsibilization, but rather how the digital facilitates new forms of participation. While the digital opens up different kinds of collectivity, as Jenkins and Carpentier (2013) point out, even in the digital context participation is still a struggle for marginalised people. Nevertheless, digital platforms can facilitate modes of civic participation with a significant impact on democratic politics. A good example of this is the poor turnout at Donald Trump's campaign rally in Tulsa in June

2020. Organised via TikTok the action brought together an unlikely alliance between Black Lives Matter protesters and K-Pop fans. Although reported to have 'sold out', at the rally large parts of the stadium were empty (Sakzewski, 2020).

In many respects, theorizing how individuals are constructed as digital citizens has focused on redefining changing civic behaviours and societies (Jenkins, Shresthova, & Gamber-Thompson, 2016). The digital may have opened up new spaces for political action and engagement. Yet the effect of corporatized social media platforms on digital acts, and the implications of these acts for citizenship is complex. The opacity of digital infrastructures and the increasing reliance on algorithmic decision-making raises critical challenges to what it means to be an informed, engaged and active citizen. Digital citizens are less reliant on the nation state for their democratic expression. At the same time, it is clear that digital technologies have enabled the introduction and intensification of draconian laws that have extended the reach of the nation state over its citizens. For example, metadata retention laws enable governments to assert new forms of discipline and control over citizens in the name of public security (Ozalp, 2019; Sarre, 2015).

2.2 Digital Rights

Digital rights are human and legal rights that allow individuals to access, use, create and publish digital content on devices such as computers and mobile phones, as well as in virtual spaces and communities (Reventlow, 2017). Currently, digital rights are not a set of rights in and of themselves, but are related to other human rights, particularly freedom of expression and the right to privacy in online and digital environments (Hutt, 2015). In practical terms, human rights can be thought of as protection against 'standard threats' –such as oppression, deprivation and violence– that jeopardize human interests (Mathiesen, 2014). However, as Peacock (2019) points out, there is still debate over whether 'access to the Internet is a human right in and of itself, part of already-existing freedom of expression guarantees, or not a right at all' (p. 4).

Given the pace of and variation in access and use of technologies across the world, ensuring that individuals have the same rights in digital spaces as in analogue ones is difficult. So too, is establishing a framework for digital rights that encompasses *all* platform stakeholders, including designers, users and shareholders (Goggin et al., 2017). Indeed, there is an inherent tension between the free exchange of ideas and ensuring adequate protection from harassment and abuse (Livingstone, 2014). The internet also reconfigures notions of privacy as participation on many mainstream platforms requires some sharing of personal information: it is virtually impossible to participate *privately* online. At the very least, privacy needs to be understood as networked (Marwick & Boyd, 2014). This is difficult to enshrine in law.

An important ontological dimension of digital rights is that the 'sovereign individual' is the subject of rights claims (Livingstone & Third, 2017, p. 667). Yet, a key issue in digital rights discourse is the tendency to 'universalize' the human subject, when in reality human rights issues are locally situated (Livingstone & Third, 2017). What is a digital right in some parts of the world may not be in others, yet individuals and their data can easily cross state and regional borders online. For this reason, Goggin et al. (2017) argue the digital rights of

different actors –LGBTQI groups, children, people with disabilities and indigenous people– are often overlooked. This calls for software architecture and legal frameworks that can ensure the enforcement of these rights. However, as Livingstone and Third (2017) argue, attempts to protect marginalized groups leads to ‘protection-dominant legal frameworks’ (p. 667), which can limit digital opportunities.

So how do digital rights support digital media use? When compared with digital citizenship and digital literacies, digital rights bring context –including software architectures and the business models that underpin digital platforms (Srnicek, 2017)– into sharp relief. A focus on digital rights encourages policymakers to develop the technological and legal frameworks to ensure individuals enjoy the same rights online as when offline. Traditionally, rights were a matter for the nation state, but as Livingstone (2014) points out, more recently the state has ‘devolved their power’ and, most notably, ‘to private sector organizations such as those which own digital sites, services and infrastructures’ (p. 22). Although it is the individual who is the subject of digital rights claims, digital rights differ from digital literacies and digital citizenship in that there is a strong reliance on institutions and organizations to support the action of the individual.

2.3 Digital Literacy

Like traditional, print-based literacies, digital literacies refer to a competency or capability with a particular topic, field or issue. However, as both conceptual and material notions of the ‘digital’ are slippery, so too are conceptions of what constitutes being ‘literate’. In fact, defining what is meant by digital literacy has become more complicated over time. An early definition by Paul Gilster (in Pool, 1997, p. 9) describes digital literacy as ‘knowledge assembly’ and involves ‘how to assimilate the information, evaluate it, and reintegrate it’. However, as the digital spaces, texts and tools are continually changing and becoming more complex, so too is what it takes to be considered ‘literate’. Perhaps for this reason, broad definitions have been adopted. Thorne (2013), for instance, defines digital literacies as ‘semiotic activity mediated by electronic media’ (p. 192), avoiding outlining the more specific skills and practices required. Other definitions of digital literacy have tended to fall into the categories of either mastery and operational proficiency, or evaluation and critique (Lankshear & Knobel, 2011).

Of the three responses analysed here, literacy is most strongly associated with education. Indeed, educational responses to phenomena become distilled into a catchall of ‘literacy’ as in ‘financial literacy’ and even sometimes ‘physical literacy’ as terms used to describe the individual’s capacity to understand information and the social norms and conventions that surround it, as well as to demonstrate this knowledge through comprehension or writing.

Despite the contemporary proliferation of ‘literacies’, literacy as a concept has a long history. The extension of the term literacy into media literacy in the 1970s helped cement the idea of literacy as a way of framing responses to changes in the communications order. Literacy, is an established frame in response to changes in communications that both normativizes and explains the relationships between individuals and society.

However, research consistently shows that schools need to do more to develop digital literacies (Littlejohn, Beetham, & McGill, 2012). In particular, there needs to be a focus on extending digital literacies across different contexts, so that critical, ethical, and technical mastery can be developed (Pangrazio, 2019). In educational contexts, digital literacies should be approached as an evolving set of skills and practices with implications for identity (Littlejohn et al., 2012). In particular, literacy can also be used to explain the process by which individuals learn how to behave on/in platforms that datafy them as well as giving the platforms pedagogic authority to inscribe their ways of learning, knowing and behaving.

Recently, new strands of digital literacy, namely data literacy (Pangrazio & Sefton-Green, 2020), personal data literacy (Pangrazio & Selwyn, 2019) and infrastructural literacy (Gray, Gerlitz, & Bounegru, 2018), have emerged as a specific response to the challenges of datafication. Even though educational institutions could be important sites for developing *critical* data literacies, most lean toward an instrumental framing of data literacy –promoting an ‘instrumentalist focus on performance management, efficiencies or evidence’ (Raffaghelli & Stewart, 2020, p. 439). This could be due to the fact that digital literacy programs, are heavily influenced by workforce demands (Alexander, Becker, Cummins, Giesinger, & The New Media Consortium, 2017) rather than by the challenges of living in a digital world.

In many respects, data literacy could be considered a subset of digital literacy and indicates an expanding range of digital media that individuals use to live in a digitally mediated world. With this in mind, digital literacy is perhaps foundational for digital citizenship and digital rights: individuals cannot participate or claim their digital rights if they are not ‘literate’ in the first place.

3 DISCUSSION

3.1 Fields of Action

While the three concepts operate as norms in discursive arenas, they also describe sets of activities, actions and practices where some people can have more or less authority than others and the possibility for individual agency is often unequal. For example, citizenship tends to be defined through the minimum requirement of voting even though there are a number of other ways in which being a citizen can be described and measured: from civic minded actions like picking up litter to marching, attending demonstrations, posting online and membership of civil society and political parties. In general, citizenship is as much a question of ontology –of being– as it is a question of beliefs, understandings or actions.

By contrast the field of rights is more public, where individuals are to some extent protected by shared norms or laws and where the individual requires protection or enforcement when rights are threatened. This is why the use of consumer law in relationship to terms and conditions or the acceptance of data cookies is so fraught because it seems inappropriate (Andrejevic, 2014; Richardson, 2015). If these terms and conditions were really about protecting the rights of citizens then they would be written in a way that is more accessible to individuals. However, the field of rights is not just one of public bodies, lawmakers and policing because individuals have to assert their rights to claim them. While there are

forms of collective protest in the digital sphere and indeed grassroots movements that take down or re-appropriate government data when it has been used to deny services (D'Ignazio & Klein, 2020), most digital rights are passive with conflict being resolved by corporate and/or state actors –such as the European Parliament's GDPR (Richardson, 2015).

Digital literacy is perhaps the field of action that most emphasises individualistic and individualised agency. Although digital literacy is now evaluated and accredited, it is also assumed to be a vernacular and folk practice. As a mode of power (Pangrazio & Sefton-Green, 2020) digital literacy is exercised significantly by people through their digital acts in contrast with digital rights which are exercised by national and supranational bodies. All three fields thus mesh top-down and bottom-up energies, authority and warrants along an axis that pays different kind of attention to individual and/or collective entities. This is captured in the following diagram (Figure 1):

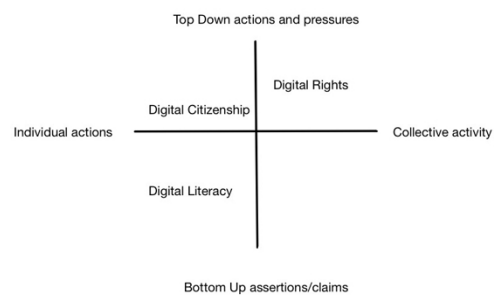


Figure 1 Diagram showing the broad field of action for Digital Citizenship, Digital Rights and Digital Literacy

As we discuss in the section below, all three concepts acknowledge changing and limited principles of human agency acting in society. However, in their work within the fields of education and state regulation the tension between top-down and bottom-up powers only serves to exacerbate the ways that the digital in all three concepts seems to demonstrate the prerogative of structural power rather than individual autonomy.

Not surprisingly, across all three fields, conservative definitions are authorised and endorsed. For example, in education digital literacy is often understood in terms of how it prepares young people for work in the 'knowledge economy', rather than in terms of self-expression. Similarly, digital citizenship has become a useful cipher to challenge cyberbullying and inappropriate behaviour (Ribble, Bailey & Ross, 2004) particularly with regard to children and young people. Typically, educational programs about digital citizenship take a didactic approach to scaffolding 'appropriate', 'respectful' and 'responsible' online behaviour (Australian Curriculum Assessment and Reporting Authority, 2020; New South Wales Department Education, 2020; Ribble, Bailey, & Ross, 2004). In Australia, this protectionist approach to digital citizenship is also reflected in policy as in a recent mobile phone ban in schools in the state of New South Wales (New South Wales Department Education, 2020).

From a digital rights perspective, efforts to protect children are usually framed in terms of rights to rich and varied online experiences. As Macenaite (2017) argues, protection and regulation can limit children's online opportunities and 'fails to consider the evolving capacities and best interests of the child' (p.765). At the same time, there is clearly a need for better protection of children's personal data. For example, how learning analytics appears to 'speak for' children as personalised learning is disempowering (Lupton & Williamson, 2017). However, as Lupton and Williamson (2017) note there are few examples of instruments and strategies that protect children's data and digital privacy without diminishing the range of digital experiences.

3.2 A Question of Agency?

While exploring the differences in approaches is the main focus of this paper, we would argue that one thing they have in common is an overt commitment to promoting agency in the digital context. To claim one's digital rights, to act as an informed and responsible citizen, or be literate enough to use digital media, requires agency. Indeed, across all three approaches - digital citizenship, digital rights and digital literacy - agency is referred to as an overarching 'power' needed to create value in an increasingly complex digital world.

'Agency' has a complex philosophical history. Describing the capacity of an individual to act freely in the world, the concept is entwined with assumptions about free will, the structural constraints which limit individuals' actions and the relationship between an individual and their society (Richardson, 2015). In an era of 'predictive analytics' where knowledge about personal tastes, choices, preferences, beliefs and actions now appears to border on fate, the idea of digital agency has become even more fragile. In fact, analysis of mal-, dis- and mis-information under the banner of 'fake news' combined with targeted advertising in social media, now raises the fear that democratic decision-making –in some ways one of the most treasured expressions of human agency– is no longer an outcome of free will but instead an example of the ways that individuals can be manipulated (Korner, 2019; Sefton-Green, 2019).

Yet, agency, as a catch-all term for the individual's power to bring about change in the world, is promoted as an important quality for children and young people. Schools and youth programs are mandated to develop modes of participation across various domains. The digital context is no exception. In fact, 'digital agency' is now deemed integral to an 'individual's ability to control and adapt to a digital world' (Passey et al., 2018, p. 426). As such, 'digital agency' has become a popular element of many educational programs. However, whether digital agency –as we traditionally understand the concept– is actually possible in a context that is increasingly controlled by multinational tech companies is unknown.

Digital citizenship appears especially vulnerable to interference by commercial and state-based actors. Traditionally, citizenship was determined by factors like place of birth (either of the individual or their parents) or an application for citizenship to a country. However, in the digital context, the concept of citizenship is far more nebulous and open to dispute. In a globalized digital world, citizenship can be attributed algorithmically by organizations such as the National Security Agency (NSA) in the US or the Australian

Security Intelligence Agency (ASIO), creating a new type of citizenship –algorithmic citizenship (Cheney-Lippold, 2017). Algorithmic citizenship cannot be proven, but is instead performed. Indeed, it is the data that is generated through the performance of online social relations and associations that articulate the relationship the individual has with the state. As Cheney-Lippold (2017) explains in the age of datafication personal data is ‘most procurable’ and therefore the easiest way ‘to represent its surveilled population’ (p. 160). While the digital may have facilitated civic participation, it has also led to new ways of determining or ascribing citizenship that do not sit comfortably with traditional notions of democratic participation. For example, algorithmic citizenship can be determined through relationships and associations, meaning the ‘formal ability to knowingly relate to a state as a verified, authentic citizen is thrown into disarray’ (Cheney-Lippold, 2017, p. 166).

3.3 Action Points

Action points for *education*, *research* and *regulation* emerge from this discussion. First, identifying the contradictory points of overlap, tension and difference is helpful for *education* because it ensures the most appropriate response might be applied in a given context. For example, digital literacy and digital rights tend to focus on individual forms of action, whereas digital citizenship typically connects practices to a collective or group. As digital literacy is increasingly viewed by governments and educational authorities as similar to reading and writing (Littlejohn et al., 2012), it is useful to think of this as the *primary* digital response. After all, there is little need to claim your digital rights if you cannot use digital technologies. Similarly, the identity work that takes place as part of digital literacies, strengthens and initiates group belonging, which lies at the heart of digital citizenship.

Our analysis has revealed that the three responses tend to operate at a conceptual level, appealing to academic researchers in their quest to make sense of people’s digital engagements. However, communication and participation in civic spheres, control and mastery of progressions in learning, the power to authorize commercial transactions, membership of affinity and taste or interest driven communities mean different things to different individuals and their expression of agency. Awareness of datafication and ‘surveillance capitalism’ constrain the notions of freedom which previously seemed part and parcel of our normative understandings of agency. Do the three responses examined here articulate people’s everyday lives and what kinds of agency do they promote? Future *research* needs to test the limits of these responses and perhaps, more importantly, consider how they can be operationalized as a triumvirate that helps individuals resist the more pervasive aspects of dataveillance and commercial profiling.

Finally, our analysis has revealed that despite the dogged efforts of educators and researchers to prepare individuals for living in a datafied world, there are limits to individualized and collective bottom-up responses. Clearly, further top-down *regulation* of big tech companies is needed. If seen as a triumvirate of responses operating at different levels (i.e technical/critical/social and individual/collective), it is imperative that education and research formulate ways to show people when and how these responses can be enacted in everyday social and civic life to ensure protection of digital rights.

4 CONCLUSIONS

In this article we have critically examined how three different concepts prepare individuals to live in a digitally mediated world. The rationale for writing the article was that digital citizenship, digital rights and digital literacy have been developed in parallel, rather than dialogically, meaning they have not been brought together effectively. Our discussion highlighted why bottom up approaches, like that of digital literacies and digital citizenship, need to be complemented by top-down, regulatory approaches like digital rights. Similarly, individualised skills like those promoted through digital literacy can lead to a collective, participatory action that is important for digital citizenship and the promotion of pluralism and democracy. Our examination also revealed how datafication and automation are rapidly changing the digital landscape. New strands of critical digital literacy, such as data literacy, need to be developed in education if individuals are to be aware of the challenges to their digital rights, as well as inculcating the motivation and skills to claim them. As digital media further converge, traditional notions of agency are under threat. This calls for both regulation and education, meaning neither digital citizenship, digital rights nor digital literacy by themselves can prepare individuals adequately. These three concepts must work in concert if a 'good' society can flourish.

REFERENCES

- Alexander, B., Becker, S. A., Cummins, M., Giesinger, C. H., & The New Media Consortium. (2017). *Digital Literacy in Higher Education, Part II: An NMC Horizon Project Strategic Brief. Volume 3.4.* The New Media Consortium.
- Andrejevic, M. (2014). The big data divide. *International Journal of Communication*, 8, 1673–1689.
- Andrejevic, M. (2020). *Automated Media*. Routledge. <https://doi.org/10.4324/9780429242595>
- Australian Curriculum Assessment and Reporting Authority. (2020). *Glossary: Digital Citizenship. F-10 Curriculum*. Retrieved from <https://bit.ly/3dBtkqp>
- Bennett, L. (2007). Changing citizenship in the digital age. *Conference on Millennial Learners*.
- Cheney-Lippold, J. (2017). *We Are Data: Algorithms and the Making of Our Digital Selves*. New York, NY: New York University Press. <https://doi.org/10.2307/j.ctt1gk0941>
- D'Ignazio, C., & Klein, L. (2020). *Data Feminism*. The MIT Press. <https://doi.org/10.7551/mitpress/11805.001.0001>
- Goggin, G., Vromen, A., Weatherall, K., Martin, F., Webb, A., Sunman, L., & Bailo, F. (2017). *Digital Rights in Australia*. The University of Sidney. Retrieved from <http://hdl.handle.net/2123/17587>
- Gray, J., Gerlitz, C., & Bounegru, L. (2018). Data infrastructure literacy. *Big Data & Society*, July-December. <https://doi.org/10.1177/2053951718786316>
- Hutt, R. (2015, 11). *What are your digital rights?* Retrieved from <https://www.weforum.org/agenda/2015/11/what-are-your-digital-rights-explainer/>
- Insin, E., & Ruppert, E. (2015). *Being Digital Citizens*. Rowman & Littlefield.
- Jenkins, H., & Carpentier, N. (2013). Theorizing participatory intensities: A conversation about participation and politics. *Convergence*, 19(3), 265–286. <https://doi.org/10.1177/1354856513482090>
- Jenkins, H., Shresthova, S., & Gamber-Thompson, L. (2016). *By Any Media Necessary: The New Youth Activism (Connected Youth and Digital Futures)*. NYU Press.

- Kitchin, R. (2014). Big Data, new epistemologies and paradigm shifts. *Big Data & Society*, April-June. <https://doi.org/10.1177/2053951714528481>
- Korner, K. (2019). Digital politics: AI, big data and the future of democracy. *EU Monitor: Digital Economy and Structural Change*, August.
- Lankshear, C., & Knobel, M. (2011). *New Literacies: Everyday Practices and Social Learning* (3rd ed.). Open University Press.
- Littlejohn, A., Beetham, H., & McGill, L. (2012). Learning at the digital frontier: a review of digital literacies in theory and practice. *Journal of Computer Assisted Learning*, 28(6), 547–556. <https://doi.org/10.1111/j.1365-2729.2011.00474.x>
- Livingstone, S. (2014). Children's digital rights: a priority. *Intermedia*, 42(4/5), 20–24.
- Livingstone, S., & Third, A. (2017). Children and young people's rights in the digital age: An emerging agenda. *New Media & Society*, 19(5), 657–670. <https://doi.org/10.1177/1461444816686318>
- Lupton, D., & Williamson, B. (2017). The datafied child: The dataveillance of children and implications for their rights. *New Media & Society*, 19(5), 780–794. <https://doi.org/10.1177/1461444816686328>
- Macenaite, M. (2017). From universal towards child-specific protection of the right to privacy online: Dilemmas in the EU General Data Protection Regulation. *New Media & Society*, 19(5), 765–779. <https://doi.org/10.1177/1461444816686327>
- Marwick, A. E., & Boyd, D. (2014). Networked privacy: How teenagers negotiate context in social media. *New Media & Society*, 16(7), 1051–1067. <https://doi.org/10.1177/1461444814543995>
- Mathiesen, K. (2014). Human Rights for the Digital Age. *Journal of Mass Media Ethics*, 29(1), 2–18. <https://doi.org/10.1080/08900523.2014.863124>
- McCosker, A., Vivienne, S., & Johns, A. (2016). *Negotiating Digital Citizenship*. Rowman & Littlefield.
- Mossberger, K., Tolbert, C. J., & Mcneal, R. S. (2007). *Digital Citizenship: The Internet, Society and Participation*. The MIT Press. <https://doi.org/10.7551/mitpress/7428.001.0001>
- New South Wales Department Education. (2020). *Digital citizenship*. Retrieved from <https://www.digitalcitizenship.nsw.edu.au>
- Ozalp, S. (2019). Unlawful data access and abuse of metadata for mass persecution of dissidents in Turkey: The by-lock case. In A. Daly, S. K. Devitt, & M. Mann (Eds.), *Good Data* (pp. 117–134). Institute of Network Cultures.
- Pangrazio, L. (2019). *Young People's Literacies in the Digital Age: Continuities, Conflicts and Contradictions*. Routledge.
- Pangrazio, L., & Sefton-Green, J. (2020). The social utility of 'data literacy'. *Learning, Media and Technology*, 45(2), 208–220. <https://doi.org/10.1080/17439884.2020.1707223>
- Pangrazio, L., & Selwyn, N. (2019). 'Personal data literacies': A critical literacies approach to enhancing understandings of personal digital data. *New Media & Society*, 21(2), 419–437. <https://doi.org/10.1177/1461444818799523>
- Passey, D., Shonfeld, M., Appleby, L., Judge, M., Saito, T., & Smits, A. (2018). Digital Agency: Empowering Equity in and through Education. *Technology, Knowledge and Learning*, 23(3), 425–439. <https://doi.org/10.1007/s10758-018-9384-x>
- Peacock, A. (2019). *Human rights and the digital divide*. Routledge. <https://doi.org/10.4324/9781351046794>
- Pool, C. R. (1997). A new digital literacy. *Educational Leadership*, 55(3), 6–11.
- Raffaghelli, J. E., & Stewart, B. (2020). *Centering complexity in 'educators' data literacy' to support future practices in faculty development: a systematic review of the literature* (Vol. 25). Informa UK Limited. Retrieved from <https://dx.doi.org/10.1080/13562517.2019.1696301> 10.1080/

13562517.2019.1696301

- Reventlow, N. (2017, 12 10). *Digital rights are human rights*. Retrieved from <https://digitalfreedomfund.org/digital-rights-are-human-rights/>
- Ribble, M., Bailey, G., & Ross, T. (2004). Digital citizenship: Addressing appropriate technology behavior. *Learning & Leading with Technology*, 32(1), 7–13.
- Richardson, J. (2015). *Law and the Philosophy of Privacy*. Routledge. <https://doi.org/10.4324/9780203516133>
- Sakzewski, E. (2020, 06 22). *Were TikTok users and K-pop fans really behind the poor turnout at Trump's Tulsa rally*. Retrieved from <https://www.abc.net.au/news/2020-06-22/did-tiktok-users-kpop-fans-really-troll-donald-trump-tulsa-rally/12378768>
- Sarre, R. (2015). *Metadata retention: A review of policy implications for Australians*. Justice and Social Democracy Conference.
- Sefton-Green, J. (2019). Can schools educate for democracy in the digital age? *Oxford Research Encyclopedia of Education*. Oxford University Press.
- Shelley, M., Thrane, L., Shulman, S., Lang, E., Beisser, S., Larson, T., & Mutiti, J. (2004). Digital citizenship: Parameters of the digital divide. *Social Science Computer Review*, 22(2), 256–269. <https://doi.org/10.1177/0894439303262580>
- Srnicek, N. (2017). *Platform Capitalism*. Polity Press.
- Thorne, S. L. (2013). Digital literacies. In M. Hawkins (Ed.), *Framing Languages and Literacies* (pp. 192–218). Routledge.
- Thrane, L., Shelley, M., Shulman, S., Beisser, S., & Larson, T. (2004). E-political empowerment: Age effects or attitudinal barriers. *Journal of E-Government*, 1(4), 21–37. https://doi.org/10.1300/J399v01n04_03
- Vromen, A. (2017). *Digital Citizenship and Political Engagement*. Palgrave Macmillan. <https://doi.org/10.1057/978-1-137-48865-7>