

A REALITY OF VULNERABILITY AND DEPENDENCE: INTERNET ACCESS AS A HUMAN RIGHT

*Ryan Shandler and Daphna Canetti**

We are faced with a new reality where our reliance on internet access to fulfil basic civil tasks is threatened by increasing personal and societal cyber vulnerability. This dichotomy of dependence and vulnerability requires a new framework for understanding the legal and human rights status of this evolving technological reality. A number of theories have sought to explain how internet access could attain the status of a human right. These include reliance on the freedom of expression protection offered by the International Covenant on Civil and Political Rights and the Universal Declaration of Human Rights. More recent approaches have suggested that international customary law could apply, or that internet access could attain the status of an auxiliary human right. Despite repeated demands by international institutions to address modern cyber challenges through a human rights lens, this assortment of legal approaches has failed to garner a consensus view in the international community. The article reviews the merits of each of these arguments, and grounds the debate in the lens of this reality of dependence and vulnerability. Of the four options surveyed, we find that auxiliary righthood is the most promising approach, but that additional research is required to substantiate the claims.

Keywords: internet access, human rights, cyber attacks, internet shutdowns

1. INTRODUCTION AND CONTEXT

What are the societal and legal implications of our growing dependence on internet access? We are faced with a new reality where our reliance on internet access to fulfil basic civil tasks is threatened by increasing personal and societal cyber vulnerability. This dichotomy of dependence and vulnerability requires a new framework for understanding the status of this evolving technological reality. From a social perspective, society's growing digital predominance has facilitated widespread cultural and political participation. It has changed the nature of modern speech by lowering the costs of disseminating information, enabling an efficient global transmission of information, and allowing more people to participate in social discourse.¹ The world has long awaited the realisation of the budding potential of the internet to democratise communication,²

* Ryan Shandler, School of Political Science, University of Haifa; ryanshandler@gmail.com. Professor Daphna Canetti, School of Political Science, University of Haifa.

¹ Jack M Balkin, 'Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society' (2004) 79 *New York University Law Review* 1.

² Kristina Lerman, 'User Participation in Social Media: Digg Study' (2007) IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology 255, <https://arxiv.org/abs/0708.2414>; Ann Macintosh, 'Characterizing e-Participation in Policy-making', Proceedings of the 37th Annual Hawaii International Conference on System Sciences, 2004; Eugene Volokh, 'Cheap Speech and What It Will Do' (1995) 104 *Yale Law Journal* 1805.

and in 2018 an estimated 3.2 billion people are active on social media alone.³ However, this trend also bears risks. The ease of realising basic civic functions through online avenues can at times supplant its traditional analogue equivalents, which means that citizens who lack internet connectivity are precluded from exercising their rights.

When we discuss the social implications of cyber technology, our focus is often too narrow, examining the individual pieces of technological development rather than the multidimensional nature of how the digital revolution is affecting our daily functioning.⁴ Rather than focusing on the manner in which social media platforms influence patterns of media reporting, for example, we could look at how digital technology has altered the very nature of free speech and association. We argue that more than merely serving as a digital tool to ease the realisation of human rights, internet access has become inextricably intertwined with the basic capacity of how human rights manifest in the modern age. If access is indeed a human right, then the discussion needs to turn from how internet access supports human rights to how public policy must support internet access and the duties that this right imposes upon governments.

There has been an ongoing debate for decades about the potential of the internet to attain the status of a human right, and numerous theories have been asserted to justify this claim. The two most prominent theories argue that the International Covenant on Civil and Political Rights (ICCPR)⁵ or the Universal Declaration of Human Rights (UDHR)⁶ already provide sufficiently broad forms of protection. These approaches rely on extending traditional legal and human rights protection to modern technologies.⁷ More recent approaches claim that customary international law has given birth to a new stand-alone right to internet access as a result of national practice and culminating in a 2011 report by Frank La Rue, Special Rapporteur for the United Nations, which provides explicit institutional backing for the notion that internet access impacts upon human rights.⁸ A fourth argument claims that internet access could be an auxiliary or derived human right in service to various primary rights.⁹ The relative strengths and weaknesses of these competing theories will be discussed below.

Despite repeated demands by international institutions to address modern cyber challenges through a human rights lens, this assortment of legal approaches has failed to garner a consensus view in the international community. In the absence of any unanimity, national and regional legislative bodies and courts have started to implement various solutions that posit internet access

³ Simon Kemp, 'Digital in 2018: Global Overview', *We Are Social*, 13 January 2018, <https://wearesocial.com/blog/2018/01/global-digital-report-2018>.

⁴ Susan Perry and Claudia Roda, *Human Rights and Digital Technology: Digital Tightrope* (Springer 2016).

⁵ International Covenant on Civil and Political Rights (entered into force 23 March 1976) 999 UNTS 171 (ICCPR).

⁶ Universal Declaration of Human Rights, UNGA Res 217A (III), UN Doc A/810 (1948) 71.

⁷ Jason M Tenenbaum, 'Is There a Protected Right to Access the Internet?', *International Journal of Constitutional Law Blog*, 6 June 2014, <http://www.iconnectblog.com/2014/06/is-there-a-protected-right-to-access-the-Internet>; Daniel Joyce, 'Internet Freedom and Human Rights' (2015) 26 *European Journal of International Law* 2.

⁸ Frank La Rue, Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression (16 May 2011), UN Doc A/HRC/17/27.

⁹ Kate Mathiesen, 'The Human Right to Internet Access: A Philosophical Defense' (2012) 18 *International Review of Information Ethics* 9.

as a protected right under constitutional arguments, relying on equality-based reasoning or simply on the basis of the economic benefits of stimulating higher internet connectivity. However, the risks of heightened dependence combined with an ever-present sense of digital vulnerability require a coherent human rights framework. In this article we begin by considering the nature of our dependence on internet access and question what this means in the context of our growing vulnerability to cyber disconnection. We continue by evaluating the rationales and merits of the various human rights approaches that could offer a legal framework to govern this situation. We conclude by questioning the universal applicability of a human rights approach to internet access and how it would apply to developing countries, before reflecting on how a human right to internet access would manifest in concrete implications and possibly lead to positive government duties.

2. CYBER DEPENDENCE

The technological leap that is the internet has advanced at an exponential pace over the course of decades to the point where over 4.02 billion people in the world are connected to the internet.¹⁰ While this still leaves approximately 3.2 billion people without internet access (or roughly 44 per cent of the global population), the rate of internet usage continues to grow at 9 per cent a year.¹¹ In the short time that the internet has existed, it has become a central medium of political dialogue and has transformed the nature of political participation. The growth in digital penetration has democratised public communication by allowing individuals to broadcast on a whim their thoughts and opinions to a global audience with the push of a button. Essentially, digital technologies and infrastructure have transformed the social conditions through which people speak.¹² By lowering the cost of participation, citizens with few resources, who were otherwise excluded from the centralised corridors of political discourse, can participate in public dialogue.¹³ On the structural level, cyber participation overcomes the obstacle of geographical dispersion and is entirely asynchronous compared with traditional forms of media and participation (i.e. one cannot attend a physical protest once it has ended or question a politician in a public forum after question time ends).¹⁴ By facilitating lateral peer-to-peer discourse, the internet pivots from the traditional few-to-many form of communication to a more inclusive structure that empowers a wider audience. Digital activities such as web forums and interactive media enable more active engagement compared with the traditional outlets that allowed only for passive participation.¹⁵

¹⁰ Kemp (n 3).

¹¹ Darrell West, 'Digital Divide: Improving Internet Access in the Developing World through Affordable Services and Diverse Content', Center for Technology Innovation at Brookings, February 2015, https://www.brookings.edu/wp-content/uploads/2016/06/West_Internet-Access.pdf.

¹² Jack M Balkin, 'Old-School/New-School Speech Regulation' (2014) 127 *Harvard Law Review* 2297.

¹³ Balkin (n 1).

¹⁴ Stephen Coleman and Jay G Blumler, *The Internet and Democratic Citizenship: Theory, Practice and Policy* (Cambridge University Press 2009).

¹⁵ *ibid.*

This trend bears risks, as the ease of realising basic civic functions through online avenues can at times supplant its traditional analogue equivalents, with the result that citizens who lack internet connectivity are precluded from exercising their rights. Where this becomes most problematic is where basic civil and human rights become entangled with a need for internet connectivity. The most visible revolution in the practical manifestation of modern human rights is among the primary three speech-based rights: freedom of expression, freedom of association and freedom of information. In our analysis of the interplay between these rights and digital connectivity, we note that there are times when technological improvements simply increase convenience, and there are times when evolving technologies fundamentally alter the underlying nature of the right, thus creating a complete dependence on internet access to engage in modern civic life.

Freedom of expression – the ability to communicate ideas and opinions – is the cornerstone of democracy and is thought to grant substance to all other civil liberties. Though this is an individual right, its underlying purpose is not only self-actualisation and personal autonomy, ‘but rather the preservation of democracy, and the right of a people, as a people, to decide what kind of life it wishes to live’.¹⁶ In this area, the digital revolution has not affected the content of free speech, but has had a transformative impact on its medium – in other words, the process of speaking freely. In the short time that the internet has existed, it has become a central medium of political dialogue. In an American study, 66 per cent of social media users, constituting 39 per cent of American adults, engaged in civic or political activities through social media. Similarly, 73 per cent of adult internet users (representing 54 per cent of all US adults) went online to obtain news or information during the 2010 congressional elections or to become involved in political campaigns.¹⁷ This migration of discourse is taking place in all matters of substantive discourse and not just in media. The increasing predominance of digital journalism,¹⁸ the transition of academic journals to internet-based formats,¹⁹ the role of digital interfaces in promoting public opinion and the evolution of online receipt of letters to the editor – a symbol of popular participation in political discourse – all offer stark insight into the vital role played by the internet in enabling modern speech.

This link between political discourse and internet access was perhaps best expressed by Justice Kennedy in the 2017 US Supreme Court case of *Packingham v North Carolina*. In unanimously striking down a law that limited access to social media, the court made clear how the internet has transformed civic life and assumed the role of the modern ‘public square’.²⁰

¹⁶ Owen Fiss, ‘Free Speech and Social Structure’, *Faculty Scholarship Series*, 1986, Paper 1210, http://digitalcommons.law.yale.edu/fss_papers/1210.

¹⁷ Aaron Smith, ‘The Internet and Campaign 2010’, *Pew Research Center*, 17 March 2011, <http://www.pewinternet.org/2011/03/17/the-internet-and-campaign-2010>.

¹⁸ Jim Conaghan, ‘Newspaper Digital Audience Peaks’, *News Media Alliance*, 9 October 2015, <https://www.news-mediaalliance.org/newspaper-digital-audience-grew-twice-fast-internet-past-year>; Ian Cram, *Citizen Journalists: Newer Media, Republican Moments and the Constitution* (Edward Elgar 2015).

¹⁹ Donald W King and others, ‘Patterns of Journal Use by Faculty at Three Diverse Universities’ (2003) 9(10) *D-Lib Magazine*, <http://www.dlib.org/dlib/october03/king/10king.html>; Judy Luther, ‘White Paper on Electronic Journal Usage Statistics’ (2002) 41(2) *Serials Librarian* 119.

²⁰ *Packingham v State of North Carolina* 15–1194 US (2017).

By prohibiting sex offenders from using those websites, North Carolina with one broad stroke bars access to what for many are the principal sources for knowing current events ... speaking and listening in the modern public square, and otherwise exploring the vast realms of human thought and knowledge. These websites can provide perhaps the most powerful mechanisms available to a private citizen to make his or her voice heard. They allow a person with an internet connection to become a town crier with a voice that resonates further than it could from any soapbox.

Similarly, for freedom of association, another fundamental pillar of democracy, the internet plays a key role in easing and facilitating traditional forms of assembly by facilitating instantaneous communication and targeted recruiting. Today, '[i]n a world where citizens are increasingly connected to the internet, assemblies are not only planned and organised online, assemblies can occur entirely online'.²¹ Modern protest movements can comprise millions of participants who are able to express support from the comfort of their homes, although this has also raised questions about the relative value of modern participation in protests.²² Face-to-face human interaction has become culturally archaic in light of efficient online forums that amplify attendance and ensure anonymity. The influence of internet forums on the conduct of popular assemblies and gatherings was most pronounced during the Arab Spring. Digital channels and electronic media were central to the organisation, facilitation and recruitment processes that brought hundreds of thousands of people to the streets.²³ It is commonly accepted that the mass gatherings would not have converged without internet access and social media.²⁴ This is equally so for the border-transcending nature of the protests and their instantaneous relay to other protesters and countries.

Perhaps most reflective of the importance of internet access to free association is the accelerating use of cyber shutdowns by governments who are looking to disperse demonstrations and stymie protests. During a one-year period in 2015 to 2016, a study tracked 81 different instances of internet shutdown in 19 countries.²⁵ The fact that governments immediately target online connectivity to disperse protests is telling. These new digital avenues for civic engagement have done more than offer technological shortcuts for an internet savvy generation – they have significantly reshaped our democratic processes and structures such that internet access is now a

²¹ Henrik Almstrom and Joy Liddicoat, 'The Rights to Freedom of Peaceful Assembly and Association and the Internet', Submission to the UN Special Rapporteur by the Association for Progressive Communication, 2012, https://www.apc.org/sites/default/files/APC_Submission_FoA_Online.pdf.

²² Henrik Christensen, 'Political Activities on the Internet: Slacktivism or Political Participation by Other Means?' (2011) 16 *First Monday* 2.

²³ John Pollock, 'Streetbook: How Egyptian and Tunisian Youth Hacked the Arab Spring' (2011) 114 *Technology Review* 5; Anupam Chander, 'Jasmine Revolutions' (2011) 97 *Cornell Law Review* 505.

²⁴ Mohamed Arafa and Crystal Armstrong, "'Facebook to Mobilize, Twitter to Coordinate Protests, and YouTube to Tell the World": New Media, Cyberactivism, and the Arab Spring' (2016) 10 *Journal of Global Initiatives: Policy, Pedagogy, Perspective* 1.

²⁵ Darrell M West, 'Internet Shutdowns Cost Countries \$2.4 Billion Last Year', Center for Technology Innovation at Brookings, October 2016, <https://www.brookings.edu/research/internet-shutdowns-cost-countries-2-4-billion-last-year>.

prerequisite for participation in civic life. However, this centralisation of democratic participation through a cyber funnel also offers unparalleled opportunities for governments to limit access.

The most tangible application of civic life is the nature by which governments interact with their citizens. This includes citizens accessing information that the government holds on trust for them, the provision of basic public services, and the manner in which citizens interact with their elected representatives. The free flow of information and ideas is at the very heart of the principles of democracy and is essential for human rights. Democracy requires that all individuals possess the capacity to participate in decision making and assess the performance of their government.²⁶ Internet access has grown to be the predominant intermediary between citizens and governments. Governments across the world are adopting 'E-Government strategies' whereby public services and information portals are migrated to the internet. 'Simply stated, E-Government is the use of technology to enhance the access to and delivery of government services to benefit citizens, business partners and employees'.²⁷

All of this represents a drastic transformation in the nature of political participation. Traditional forms of political participation are replaced by modern equivalents such as political consumerism, internet activism and viral campaigning.²⁸ In trying to isolate the precise nature of this evolving relationship, research has sought to identify whether online political participation supports, supplants or exists in tandem with their offline equivalents, but this has produced equivocal results.²⁹ To resolve this question, a new experiment was developed which used a controlled, randomised methodology to gauge the ability of participants to complete political activities under the conditions of internet access and deprivation.³⁰ Participants received rewards for completing tasks that simulated the realisation of freedom of expression, association and information. Participants were divided into a control group, which had full access to environmental tools, while a treatment group was denied access to the internet through any medium. The results revealed that internet access significantly affected the distribution of success in the realisation of freedom of expression ($\chi^2 (df = 1) = 6.46, p = .011$) and freedom of association ($\chi^2 (df = 1) = 14.59, p < .001$), and had a slightly less significant effect on the realisation of freedom of information ($\chi^2 (df = 1) = 4.66, p = .031$). A series of logistic regression analyses reinforced these findings, showing that the internet access condition was the sole variable to significantly predict success for each of the three tasks even after demographic and other variables were added to the model. This experiment adds empirical evidence to the heretofore normative discussion on the dependent relationship between internet access and human rights.

²⁶ Toby Mendel, 'Freedom of Information: A Comparative Legal Survey' (2nd edn, UNESCO 2008).

²⁷ Rachel Silcock, 'What is E-Government?' (2001) 54 *Parliamentary Affairs* 1.

²⁸ Sara Vissers and Dietlind Stolle, 'The Internet and New Modes of Political Participation: Online versus Offline Participation' (2014) 17 *Information Communication and Society* 937.

²⁹ *ibid*; Rachel Gibson and Marta Cantijoch, 'Conceptualizing and Measuring Participation in the Age of the Internet: Is Online Political Engagement Really Different to Offline?' (2013) 75 *The Journal of Politics* 3, 701.

³⁰ Ryan Shandler, 'Measuring the Political and Social Implications of Government-Initiated Cyber Shutdowns' (2018) 8th USENIX Workshop on Free and Open Communications on the Internet (FOCI '18).

3. MODES OF CYBER VULNERABILITY

Involuntary internet deprivation is not a theoretical phenomenon. It affects millions of people in developed and developing countries alike, and takes place in vastly different contexts. It can be imposed by external authorities or it can transpire as a result of personal circumstances. It can be initiated by private actors and government actors, by known institutions or by anonymous hackers. It can take place with advance warning for a limited amount of time, or by surprise for a prolonged period. The possibility of a cyber-extinction event causing a widespread internet blackout is becoming a distinct possibility. We review below four concrete mechanisms that lead to internet disconnection: (i) cyber attack; (ii) digital divide; (iii) government shutdown; and (iv) criminal sanction. These modes of deprivation are not exhaustive. Among other possibilities, citizens can also choose to disconnect from the internet in response to privacy concerns relating to surveillance or censorship; and religious groups can encourage members to avoid internet connection for moral or communal reasons. These mechanisms are differentiated from the modes of disconnection reviewed below as they are anticipated and preferred by those affected.

3.1. CYBER ATTACKS

The most visible danger related to internet deprivation is the risk of cyber attack. A key characteristic of cyber-offensive tools is that this is an asymmetric resource – a resource with low entry costs that allows both small and large states and organisations to exercise significant power. Sophisticated cyber tools that were once the domain of government agencies are now commonly utilised by domestic and international cyber criminals that target businesses and individuals. Government-sponsored cyber warfare has allowed even countries with relatively weak military strength to employ and utilise asymmetrical military tools, the results of which are spilling over into civilian life. The anonymity of cyber attacks, or at least the difficulty in ascribing attribution, means that contrary to classical military conflicts, governments appear more willing to employ offensive cyber tools. In addition to the myriad targeted cyber attacks that focus on intelligence gathering or sabotage, and are limited to isolated institutions, there is evidence of cyber attacks targeting civilian networks, such as the alleged Russian attack on the Ukraine in March 2014 which shut down mobile phone networks and hampered internet connection for millions of Ukrainians.³¹

The rise of a one billion dollar ransomware industry has added further antagonists to the cyber-offensive field, with international criminal organisations identifying a low-cost modern variation of extortion. High-profile ransomware attacks, such as WannaCry and Petya, infected more than half a

³¹ David Lee, 'Russia and Ukraine in Cyber "Stand-off"', *BBC News*, 5 March 2014, <https://www.bbc.com/news/technology-26447200>.

million computers in over 150 countries.³² Commercial espionage has also adapted to the cyber age with approximately 47 per cent of US companies experiencing a ransomware attack or other online intrusion during a recorded 12-month period.³³ In the future, with the new frontier of the ‘internet of things’, we will see an intertwining of the internet with aspects of daily life that are not traditionally associated with digital connectedness. In contrast to the human-to-human interactions that the internet has historically facilitated, this advancement will facilitate human-thing and thing-thing communication.³⁴ Predictions abound of more than twenty billion connected devices by 2020 offering a vast new avenue for cyber attacks. Currently hackers have succeeded in denying access to major platforms like Twitter, Netflix and Facebook for hours by harnessing vulnerabilities in household items such as WIFI-connected baby monitors and CCTV cameras.³⁵

3.2. THE DIGITAL DIVIDE

The digital divide refers generally to disparities in internet access among segments of population groups, both internationally and within countries. This multidimensional phenomenon can be subdivided into three primary areas: (i) a global digital divide relating to the divergence in connectivity among industrialised and developing countries; (ii) a social divide between groups inside each society; and (iii) a democratic divide between those who do and do not take advantage of the full spectrum of digital resources to participate in public life.³⁶ For the purposes of this article, we focus primarily on the social and democratic digital divides, of which we can subdivide the social divide further into variables relating to age and income. Age is strongly related to greater internet connectivity. In a Dutch study, a country renowned for its high rate of connectivity, 19 per cent of those aged 65 and older were found to lack regular internet access at home, compared with rates of 5, 1 and 10 per cent among younger age brackets.³⁷ In Britain, 51 per cent of the elderly population were found to lack internet access at home in 2013.³⁸ Income levels, for obvious reasons, can significantly impact on connection rates owing to the cost of computer equipment, internet connection fees, mobile phones, and more. Indeed, a series of studies have pinpointed income levels as the primary predictor of internet access – both in terms of

³² Yellepeddi Vijayalakshmi and others, ‘Study on Emerging Trends in Malware Variants’ (2017) 117 *International Journal of Pure and Applied Mathematics* 22.

³³ Osterman Survey, ‘Understanding the Depth of the Ransomware Problem’, August 2016, <https://www.malwarebytes.com/surveys/ransomware>.

³⁴ Lu Tan and Neng Wang, ‘Future Internet: The Internet of Things’, 3rd International Conference on Advanced Computer Theory and Engineering, 20–22 August 2010, vol 5, 376.

³⁵ Hannah Bryce, ‘The Internet of Things Will Be Even More Vulnerable to Cyber Attacks’, Chatham House, 18 May 2017, <https://www.chathamhouse.org/expert/comment/internet-things-will-be-even-more-vulnerable-cyber-attacks>.

³⁶ Pippa Norris, *Digital Divide: Civic Engagement, Information Poverty, and the Internet Worldwide* (Cambridge University Press 2001).

³⁷ Alexander van Deursen and Ellen J Helsper, ‘A Nuanced Understanding of Internet Use and Non-use among the Elderly’ (2015) 30 *European Journal of Communication* 2, 171.

³⁸ William H Dutton and Grant Blank, with Darja Groselj, ‘Cultures of the Internet: The Internet in Britain’, Oxford Internet Survey 2013, Oxford Internet Institute, University of Oxford.

international comparisons and within individual countries.³⁹ While widespread internet access is considered an equalising force in society, this income generated digital divide raises the spectre of the benefits of internet access being concentrated among socio-economic elites.⁴⁰

To combat this phenomenon, authorities are investing considerable resources into making internet services more accessible for at-risk populations.⁴¹ As far back as 2002, the United Kingdom government acknowledged:⁴²

While the market has successfully delivered internet access to most citizens, take-up among the most disadvantaged groups in society – those on low incomes, the elderly and people with disabilities – is lower. These groups are traditionally heavy users of public services ... but without access to the internet or the skills to use it confidently, these groups may face further social exclusion.

New research has claimed that the elderly should not be treated as a homogeneous group in understanding the variables contributing to low levels of connectivity. Various types of (dis)engagement from the internet can be moderated by gender, attitudes towards age, perception of difficulty of internet use, internet attitudes, and more.⁴³

3.3. GOVERNMENT SHUTDOWN

The production of a centralised gateway for modern communication offers states unprecedented possibilities for surveillance and intervention. Dozens of governments across the world, typically but not always characterised by autocratic governance features, have at times initiated some form of internet blackout, relying on a series of justifications that include safeguarding government authority, reducing public dissidence, fighting terrorism, maintaining national security, or protecting local businesses. Authorities are increasingly utilising this tool to control the information landscape and the ability of citizens to mobilise in recognition of the manner in which the internet has become the fundamental tool to facilitate mass social participation.⁴⁴ Shutdowns can range from a complete closure of the underlying internet infrastructure to the closure of mobile internet services, or even particular subnational apps or services such as ViOP or WhatsApp.⁴⁵

³⁹ See, eg, Javier Corrales and Frank Westhoff, 'Information Technology Adoption and Political Regimes' (2006) 50(4) *International Studies Quarterly* 911; Bo Kinney, 'The Internet, Public Libraries, and the Digital Divide' (2010) 29 *Public Library Quarterly* 104; Xiaoqun Zhang, 'Income Disparity and Digital Divide: The Internet Consumption Model and Cross-Country Empirical Research' (2013) 37(6–7) *Telecommunications Policy* 515.

⁴⁰ La Rue (n 8).

⁴¹ Doria Pilling and Heike Boeltzig, 'Moving Toward E-Government: Effective Strategies for Increasing Access and Use of the Internet among Non-Internet Users in the US and UK', Proceedings of the 8th Annual International Conference on Digital Government Research, 'Bridging Disciplines & Domains', 20–23 May 2007, 35, <https://dl.acm.org/citation.cfm?id=1248460.1248467>.

⁴² *ibid.*

⁴³ Van Deursen and Helsper (n 37).

⁴⁴ Dionne Searcey and Francois Essomba, 'African Nations Increasingly Silence Internet to Stem Protests', *The New York Times*, 10 February 2017, <https://www.nytimes.com/2017/02/10/world/africa/african-nations-increasingly-silence-internet-to-stem-protests.html>.

⁴⁵ West (n 25).

In terms of pure numbers, the level of temporary government-initiated internet shutdowns has risen exponentially in recent years. A study conducted by University of Washington researchers identified 606 instances between 1995 and 2011 when 99 different governments deliberately interfered with internet operations.⁴⁶ Compared with a single disruption in 1995 and four disruptions in 1996, the number rose to 111 in 2010. During a one-year period between 2015 and 2016 a Brookings Institute research project, led by Darrell West, tracked 81 different instances of internet shutdown in 19 countries.⁴⁷ His research observed a cumulative total of 753 days of affected internet services, causing some USD 2.4 billion in economic damage to the respective countries.

The most cited modern illustration of an internet shutdown was by Egypt during the Arab Spring protests during 2011. In response to increasingly violent street protests that threatened the stability of the Mubarak regime, authorities adopted harsh steps to dispel protesters and end the popular uprising. It is notable that one of the primary steps taken to disperse the protests that were being publicised online was to order ‘all [internet service providers (ISPs)] to shut down all international connections to the internet’.⁴⁸ In light of the relatively few ISPs in the country at the time with international digital connections, this had the effect of severing internet services for civilians. Other notable recent examples of government shutdown include Turkey in 2015 following a terrorist bombing at a public rally,⁴⁹ India throughout 2016 and 2017 in response to frequent street protests,⁵⁰ and Brazil following corruption protests in 2016.⁵¹ While the justification for most of these occurrences rely on maintaining law and order and protecting public safety, several countries – including Uganda, Algeria, India and Iraq – have disrupted internet services on the ground of concerns about students cheating in national exams.⁵²

3.4. CRIMINAL SANCTION

States have long restricted internet access to prisoners – most commonly for sex offenders and accused terrorists.⁵³ The rationale for this deprivation is public safety: sex offenders could

⁴⁶ Philip N Howard, Sheetal D Agarwal and Muzammil M Hussain, ‘The Dictators’ Digital Dilemma: When Do States Disconnect Their Digital Networks?’, *Brookings Institution Issues in Technology Innovation*, 5 October 2011, <https://www.brookings.edu/research/the-dictators-digital-dilemma-when-do-states-disconnect-their-digital-networks>.

⁴⁷ West (n 25).

⁴⁸ Ramesh Subramanian, ‘The Growth of Global Internet Censorship and Circumvention: A Survey’ (2011) 11 *Communications of the IIMA* 2.

⁴⁹ Lizzie Dearden, ‘Ankara Terror Attack: Turkey Censors Media Coverage of Bombings as Twitter and Facebook “Blocked”’, *Independent*, 10 October 2015, <https://www.independent.co.uk/news/world/europe/ankara-terror-attack-turkey-censors-media-coverage-of-bombings-as-twitter-and-facebook-blocked-a6689036.html>.

⁵⁰ Nivedita Dash, ‘Jat Reservation Protest in Haryana: Mobile Internet Services Blocked in Rohtak’, *India Today*, 18 February 2016, <https://www.indiatoday.in/india/story/jat-reservation-protest-in-haryana-mobile-internet-services-blocked-in-rohtak-309472-2016-02-18>.

⁵¹ ‘Brazil Judge Orders WhatsApp Blocked, Affecting 100 Million Users’, *Reuters*, 2 May 2016, <https://www.reuters.com/article/us-facebook-brazil-whatsapp-idUSKCN0XTIKB>

⁵² West (n 25).

⁵³ Adam Wagner, ‘Is Internet Access a Human Right?’, *The Guardian*, 11 January 2012, <https://www.theguardian.com/law/2012/jan/11/is-internet-access-a-human-right>

ostensibly continue to offend over the internet, even behind bars, and members of terrorist groups and organised crime could continue to direct operations. Some of the most notorious examples of targeted internet deprivation for prisoners who claimed that their rights were being infringed include Kevin Mitnick, convicted of various computer crimes in the United States 1995. He was refused access to the internet or any communications device for fear that his technical genius was such that he could start a nuclear war by whistling into a pay phone.

In recent years, the phenomenon of internet deprivation for prisoners has raised questions about the balancing of public safety with the right of free expression – a right that is not robbed of prisoners. This practice of deprivation has led to multiple legal battles in state and federal courts of the United States, and also in countries as diverse as India and the United Kingdom (UK). Reflected most prominently in the US Supreme Court ruling in *Packingham v North Carolina*,⁵⁴ the courts have consistently struck down internet deprivation laws on the basis that they disproportionately harm the realisation of free expression and other rights. Similar rulings have been handed down by the New Jersey Supreme Court, which overturned a complete internet ban on a convicted sex offender and instructed the state to find a less restrictive way to meet the legitimate public interest of preventing re-offending.⁵⁵ Other states, such as Indiana and Nebraska, have enacted similar laws, many of which were ultimately struck down for being overly restrictive.⁵⁶ In 2017 the Indian Supreme Court struck down a law that prohibited internet searches on pre-natal sex determination on the basis that citizens have an unfettered right to access the internet.⁵⁷ *Opinio juris* was also provided by the UK Court of Appeal in 2012 in the case of *R v Smith & Others*. It was held in this case, in discussing the restrictions on internet access for convicted sexual offenders, that the internet was an ‘essential part of everyday living’ and therefore a complete ban on its use in this case would be disproportionate.⁵⁸

4. THE NEED FOR A HUMAN RIGHTS APPROACH TO INTERNET ACCESS

This new dichotomy of cyber dependence and vulnerability requires a coherent human rights framework. A demand to address modern cyber challenges through a human rights lens has been echoed by international institutions, national legislative bodies and courts around the world. The most prominent calls have come from the United Nations and the European Union. In his landmark report in 2011, Frank La Rue, the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, proclaimed that ‘the Internet has become an indispensable tool for realizing a range of human rights’ in light of which ‘states should develop a concrete and effective policy ... to make the Internet

⁵⁴ (n 20).

⁵⁵ *Jl v New Jersey State Parole Board* 223 NJ 555 (2017).

⁵⁶ Elizabeth Tolon, ‘Updating the Social Network: How Outdated and Unclear State Legislation Violates Sex Offenders’ First Amendment Rights’ (2016) 85 *Fordham Law Review* 1827.

⁵⁷ *Sabu Mathew George v Union of India and Others* 341 SCC 08 (2017).

⁵⁸ *R v Smith & Others* [2011] EWCA Crim 1772.

widely available, accessible and affordable to all segments of the population'.⁵⁹ The United Nations Human Rights Council built on this foundation with a follow-up report in 2016, which affirmed 'the importance of applying a comprehensive human rights-based approach when providing and expanding access to the Internet' and called upon states to formulate and adopt 'national Internet-related public policies that have the objective of universal access and enjoyment of human rights at their core'.⁶⁰ Similarly, in Europe, declarations by the Committee of Ministers called on states to take specific measures to facilitate access to the internet in light of the link between cyber connectedness and the realisation of particular human rights.⁶¹ In a 2015 report by the Council's Committee of Experts on Cross-Border Flow of Internet Traffic and Internet Freedom, the Committee identified that one of the central challenges in protecting the right to freedom of assembly lies in the lack of clear guidance in the face of the transition to online assemblies.⁶²

This call for a human rights framework has also resonated at the national level. The foremost judicial statement on the topic is a strongly worded decision in 2009 by the Constitutional Council of France.⁶³ The court concluded that given the diffusion of online services and their growing importance to participation in democratic life, freedom of expression must include freedom to access online networks.⁶⁴ The judges tempered their decision by noting that strengthened regulatory protection is required, but left open the nature of this protection. In *Packingham v North Carolina* the US Supreme Court recognised that the new digital landscape is altering the way in which we think and express ourselves, thus requiring new thinking on how to employ existing law to apply it to the modern internet.⁶⁵ Similar cases in the United Kingdom⁶⁶ and India⁶⁷ have struck down laws that restrict internet access on the ground that they restrict the exercise of human rights, yet they too have equivocated in their description of the nature of this relationship.

In the absence of a comprehensive human rights approach to internet access, individual countries have adopted local solutions that entrench internet access within legislative and constitutional frameworks. In Greece, a 2001 constitutional amendment inserted a clause stating that

⁵⁹ La Rue (n 8).

⁶⁰ UN Human Rights Council, 'The Promotion, Protection and Enjoyment of Human Rights on the Internet' (18 July 2016), UN Doc A/HRC/RES/32/13.

⁶¹ Council of Europe, Declaration by the Committee of Ministers on the Protection of Freedom of Expression and Information and Freedom of Assembly and Association with regard to Internet Domain Names and Name Strings, (adopted by the Committee of Ministers, 21 September 2011) para 3, <https://wcd.coe.int/ViewDoc.jsp?id=1835805>; Council of Europe, Committee of Experts on Cross-Border Flow of Internet Traffic and Internet Freedom (MSI-INT), Draft Report on Freedom of Assembly and Association on the Internet (11 May 2015), <https://rm.coe.int/draft-report-on-freedom-of-assembly-and-association-on-the-internet/1680744c4fb>.

⁶² Council of Europe (2015), *ibid*.

⁶³ Conseil constitutionnel [Constitutional Council], Decision No 2009-580DC, 22 June 2009, relative à la loi favorisant la diffusion et la protection de la création sur internet, 13 June 2009, *Journal Officiel de la République Française* [Official Gazette of France] 9675.

⁶⁴ Nicola Lucchi, 'Access to Network Services and Protection of Constitutional Rights: Recognizing the Essential Role of Internet Access for the Freedom of Expression' (2011) 19 *Cardozo Journal of International and Comparative Law* 645.

⁶⁵ *Packingham v State of North Carolina* (n 20).

⁶⁶ *R v Smith* (n 58).

⁶⁷ *George v Union of India* (n 57).

‘[a]ll persons have the right to participate in the Information Society. Facilitation of access to electronically transmitted information, as well as of the production, exchange and diffusion thereof, constitutes an obligation of the State’.⁶⁸ Finland took this approach a step further by legislating that, in addition to mere access, *high-speed* broadband internet is a legally enforceable human right. Even though internet diffusion is extremely high in Finland (96 per cent of the population has internet connectivity), the government explained that the law was important to protect the rights of rural citizens and minorities.⁶⁹

Among these different forums we can observe a series of foundations upon which a right to internet access could be based. Some are based on the importance of internet access to free speech; another is founded on education rights; and yet another is derived from equality-based reasoning. Combined together, we can see the vague outline of a rights-based approach to internet access, but the individual rationales fail to identify a unifying foundation or consistent legal framework. What is consistent is a recognition of the need to view cyber advances through a human rights lens and a desire for a more uniform approach.

5. APPROACHES TO INTERNET RIGHTS IN THE ACADEMIC LITERATURE

Multiple schools of thought have offered theoretical groundings for a right to internet access. They rely on a broad range of philosophical and legal framings which range from information rights to public accommodation laws to access to knowledge theories, and more. What these theories share in common is that they are attempting to build a legal-philosophical foundation on which a right to internet access could rest. We begin this section by reviewing some of these theoretical groundings, before contemplating some of the practical avenues by which internet access could attain human rights status.

One of the most transformative theories in the field of human rights in recent decades has been the capabilities approach to human rights, proposed by Amartya Sen and Martha Nussbaum.⁷⁰ This approach stems from an underlying dissatisfaction with traditional theories of human rights, which emphasise access to goods and resources, and notions of subjective utility.⁷¹ In contrast, Sen and Nussbaum assert that rights emanate from the humanity of each individual, borne from a concept of human dignity. What is important, then, is not the underlying utility or value, but the actual capabilities, or set of functionings, that enable human dignity. The capabilities that fall within this category are ‘human capabilities that can be convincingly argued to be of central importance in any human life, whatever else the person pursues or

⁶⁸ Syntagma (Syn. 2008) [Constitution] 5a (Greece).

⁶⁹ Bobbie Johnson, ‘Finland Makes Broadband Access a Legal Right’, *The Guardian*, 14 October 2009, <https://www.theguardian.com/technology/2009/oct/14/finland-broadband>.

⁷⁰ Among a long list of articles on the topic by Sen and Nussbaum see, eg, Amartya Sen, ‘Human Rights and Capabilities’ (2005) 6 *Journal of Human Development* 151.

⁷¹ Justine Johnstone, ‘Technology as Empowerment: A Capability Approach to Computer Ethics’ (2007) 9(1) *Ethics and Information Technology* 73.

chooses'.⁷² Scholars, not least among them Sen and Nussbaum, have argued that information communication technologies (ICTs) in general and internet access in particular play a key role in advancing human capabilities.⁷³ The capabilities approach theory, applied to internet access, views the capability of human communication as being of central importance to human life – a capability that we found to be highly dependent on internet access. An analysis by William Birdsall connected ICTs with each of the capabilities enumerated by Nussbaum – including life, bodily integrity and emotional development.⁷⁴ A related approach, which is also predicated on opposition to the view of human rights as natural rights derived from a universal human nature, is a theory by Charles Beitz.⁷⁵ Beitz offers a political theory of human rights that emphasises the specific political role each right is expected to play in the international community, and takes into account changing political realities.⁷⁶ Applied to internet access, Beitz would posit that a human right to internet access exists if its use would significantly contribute to the protection of basic social and political interests, or if its absence would endanger the exercise of these fundamental interests.⁷⁷ In attempting to apply Beitz's theory to internet access, scholars argue that its emancipatory character and contribution to political life is inarguably sufficient.⁷⁸

One of the most explicit attempts to ground a human rights theory of internet access was offered by Michael Best in a short essay in 2004.⁷⁹ Even at that time Best argued that information technology was implicitly linked to communication, information and national development. However, rather than sufficing with his identification of a causal nexus between internet access and information rights, Best went one step further to offer one of the earliest proposals for a stand-alone human right to internet access. Best argued:⁸⁰

However, I am making a stronger claim, which is that a symmetric information right to some extent requires the Internet, and thus access to the Internet itself has become a human right ... Thus to be excluded from this information technology is, effectively, to be excluded from information, full stop.

While Best's assertion was a decade ahead of its time, identifying at an early stage the extent of the relationship between internet access and modern life, he was unable at that time to offer a systemic basis for a human rights claim.⁸¹

⁷² Martha C Nussbaum, *Women and Human Development: The Capabilities Approach*, Vol 3 (Cambridge University Press 2001).

⁷³ William F Birdsall, 'Human Capabilities and Information and Communication Technology: The Communicative Connection' (2011) 13(2) *Ethics and Information Technology* 93.

⁷⁴ Birdsall, *ibid.*

⁷⁵ Charles R Beitz, *The Idea of Human Rights* (Oxford University Press 2011).

⁷⁶ *ibid.*

⁷⁷ Xiaowei Wang, 'Time to Think about Human Right to the Internet Access: A Beitz's Approach' (2013) *Journal of Politics and Law* 6, 67.

⁷⁸ *ibid.*

⁷⁹ Michael L Best, 'Can the Internet Be a Human Right?' (2004) 4 *Human Rights & Human Welfare* 23.

⁸⁰ *ibid.* 24.

⁸¹ Wang (n 77).

Not all theories of internet rights derive from a connection with human communication and political participation. A novel theory by Colin Crawford highlights the implications of internet exclusion.⁸² In light of what he called the ‘proportization of cyberspace’, Crawford argued that the best avenue to protect against exclusion of access is to articulate a right to internet access. In contrast to competing theories, Crawford identified public accommodation law as the ideal legal vehicle to ground a right to internet access. A similarly legalistic approach, from another direction, is offered by Molly Land. Land forcefully argues that the multitude of international forms of legal protection for freedom of expression and freedom of information is already applicable to the internet.⁸³ This applicability is founded on language in various treaties (such as Article 19 of the UDHR and ICCPR), which explicitly protects the ‘media’ of expression and information, and applies this protection to later developed technologies. While this would not activate an individual right to internet access per se, the effect would be the same. Land also proposes a separate pathway to rights status by suggesting that the access to knowledge movement could form an appropriate vehicle to impose obligations related to internet access.⁸⁴ Land reviews a range of existing legislation that ensures access to information for disadvantaged and disenfranchised populations in fields as diverse as healthcare, education and culture. By reconciling this movement with the evolving role of internet as a knowledge dispensary, Land suggests that it could lead to the imposition of strong obligations via imprecise norms – ensuring access while maintaining flexibility.⁸⁵

6. POSSIBILITIES WHEREBY INTERNET ACCESS COULD BECOME A HUMAN RIGHT

Over the course of two decades, these theories have offered competing philosophical bases for a right to internet access. While varying in their reliance on legalistic interpretations and capabilities or interests-centred analyses, what the theories possess in common is a shared view of the central role of internet access in realising modern rights. Stemming from these analyses, we can now observe four concrete legal approaches by which internet access could become a human right. The first approach relies on Article 19(2) of the ICCPR, which declares:

Everyone shall have the right to freedom of expression; this right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice.

The argument here is that the language used in this clause is sufficiently broad to apply to new technologies that facilitate the protected activities. Indeed, in his review of the legislative history and intent of this clause, Tenenbaum argues that the broad language was inserted in order to

⁸² Colin Crawford, ‘Cyberplace: Defining a Right to Internet Access through Public Accommodation Law’ (2003) 76 *Temple Law Review* 225.

⁸³ Molly Land, ‘Toward an International Law of the Internet’ (2013) 54 *Harvard International Law Journal* 393.

⁸⁴ *ibid.*

⁸⁵ *ibid.*

cover precisely this kind of future development.⁸⁶ During the drafting phase, two motions were rejected that would have constrained the scope of the protection offered to communications. The word ‘seek’ was preferred over the word ‘gather’, as the drafters wanted to protect ‘active steps to procure and study information’.⁸⁷ In addition, a motion to replace the phrase ‘through any media’ with the more restrictive phrase ‘by duly licensed visual or auditory devices’ was rejected on the ground that ‘it would be contrary to the general principle of freedom of information ... to adopt the restrictive formula’.⁸⁸ In reviewing the Commission on Human Rights Summary Record of the session, Land contends that the more expansive phrase ‘regardless of frontiers’ was specifically included to ensure that the protection would be extraterritorial – a recognition of the international nature of this right. This expansive intent was well summarised by the French delegate to the drafting committee in his famous argument that ‘[t]he members of the Commission must take into account the fact that their work concerned the future and not the past; no one could foresee what information media would be employed in a hundred years’ time’.⁸⁹ The legislative history shows a clear intent for a broad application that offers protection to all proactive pursuit of information and the expression of ideas – regardless of location – essentially internet communications.⁹⁰ Although this direction possesses merit, it relies on a legalistic interpretation of particularly ambiguous language and so the argument that it supports a stand-alone right has not gained traction.⁹¹ This is compounded by the fact that the argument lacks support from the UN Human Rights Committee, which has failed to take up this interpretation.

The second approach to a human rights framework for internet access is based on Article 19 of the Universal Declaration of Human Rights, which guarantees that ‘[e]veryone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers’. As with the ICCPR argument, this claim relies on an expansive interpretation of the clause to read into it a right to internet access. The ambiguous phrasing of ‘regardless of frontiers’ can be understood to indicate that the clause should apply to any medium that is central to facilitating the distribution of ideas and information. This argument was most popular during the 1970s and 1980s in the context of a proposed ‘right to communication’ that was being debated at international forums. Though the internet itself was not yet born at that time, a series of new technologies, such as satellite technology, had drastically altered the communications landscape. In this context, debate centred on whether the UDHR clause gave rise to a right to communicate through the new technologies, or whether it required an additional vote and the establishment of a new treaty. The discussions took place against the backdrop of Cold War tensions, which

⁸⁶ Tenenbaum (n 7).

⁸⁷ Manfred Nowak, *U.N. Covenant on Civil and Political Rights: CCPR Commentary* (NP Engel 1993) 343.

⁸⁸ UN Commission on Human Rights Summary Record, 6th Session (2 May 1950), UN Doc E/CN.4/SR.165, para 59.

⁸⁹ Land (n 83).

⁹⁰ For an in-depth history of the drafting of this clause, see Land (n 83).

⁹¹ Hans Haugen, ‘Is Internet Access a Human Right for Everyone, or Only for Persons with Disabilities?’ (2014) 40 *Kritisk juss*, 26–51.

influenced the debate, yet it was actively decided that an additional statute and body would be required to entrench the right to communicate.⁹² Most scholars accepted that the decision not to recognise a right to communicate following extensive debate in policy and government circles ended the claim that the UDHR guaranteed a right to communicate. Yet others, notably Antonio Pasquali, continue today to claim that this debate was tainted by Cold War rivalries and that a fair reading of the text offers implicit support for a right to communicate in general, using the internet in particular.⁹³

A third and more recent approach claims that national practice and rising levels of institutional support at the international level are sufficient to comprise customary international law and so grant internet access the status of a human right. The key piece of evidence on which proponents rely to support this claim is the 2011 report by Frank La Rue, Special Rapporteur, on the Promotion and Protection of the Right to Freedom of Opinion and Expression,⁹⁴ and a 2016 resolution of the UN Human Rights Council calling for a ‘human rights-based approach to facilitating Internet access’.⁹⁵ In the 2011 report La Rue declares:⁹⁶

Given that the internet has become an indispensable tool for realizing a range of human rights, combating inequality, and accelerating development and human progress, ensuring universal access to the Internet should be a priority for all States. Each State should thus develop a concrete and effective policy ... to make the Internet widely available, accessible and affordable to all segments of the population.

This suggestive phrasing triggered an enormous level of media attention and a torrent of news articles with headlines proclaiming exaggerated claims such as ‘United Nations Report Declares Internet Access a Human Right’.⁹⁷ Beyond the popular media, however, it is clear that these arguments do not meet the legal criteria for proving a human right under customary international law. Beyond the absence of sufficient state practice, the precise wording of the reports constitutes a call to adopt more expansive policies for increasing internet accessibility and affordability – not a claim that internet access has become a human right.

In contrast to the approaches reviewed above, a fourth argument claims that internet access has become an auxiliary human right in support of a series of primary rights. Internet access does not emanate from the human condition and, to this end, Cerf is right in arguing that internet access is not a primary right.⁹⁸ Yet not all rights flow from a person’s inherent humanity; nor need they transcend the social conditions in which we live. According to rights theorist Carl Wellman, primary rights can give birth to either derived or auxiliary rights:⁹⁹

⁹² Joyce (n 7).

⁹³ *ibid.*

⁹⁴ La Rue (n 8).

⁹⁵ UN Human Rights Council (n 60) para 5.

⁹⁶ La Rue (n 8) para 85.

⁹⁷ Jenny Wilson, ‘United Nations Report Declares Internet Access a Human Right’, *Time*, 7 June 2011, <http://techland.time.com/2011/06/07/united-nations-report-declares-internet-access-a-human-right>.

⁹⁸ Vince Cerf, ‘Internet Access Is Not a Human Right’, *The New York Times*, 4 January 2012, 25–26.

⁹⁹ Carl Wellman, *The Proliferation of Rights: Moral Progress or Empty Rhetoric?* (Westview Press 1999).

Derived rights may be either more specific forms of some generic right, as the freedom of the press is a special case related to the right to free speech; or auxiliary rights that serve to protect some primary right, as the right to habeas corpus serves to prevent a violation of the individual's right to liberty.

An auxiliary right is a secondary human (or civil or political) right with all of the protection and limitations of the primary human (or civil or political) right that it serves. What makes it a secondary right is not its import or authority, but simply that it is borne out of its connection with a primary right. Just as the right to liberty can be frozen in certain situations and so the right to habeas corpus would be automatically denied, so too would an auxiliary right to internet access rely on the authority and applicability of any primary rights with which it is connected. The value of this right is that it recognises modern manifestations of particular rights, thus preventing a scenario where society protects human rights while forbidding people from 'engag[ing] in the concrete activities of exercising those rights'.¹⁰⁰ An example of this contextual extension of rights is the right to a free press, which was only born following the invention of the printing press, but without which today the right to free expression and the exercise of autonomy would be completely hollow.¹⁰¹

In the case of internet access, the claim is that a number of human rights have become entirely intertwined with internet access, and that in the absence of internet access the right would lose substance and value. In this case, the primary rights with which it could connect include freedom of expression, freedom of information, freedom of association, the right to national development, the right to education, the right to employment, and more. This article reviewed above how modern forms of expression, association and political participation are becoming dependent on internet access, and if it can be shown that the rights cannot be effectively realised in the absence of internet access, as the empirical experiment above has attempted to do, then this would be sufficient to activate a claim of auxiliary righthood. This theory also recalls elements of the approaches of Sen, Nussbaum, Best and Beitz, who argued that the exercise of human rights, manifesting in their modern capabilities and interests, requires internet access in the most basic sense.

7. DISCUSSION AND POLICY IMPLICATIONS

We began our analysis by observing a concerning paradigm of digital dependence and vulnerability. This paradigm is premised on the idea that the internet has become central to the realisation of our basic rights and civil functioning, while being simultaneously characterised by a sense of vulnerability. Ironically, it is the very openness of the global internet infrastructure that provides both its utility and its susceptibility to infiltration. As internet penetration continues to extend both vertically (new users) and horizontally (additional uses such as the internet of things), this vulnerability will only deepen. The insecurity of the technology is complicated

¹⁰⁰ Mathiesen (n 9).

¹⁰¹ James Griffin, *On Human Rights* (1st edn, Oxford University Press 2009); Mathiesen (n 9).

by the fact that disconnection can be caused by government and non-government actors, through targeted attacks or as a result of collateral damage, and via digital means or because of financial circumstances.

Yet, despite this phenomenon, we should be wary of anointing any technology as a human right. A seminal op-ed in *The New York Times* by Vince Cerf, commonly referred to as the ‘father of the internet’, asserted that ‘technology is an enabler of rights, not a right itself’.¹⁰² Cerf is correct in that internet access does not emanate from a person’s inherent humanity, and is not a natural right equivalent to life, liberty and freedom. However, not all rights need transcend the social conditions in which we live.¹⁰³ ‘Human rights are commonly understood as the inalienable rights to which each person is entitled by virtue of being human’.¹⁰⁴ ‘For an individual claim to constitute a human right it must be fundamental, universal, definable in justiciable form (in other words, capable of judicial interpretation and application), and the actor designated responsible for implementation must possess the necessary capability to fulfil the obligation in question’.¹⁰⁵

Our analysis indicates that we have grown dependent on internet access to fulfil basic social and political tasks and to realise basic human rights. This dependence will continue to grow for as long as internet-based activities supplant and replace the original methods through which we originally realised our rights. After many years of debate, there is an emerging consensus that internet access is a human right – and the demand to formulate a consistent human rights framework has been echoed by the United Nations,¹⁰⁶ by courts in the United States, Europe and Asia,¹⁰⁷ and by a series of states.¹⁰⁸ The remaining question is not whether internet access is a right, but under what framework the right manifests.

Each of the four pathways that we reviewed has its proponents in the literature, and each option possesses advantages and weaknesses. The advantage of options one and two – relying on Articles 19 of the ICCPR and UDHR respectively – is the simplicity of the argument. At its core, this argument proposes the extension of a universally accepted right, anchored in multiple international instruments, to a modern technology. The phrases ‘regardless of frontiers’ and ‘through any media’ appear to imply a clear intent for an expansionist interpretation. Opposing this trend is the fact that it has gained no international traction. Despite ample opportunity, no state or international body has taken up this interpretation, and the argument has largely fallen from the international agenda. Another weakness is that this option ties a right to internet access only to freedom of expression (and possibly information), ignoring the strong nexus with other rights. The third option, proposing international customary law, is the most expansive pathway. With the sheer number of legislative, legal, constitutional and international proposals that anchor

¹⁰² Cerf (n 98) 25.

¹⁰³ Wellman (n 99).

¹⁰⁴ Alexander Timmer, ‘Report – State-of-the-art Literature Review: Human Rights, Democracy and the Rule of Law’ (2013), Frame (Fostering Human Rights Among European Policies), Large-Scale FP7 Collaborative Project, GA No. 320000.

¹⁰⁵ Stephen Tully, ‘The Human Right to Access Electricity’ (2006) 19 *The Electricity Journal* 3, 30–39.

¹⁰⁶ La Rue (n 8); UN Human Rights Council (n 60).

¹⁰⁷ *Packingham v State of North Carolina* (n 20); Conseil constitutionnel (n 63); *George v Union of India* (n 57).

¹⁰⁸ Tully (n 105).

some form of internet rights in national practice, there may well come a time when internet access could become a stand-alone human right as a matter of customary international law. At this stage it is too early to conclude this, and we will need to see additional international and state-based implementation before it can be further scrutinised.

As such, we contend that auxiliary righthood has the strongest claim – both on account of its own merits and because of deficiencies in the alternative pathways. A structure of auxiliary rights is suitable for the nature of internet access as it views internet access as tied to the realisation of other primary rights. The empirical data reviewed above supports the notion of internet access as an auxiliary human right as it reveals a direct correlation between connectivity and the ability to realise basic civil rights. This solution of an auxiliary right offers both the concrete protection of human rights and flexibility as digital connectivity develops. This discussion would benefit from future research which expands this method and experimentally tests the relationship between internet access/deprivation and additional human rights, such as the rights to education, development and employment.

A common refrain and potential limitation on the notion of internet access as a human right is the absence of internet penetration among developing countries. Can we claim in good faith that internet access is a universal human right where access is so skewed towards developed countries? This argument is especially potent in advocating auxiliary righthood, as dependence cannot be shown where access is absent. While there is merit in this argument, we suggest three responses as to why internet access still bears a claim to human rights status. First, the accelerating rate of internet penetration will soon make this point moot. The reason for this is that even in countries with relatively low levels of internet penetration, it is only a matter of time until they too achieve digital saturation. To illustrate this point, the most recent internet tracking report indicates that more than 250 million new users logged on to the internet for the first time during 2017.¹⁰⁹ Global internet penetration is already at 53 per cent, with the fastest growth taking place in Central Africa and Southern Asia, driven by more affordable smartphones and mobile data plans.¹¹⁰ Second, we can consider an analogous situation with regard to other accepted human rights, such as the right to healthcare. Realising the right to healthcare relies upon the presence of doctors, clinics, medical supplies and hospitals. In countries without access to doctors or medical equipment, society claims that the right to healthcare is going unrealised. This is despite the fact that the country may never have had widespread access to hospitals. This assertion reflects the fact that modern healthcare is associated with modern manifestations of the right. The same goes for the right to education and schools, and the right to due process and a functioning judicial system. Thirdly, we should be careful about accepting the rationale that those without access to the internet have no need for it, as this will serve to perpetuate the global digital divide.¹¹¹

¹⁰⁹ Kemp (n 3).

¹¹⁰ *ibid.*

¹¹¹ Mathiesen (n 9).

8. ACTUALISING A RIGHT TO INTERNET ACCESS

Granting internet access the status of a human right would have far-reaching social implications and would drastically affect the cyber status quo in a number of areas. Such a determination would affect public policy, cyber regulation, and the inherent tensions between national security considerations and civil liberties. It could moreover impose significant positive obligations upon a government to ensure this right for its citizens, in contrast to the past where digital governmental obligations have been cast as negative rights.¹¹²

A common misconception about a human right to internet access, expressed among others by Vince Cerf in his famous *New York Times* op-ed,¹¹³ is that governments would be compelled to supply every person with a computer and internet connection. ‘This misconception is based on a misunderstanding of the sorts of obligations that human rights impose on states’.¹¹⁴ Among developing countries, recognising a reality of limited resources and competing priorities, the United Nations has made clear that states are only obliged to progressively fulfil such rights to the best of their ability.¹¹⁵ Among developed countries, where internet accessibility already tends to be high, a right could manifest in efforts to minimise the digital divide. For example, a study in Glasgow demonstrated that public libraries could play a role as a provider of public internet access.¹¹⁶ In other cases, the market could be encouraged to offer more affordable internet access in recognition of its social value. In Spain, for example, broadband services are legislatively compelled to offer reasonably priced broadband services at speeds of at least one megabit per second.¹¹⁷ Similar forms of legislative, constitutional and legal protection have emerged in countries such as Finland,¹¹⁸ Greece,¹¹⁹ Costa Rica¹²⁰ and France.¹²¹ Individual policies would need to be tailored to the requirements of particular countries, but these are just some of the possible responses to a positive duty to ensure internet access.

Beyond positive duties to guarantee simple connectivity, states could accrue additional social responsibilities. The ability of states to restrict internet access (to the entire population or specific persons such as prisoners and security threats) would be limited. The proportionality calculus during offensive cyber attacks would be altered seeing as any cyber attack that deprived a civilian population of internet access would prima facie infringe their rights and increase the damage

¹¹² Andrew T Hopkins, ‘Right To Be Online: Europe’s Recognition of Due Process and Proportionality Requirements in Cases of Individual Internet Disconnections’ (2010) 17 *Columbia Journal of European Law* 557.

¹¹³ Cerf (n 98).

¹¹⁴ Mathiesen (n 9) 17.

¹¹⁵ *ibid.*

¹¹⁶ Gillian Anderson and Jason Whalley, ‘Public Library Internet Access in Areas of Deprivation: The Case of Glasgow’ (2015) 32 *Telematics and Informatics* 521.

¹¹⁷ Sarah Morris, ‘Spain Government to Guarantee Legal Right to Broadband’, *Reuters*, 17 November 2009, <https://www.reuters.com/article/spain-telecoms/spain-govt-to-guarantee-legal-right-to-broadband-idUSLH61554320091117>.

¹¹⁸ Johnson (n 69).

¹¹⁹ Syntagma (n 68).

¹²⁰ *Guzm, Fallas and Vila v Ministry of Environment, Energy and Telecommunications*, Judgment 12790 of the Supreme Court, File 09-013141-0007-CO, 30 July 2010 (Costa Rica).

¹²¹ Conseil constitutionnel (n 63).

caused. A new question would be raised regarding a duty to protect civilians from crippling cyber attacks that inhibit their access to the internet. On a practical basis, such a finding is unlikely to spur a flood of new legislation, since governments do not necessarily respond to developments in human rights theory. Multiple governments and international institutions are already enacting protection for internet accessibility because of its connection with economic development and educational outcomes.

9. CONCLUSION

The demand to address modern cyber challenges through a human rights framework has echoed through national legislative bodies, international institutions, courts and the halls of academia. Rather than merely serving as a digital tool to facilitate the realisation of human rights, internet access has become inextricably intertwined with the basic capacity of how human rights manifest in the modern age. As digital means of political participation supplant their traditional analogue equivalents, this demand for a human rights framework will become more urgent.

Yet, despite a burgeoning discourse in the academic and legal communities, there is no consensus about the best human rights framework that covers this complex situation. This article considered four prominent contenders for the throne. While each has its merits, we contend that auxiliary righthood bears the strongest claim. A structure of auxiliary rights suitably reflects the modern nature of internet access by granting flexibility in its application as the technology evolves and the social implications become clearer. The empirical data, what little there is, similarly supports this conception by tying internet access to particular human rights such as freedom of expression, freedom of association and freedom of information.

Looking ahead, regardless of which legal framework the international community coalesces around, the next challenge will be to develop practical policy measures that reflect this new perspective. This is likely to impose positive duties on governments to guarantee internet connectivity through some form, and perhaps even to ensure high speed connectivity and secure connectivity. While many governments are already doing this as a result of economic incentives, a human rights motivation may manifest differently. Lastly, we reiterate that though the debate on the role of technology in civic life has developed significantly, there is a stark absence of empirical knowledge with regard to the effect of internet access on political participation or our dependence on such access to realise our basic civil rights. In the context of our growing vulnerability to disconnection, understanding this relationship will take on growing importance. We encourage additional research that attempts to isolate the precise contribution of digital connectivity to political participation and human rights generally, and individual rights in particular.