

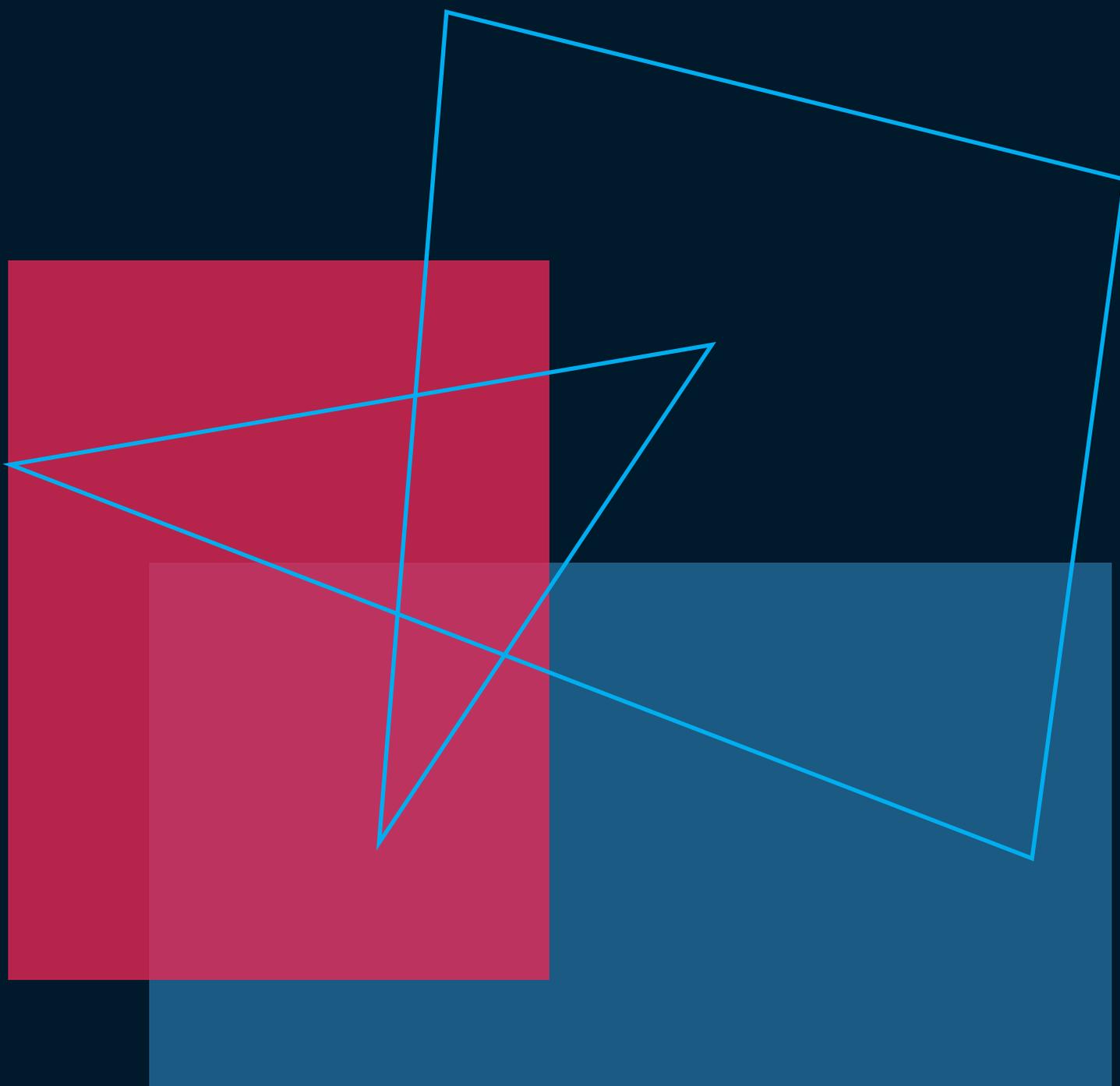
DEMOS

Quality Control

Reading, publishing and the
modern attention economy

Andrew Gloag
Alan Lockey

July 2019



Demos is a champion of people, ideas and democracy. We bring people together. We bridge divides. We listen and we understand. We are practical about the problems we face, but endlessly optimistic and ambitious about our capacity, together, to overcome them.

At a crossroads in Britain's history, we need ideas for renewal, reconnection and the restoration of hope. Challenges from populism to climate change remain unsolved, and a technological revolution dawns, but the centre of politics has been intellectually paralysed. Demos will change that. We can counter the impossible promises of the political extremes, and challenge despair – by bringing to life an aspirational narrative about the future of Britain that is rooted in the hopes and ambitions of people from across our country.

Demos is an independent, educational charity, registered in England and Wales (Charity Registration no. 1042046).

Find out more at www.demos.co.uk

DEMOS

Open Access. Some rights reserved.

As the publisher of this work, Demos wants to encourage the circulation of our work as widely as possible while retaining the copyright. We therefore have an open access policy which enables anyone to access our content online without charge. Anyone can download, save, perform or distribute this work in any format, including translation, without written permission. Its main conditions are:

- Demos and the author(s) are credited
- This summary and the address www.demos.co.uk are displayed
- The text is not altered and is used in full
- The work is not resold
- A copy of the work or link to its use online is sent to Demos.

You are welcome to ask for permission to use this work for purposes other than those covered by the licence. Demos gratefully acknowledges the work of Creative Commons in inspiring our approach to copyright. To find out more go to www.creativecommons.org



Kindly supported by The Publishers Association.

THE PUBLISHERS
ASSOCIATION

Published by Demos July 2019

© Demos.
Some rights reserved.
76 Vincent Square
London, SW1P 2PD

T: 020 3878 3955
hello@demos.co.uk
www.demos.co.uk

Contents

Acknowledgements	5
Executive Summary	6
Introduction – A new world of words	8
01. Reading and wellbeing in the digital era	10
02. Britain inside the attention economy	12
03. The social role of publishing	14
04. Reforming the reading environment	16
Conclusion – Towards a digital social charter	18
Appendix One	20
References	21
Licence to Publish	22

Acknowledgements

This report has benefited from the hard work, expertise and talent of a number of brilliant people.

First, we would like to thank the Publishers Association for their kind support which made this research possible.

We are also grateful to the policy experts, academics and practitioners who were kind enough to offer their thoughts throughout the project.

At Demos, the most important thanks go to all our colleagues – as ever, this is a collective contribution. In particular, to Asli Atay and Sacha Hilhorst who helped guide us through the Millennium Cohort Study data; Ellen Judson who was a constant source of advice on online harms; Ben Glover, Alex Krasodonski-Jones, Josh Smith, Rose Lasko-Skinner and Polly Mackenzie who provided thoughtful policy advice throughout. Finally, to our fantastic external affairs team for their help in the report's production.

Andrew Gloag, July 2019

Executive Summary

The way in which we read has changed dramatically with the dawn of the digital age. Information is available with the touch of a button, or a tap of the finger. As the transition has been made from paper to screen, our understanding of what this means for both our personal reading behaviour and wider society is not entirely understood, and often misunderstood. The effects, especially of social media, on wellbeing have come under particular scrutiny.

This report begins by exploring how we explore content in this new reading environment, and whether this has had any effect on key areas such as concentration, memory, and mental health. We then look at what we are consuming, and how economic and social models underpinning the production of content for online markets are radically different from the models which preceded them in the offline world.

Providing a clear analysis of the differing effect of reading, for example, an eBook on a Kindle and Twitter on a smartphone, can be challenging. However, we can say that depending on the activity, concentration, attention and memory can all be affected to varying degrees, at least in the very short term. Our own original analysis of the Millennium Cohort Study found that children who spend more time on social media, for example, are less likely to report being happy with their life. However, this is a complex area which is hotly disputed.

The available evidence suggests that screens themselves appear, in moderation, not to have any significant impact on health and wellbeing. Besides which, reverting to a world where the only written

words are physically printed not only seems wildly impractical and potentially regressive but also avoids the crucial issue of what, not how, we are consuming.

Many of the new problems we have identified in the report can be associated with the way in which new content is consumed, but we cannot escape the fact that much of the harm is caused by substance rather than the style of content now available. We therefore propose a range of new measures for both the government and the industry to create a truly enlightened society of readers and writers for the new digital age.

Recommendations

A Rebalanced Attention Economy

Recommendation 1: The Government and universities should commission further research on the design and behavioural factors that lead to healthier, more community-spirited online spaces.

Recommendation 2: The Government should work with and fund the publishing industry to develop a 'Citizen Editors' voluntary training scheme.

Recommendation 3: As part of the Digital Charter initiative, the Government should look to develop a public service publishing ethos, which should apply to all publishers, including technology platforms. The long-term priority should be to ensure that the public service publishing considerations materially alter search engine optimisation and content-promoting algorithms, so that harmful and poor-quality content is less valued.

Recommendation 4: The Government should work with tech companies to develop new product standards that can allow users to control their settings more easily or that have default settings that promote a better reading environment. For example, a 'reading mode' could immediately switch online browsing on smartphones to optimal settings for reading (e.g. blocking distracting pop-ups/ adverts).

Recommendation 5: The Government needs to reinvigorate the character and resilience education agenda in all schools, colleges and adult education settings. This should be incorporated into Ofsted's new inspection framework.

Support for quality content creators

Recommendation 6: The Government should zero-rate VAT on ebooks, audiobooks, digital newspapers, journals and other online publications.

Recommendation 7: The Government should make sure that both it and The Charity Commission deliver on recent promises to enable the philanthropic funding of public interest journalism, as recommended by the Cairncross review.

Recommendation 8: Arts Council England should spend more on literature and the Government should encourage it to do so. It should also ensure that the UK retains its membership of Creative Europe, with funding access, after Brexit.

Recommendation 9: The Government should consult with the publishing industry on a potential publishers' waiver on Article 11 of the Digital Single Market Directive. The objective should be to put publishers themselves in control of their own rights, so that they can pass on their licence to publish if they choose, but be

compensated by tech companies, as Article 11 recommends, if they prefer.

Reading and Writing in Society

Recommendation 10: The Government should invest in school and college libraries with the ambition that all schools can provide access to safe reading spaces that protect children from the attention economy whilst they read online.

Recommendation 11: The Government should work with reading charities to ensure that all disadvantaged children enjoy an entitlement to a universal summer reading and creative writing programme over the summer holiday as part of a broader cultural enrichment strategy.

Recommendation 12:

The Government should develop a national lifetime book gifting scheme, enshrining book ownership and reading as a key citizen entitlement. It should also work with publishers to explore the possibility of public book banks, run by Reading Ambassadors.

Introduction: A new world of words

Fewer things seem more important, more central to the human condition, than reading. The beauty and utility it provides our lives is so vital it can almost seem banal. As Scout says, in *To Kill a Mockingbird*, when Miss Caroline threatens to restrict her reading privileges:

"Until I feared I would lose it, I never loved to read. One does not love breathing".

It appears that many of us in Britain feel a little like Scout does about reading. Around 200 million books are sold each year, amounting to hundreds of millions of hours of reading.¹ And that is before we even factor in the magazines, periodicals, journals, research papers, pamphlets, webzines, blogs and all the other countless conduits for the written word we voraciously consume. The contents of which – with friends, family, colleagues and even complete strangers – mediate our conversations and ultimately our lives.

Demos believes passionately in the power and pleasure of reading. In our recent report, *A Society of Readers*, we highlighted how reading even has the potential to alleviate some of the great social problems of our time, from social mobility to loneliness, mental and physical health challenges. Allowing ourselves to dream a little, we called for:

"A society that saturates itself with books for everyone at every point of life. A state that marks significant life events with the gift of reading – especially to its children. A school system where children, by and large, arrive with a love of reading that was handed down to them by their parents who were supported at various points in their life to turn to books themselves..."

...a society where workplaces may even carve out the time to allow their employees time to attend further reading classes and reading groups. And a society that does not forget that its ill and ill-informed not only have cognitive needs but imaginations that can still light a fire too – and where we encourage them to share these imaginations by bonding with their contemporaries over the written word."²

We still hold fast to that vision of a society of readers. However, the written – or spoken – words we so cherish do not leap fully-formed onto our pages or screens of their own accord. Sadly, for writers, there is no magic way of moving directly from thought to expression. Rather, those words are discovered, curated, cultivated, edited, proofed, fact-checked, nurtured and ultimately published by one of the most strategically important industries, both culturally and economically, in Britain. Last year alone, the publishing industry created £3.2bn worth of direct gross value added to the UK economy, supported 70,000 jobs and generated immeasurable soft power capital.

However, the purpose of this report is not merely to recant the prior importance of publishing to delivering a genuine society of readers. Rather, it is to understand how that industry might help us tackle some urgent social challenges that, in this case, may lie a little closer to home. Because one thing that you can say about reading and publishing in the 21st century which requires very little research is just how profoundly the way we do both has changed. For one, vast swathes of the published written word are now viewed

on screens that have come to dominate, if not our lives, then certainly the way we access information about the wider world. Fully two-thirds of adults (64%) say the internet is an essential part of their life, a statistic that would have been unthinkable even ten years ago, when smartphones were only just beginning to take hold of the communications market.³ That today this figure seems unsurprising only shows how far we have come in so short a space in time. Both the reading environment and the publishing industry have been totally transformed. We live in a new world of words.

It is, though, a new world that people are beginning to worry about. To read the Government's recent Online Harms White Paper,⁴ for example, is to enter a dark world of cyberbullying, radicalisation, fake news and poor mental health outcomes – especially for young “digital natives” (those who grew up in the digital age and have never known a world without the internet). Some of these issues have been associated by some commentators with the shift in our reading environment, the over-exposure to screen time, in and of itself. However, by far the larger concern and bigger public policy debate, concerns content. Yes, as Bill Gates remarked presciently and more optimistically over 20 years ago – “content is king”.⁵ But sadly not always in a good way – the content we, and young people especially, read online could be harmful. Worse still, an entire economic edifice – what some commentators have called the “attention economy” – could be quite deliberately keeping us hooked on inaccurate, harmful or emotionally exploitative content.

This was not quite how Gates saw it going. Yet if we want better content in our lives then surely it pays to examine the lessons we could learn from an industry that has been informing and entertaining us through its judicious moderation of words for centuries? We believe it does and that, more importantly, it may be the only way towards healthier online spaces and a true society of readers.

The report is divided into four chapters.

Chapter 1 assesses the evidence base for a range of social problems that have been linked to this shift in the digital reading and content environment;

Chapter 2 presents a comprehensive picture of the societal attitudes and lived experience of British citizens in the modern attention economy;

Chapter 3 explores the social role of publishing in Britain and what lessons we can learn that might meet some of our harmful content challenges;

Chapter 4 suggests a reform agenda with which policymakers might boost publishing's social role, tackle the damaging incentives of the attention economy, create safer online spaces and help nurture a society of readers.

As well as desk-based research, this report is underpinned by a mixed-method approach that draws upon two discussion groups with members of the public (both in London); a nationally representative polling survey; secondary quantitative analysis of the Millennium Cohort Study, a comprehensive literature review and a short semi-structured qualitative interview series with experts and policymakers operating with the publishing industry. Further details about our methodological approach – and the Millennium Cohort Study analysis in particular – can be found in Appendix One.⁹

01.

Reading and wellbeing in the digital era

It is important, at the outset, to have a firm grasp on all aspects of, and social challenges that might arise from, the profound shift in our reading culture.

The digital age has brought with it huge changes in the way we produce and receive published content, with the vast bulk of the information we consume now read on screens, produced by an ever-proliferating array of content producers. The effects of this dramatic shift to the reading and content environment are well researched but hotly disputed. Social media content in particular has been held responsible for a wide variety of online harms – from shaking faith in democracy through the passive promotion of disinformation, right the way through to altering the way our brains store and process information. This chapter assesses the evidence base for a range of social problems that have been linked, rightly or wrongly, to this shift in the digital reading environment:

- Screen usage (and associated negative impacts);
- Worse concentration;
- Poor mental health and wellbeing;
- **Effects on neuroplasticity and memory;**
- Misinformation.

If this list seems broad, then that is deliberately so. For though this report is ultimately about how publishing can improve the digital content ecosystem, it is important at the outset to have a firm grasp on all aspects of, and social challenges that might arise from, the profound shift in our reading culture. That said, it is also important to appreciate the challenges and limitations associated with researching this area. Firstly, the literature studying the effects that flow from this profound change is clearly in its infancy. But also concepts such as “screen time” are usually defined differently across different studies, often covering multiple facets of digital use that make little analysis of the content consumed. The concept of “screen time” itself has been called “statistically noisy nonsense”.⁶ Therefore, providing a clear analysis of the differing effect of reading, for example, an eBook on a Kindle and Twitter on a smartphone, can be challenging.

Screen usage and the reading environment

One area of research that has received significant scrutiny is the impact that the shift towards more reading on screens has had upon our reading habits in and of themselves (as distinct from their potential link to social harms such as mental health challenges). For example, there is a well-advanced argument that the shift from printed word to digital screen has significantly changed the way we interact with our media, making us less likely to read a document linearly and instead encouraging habits such as the rapid scanning of text for key information. A 2005 study by Liu supports this hypothesis, suggesting that screen-based reading is characterised by more time spent browsing, scanning, keyword spotting, engaging in non-linear reading (reading out of order) and reading more selectively. Conversely, screen reading meant less time spent on in-depth and concentrated reading, and being more prone to distraction.⁷ Similarly, Myberg found that common activities typically performed when reading certain types of information on paper – such as highlighting and annotating – have not yet fully migrated onto the digital screen.⁸ For example, while scanning and skimming are ubiquitous in all forms of reading, it is easier on digital technology with the use of keyword searching and scrolling.⁹

There are also concerns that the move away from physical books and the corresponding loss of a tactile element to reading means that something essential is lost from the experience. Labelling this feeling “haptic dissonance”, Gerlach and Buxman argue that in failing to recreate this tactile experience, screens and e-readers may prevent people from navigating long texts in an intuitive and satisfying way.¹⁰ There is at least some market evidence to back this up too – print books are still the most popular form of books purchased in the UK, with 62 percent of 16-24 year olds – i.e. so-called digital “natives” – also preferring physical books over their digital equivalents.¹¹ Furthermore, a 2009 study by Sanchez and Wiley suggested that reading text on a screen and scrolling through that information could decrease comprehension and reduce the understanding of complex topics.¹²

Aside from the impact screen reading has on reading habits, there are also a number of widespread worries that too much screen time can be harmful. For example, prolonged periods of looking at a screen have been found to put strain on the eyes leading to “computer vision syndrome”, or “digital eye strain”, with symptoms including eye strain, headaches, blurred vision, dry eyes, and neck or back pain. Medical guidance has adapted to this with the so-called 20:20:20 rule, which recommends looking away from the screen every twenty minutes, for twenty seconds, at something that is twenty feet away.¹³

More recently, concerns have grown about the blue light emitted from devices such as smartphones and the potential impact on sleep quality and duration. For example, Harvard University researchers found that the blue light emitted by the most popular handheld devices can suppress the sleep hormone melatonin for about twice as long, when compared with a control green light, as well as also shifting our natural circadian rhythms by twice as much (3 hours vs. 1.5 hours).¹⁴ This research backed up a 2015 study that such devices “often generate substantial short-wavelength (blue-enriched) light emissions that can adversely affect sleep.”¹⁵ However, the study did not examine whether using these devices before sleep had a significant effect on sleep quality and duration directly. Moreover, whilst an analysis of the 2016 US National Survey of Children’s Health found that “Each hour devoted to digital screens was associated with 3-8 fewer minutes of nightly sleep and significantly lower levels of sleep consistency”, the research concluded that screen use “has little practical effect on pediatric [sic] sleep”, and that “contextual factors surrounding screen time exert a more pronounced influence on pediatric sleep compared to screen time itself”.¹⁶ Ultimately, a lack of sufficient trial evidence makes it difficult to draw firm conclusions about the causality of any links between screen use and poor sleep at this stage. It is possible, for example, that an “effect-cause” relationship could explain the link as people with pre-existing insomnia may increase phone use while they are struggling to sleep. The guidance from the Royal College of Paediatrics and Child Health (RCPCH) currently recommends that screens should be avoided one hour before bed, so as to reduce stimulation from the light or the content of the screens.¹⁷

Concentration

There is also a wide body of literature that suggests the presence of a wide range of digital devices on our person is having a profound effect on our concentration, and

consequently our productivity. A 2015 examination of the impact of new technology upon multitasking patterns in everyday settings found, perhaps unsurprisingly, that activities like studying, doing homework, learning during lectures and learning from other sources are all negatively affected by concurrent multitasking with technology. Young people who multitask frequently may be poorer at ignoring irrelevant environmental information and focusing on the task at hand.¹⁸

Similarly, a 2005 study on “infomania” (the negative effects of “always-on” technology) found that distraction diminishes IQ test performance, with the impact greater for males than females.¹⁹ Noisy conditions – including receiving text messages, phone calls, and emails – also precipitated a striking increase in self-reported stress; on a 0-10 scale of “stress experienced during the test”, women reported an increase of 4.75 - 6.75. For men, this increased from 2.75 to 5.5.

So why do we multitask so widely when it appears to have such a detrimental effect on our productivity? Research has found that while it may not fulfil our cognitive needs, it is effective at meeting emotional needs, like being entertained or feeling productive, without actually meeting the cognitive needs of studying effectively or getting work done.²⁰ Moreover, the positive feelings associated with multitasking create a feedback loop that makes people more likely to multitask in the future.

Research by Marci found that “digital natives” – those who were born in and never remember anything other than the internet era – switch their attention between media platforms 27 times per hour – about every other minute, and 35% more than “digital immigrants” (i.e. those who migrated to the digital world, with some experience of the pre-internet era).²¹ “Digital natives” also spend significantly more time using multiple platforms, which leads to a “more constrained pattern of emotional engagement with content”. They are more likely to use media to regulate their mood, with the study suggesting that as digital natives grow tired or bored, they turn their attention to something new.²²

Of course, this is not entirely a new challenge of the smartphone era. Numerous studies also suggest that mobile phones may distract our attention in different settings. Interruptions by mobile or conventional phones, whether it be through notifications or phone calls, can easily derail our train of thought.²³ However, there appears to be a great deal of evidence to suggest “engagement with smart devices can have an acute impact on ongoing cognitive tasks” in the very short-term.²⁴

Mental health and wellbeing

Clearly, there has also been a lot of concern around the impact increased digital activity has on mental health. This has been especially prominent following the death of Molly Russell, whose parents held Instagram, and the dissemination of graphic content on the platform, partly responsible.²⁵

For such policy reasons – as well as data ones, with young people easily comprising the biggest usage group²⁶ – most research has focused on younger age groups and tends to focus specifically on the impact of social media, rather than on other types

of short-form or low-quality media content. However, in truth it is incredibly difficult to assess the impact a person's digital activity or social media usage specifically has on their general mental health. Not only is the available data highly open to interpretation, even when there are stark relationships it is often extremely difficult to attribute causality. As such, journalistic articles that emphasise the supposedly negative effects of social media upon mental health sometimes fail to distinguish between different types of social media platforms, or different classifications of frequency of use, or different definitions of wellbeing, and so on.²⁷

The existing academic literature is equally mixed. Some studies have found that Facebook use, for example, can improve self-esteem²⁸ by "satisfying users' need for self-worth and self - integrity."²⁹ However another study, based on surveys sent to participants after every time they used Facebook, have found that increased use of that particular platform can decrease overall wellbeing.³⁰ Meanwhile, the recently published King's Trust Youth Index found that nearly half of 16-25 year olds surveyed (46 per cent) think that comparing their lives to others on social media makes them feel "inadequate" – a finding partially reflected in our focus groups and polling analysis (see Chapter Two).

Overall, the impact of Facebook on wellbeing can vary greatly depending upon how the user interacts with it. Research by Burke and Kraut, for example, found that receiving direct communication from trusted friends is more likely to increase wellbeing than scrolling through their photos.³¹ Equally, one theory – dubbed the "Goldilocks Hypothesis" – posits that moderate use of social media can have a net positive effect, allowing the exercise of social skills and increasing connection to peers.³² There is, according to the same study conducted by Przybylski and Weinstein (academics from the University of Oxford and Cardiff University respectively) a level of digital activities that is "just right". Too little, and the user would forego the benefits that digital activities bring; too much and other potentially rewarding activities, such as real-life social interaction, might be foregone. On the other hand, when Demos conducted a thorough quantitative analysis of the latest wave of Millennium Cohort data, we found that the participants – now aged fourteen – who spent more time on social media seemed to suffer a range of worse wellbeing outcomes (see next page).³³

Demos' original quantitative analysis of the Millennium Cohort Study³⁵

Demos analysed Wave Six of the Millennium Cohort Study which includes a range of questions about social media use and other digital habits. The fieldwork for this Wave was carried out in 2015, when the participants in the sample (just under 12,000) longitudinal series were 14 years old.

In our analysis, we defined a low social media use group as those who use social media up to one hour per day (34.6 % of total sample). Medium social media use is defined as one or two hours per day (32.3 %) while high use is defined as three or more hours per day (33.1 %).

Our top line findings are as follows:

Reading

- Reading for joy correlates with happiness at school. 62.5% of children who read for joy are happy with their school work whereas only 49.6% of non-readers say the same.

Consumerism

- Social media use seems to reinforce consumerism. 14 year olds who spend three or more hours per day on social media are over 20 % more likely to care about popular labels, compared to those who spend up to an hour per day (at 82.6 % compared to 61.9).
- Frequent readers, on the other hand, seem to care less about popular labels than their peers, at 63.5 % compared to 79.3 %.

Happiness

- Children who spend more time on social media are less likely to report being happy with their life. Among children who use social media no more than one hour per day, seven in ten (69.9 %) report feeling happy. Among high social media users, only half say the same (52.5 %).
- Girls especially tend to be unhappy when they spend a lot of time on social media. Only 46.5 % of the high use group report being happy with their life, compared to 64.4 % for boys in the same group. Girls are also more likely to be heavy social media users (43.6 % for girls versus 22.5 for boys).
- Children who spent three or more hours per day on social media were also more likely to report concentration problems. The figure was 60.5 for the high use group compared to 49.2 % for the middle use group and 45.2 % for the low use group.

Body image and mental health

- Children who spend more time on social media are less likely to be happy with the way they look (29.7 % for the high use group, compared to 47.5 % for the low use group). This difference is driven especially by girls who spend a lot of time on social media. They have the worst body image of any group, with only 21.6 % saying they are happy with their body.
- Among girls who spend three or more hours per day on social media, six in ten are hoping to lose weight (60.0 %). For girls who spend little time on social media, it is closer to four in ten (43.2 %). For boys, we see similar patterns but much less stark.
- Self-harm is more common among high social media users. 14 year olds who spend three or more hours per day on social media are twice as likely to self-harm as their peers who spend more time offline, at 23.3 % compared to 9.1 and 11.4 % for the low and middle use groups respectively.
- Again, this is more pronounced for girls. Of girls who spend more than two hours per day on social media, almost three in ten (29.3) have self-harmed over the last year.
- The high-use group was also more likely to experience feelings of self-hatred, at 35.7 %, compared to 17.1 % for the low social media group.

However, in fairness, many studies into social media and its effects (including Demos's original analysis of Millennium Cohort Study data) are based upon secondary quantitative analysis of large, often self-reported datasets. However, when the Oxford Internet Institute performed a specification curve analysis it found that though there is clear empirical evidence linking high levels of digital technology use to negative impacts upon psychological wellbeing, the association is actually "too small to warrant policy change".³⁶

In short, there needs to be more research into digital use and wellbeing, with clearer data and more thorough analysis. We are confident this will emerge soon – the evidence base on this topic is growing all the time. However, for now firm conclusions are perhaps inadvisable.

Effects on neuroplasticity and memory

Neuroplasticity can be defined as the "ability of the nervous system to respond to intrinsic or extrinsic stimuli by reorganizing its structure, function and connections."³⁷ In other words, the brain can rewire itself to adapt to new environments. The degree to which our brains are plastic changes across our lifespan, but this depends on a number of genetic and environmental factors, and how they interlink.³⁸

There is a large body of evidence that neuroplasticity can be observed with meditation and treatment of brain injury. However, the idea that the brain might be "re-written" through repeated overuse of digital media – which has been a regular focus of media articles³⁹ – is extremely contentious. Indeed, more broadly there is a mixed and varied literature on whether a causal link between use of digital technology and changes in the brain can be established.

Perhaps the most notable proponent of the idea is Baroness Greenfield, who has written extensively on the supposedly harmful effects of short-form media content, particularly on younger people and children. Comparing the effects of technology, she is quoted saying "I want parents to be so aware of the risks of the technology that they intervene to stop their children doing it, like with smoking."⁴⁰

Greenfield argues that technology – incessant exposure to social media, search engines and videogames – is capable of rewiring our brains and questions whether the minds of "digital natives" – those who grew up with the technology – are different to "digital immigrants" (those for whom social media is relatively new). Her book, *Mind Change*, draws an analogy between this issue and climate change in terms of the scale of the social challenge we may soon face.⁴¹ This compliments the long body of material that purports to find a link between changes in the brain and use of digital media – for example, by Carr⁴² and Small.⁴³ However, Greenfield's research has been subject to much criticism from some scientists and clinicians. Writing in the British Medical Journal (BMJ), Bell (et al.) expressed a concern that "Greenfield's claims are not based on a fair scientific appraisal of the evidence, often confuse correlation for causation, give undue weight to anecdote and poor-quality studies, and are misleading to parents and the public at large."⁴⁴

Putting the neuroplasticity debate to one side, the widespread prevalence of internet

enabled devices does seem to have significantly changed the way we obtain information. Now, with the power of search engines like Google, we can instantly find volumes of knowledge greater than the multi-volume encyclopedias of yesteryear. Alongside this rise in knowledge, off-shore and at our fingertips, have come worries that the availability of information has had a detrimental effect on our memory. In 2011, a study by Betsy Sparrow et al. looked at how we memorise information when we expect it to be stored by a computer for later use.⁴⁵ It concluded that instant access to information through search engines may have an impact on our ability to memorise information in the long term. By relying on our devices to produce information, we would be more likely to discard information, knowing that it would be instantly available. This research coined the term “digital amnesia” to describe this effect.⁴⁶ Similarly, a study in 2015 found that those who think more intuitively and less analytically when given reasoning problems were more likely to rely on their smartphones.⁴⁷ The available evidence therefore suggests that when we turn to devices such as search engines, we generally learn and remember less from our experiences. However, it should perhaps be pointed out that such concerns regularly emerge when new technologies create better ways to store information. For example, similar studies found the same phenomenon occurs with more traditional ways of storing knowledge, such as the “Rolodex”.⁴⁸

Addiction

While the evidence of a clinical addiction to technology has not yet been scientifically established, there have been increasing concerns in recent years. Excessive online gaming has been classified as a disorder by the World Health Organisation, which says that “when gaming takes precedence over other activities in a person’s life” it becomes a medical disorder.⁴⁹ Meanwhile, in the UK, the NHS has started offering treatment for “gaming disorder”.⁵⁰

The Government has recently published the Online Harms White Paper which raises “designed addiction” as an emerging concern.⁵¹ It claims that some online products use “seemingly small but influential features” such as ‘likes’ in order to retain attention, encouraging use for a longer period of time. These features could “exacerbate” existing addictive traits in an individual. It could also enable existing addictive tendencies such as gambling.

The key question as far as this report is concerned is whether such “designed addiction” techniques are utilised to ensure that the reading environment online is not conducive to the production of high-quality content. Like many of the topics discussed in this chapter, conclusive evidence remains to be found. However, this issue is considered further in Chapter 4.

Misinformation

The digital age has brought with it the ability to disseminate information almost instantaneously, largely bypassing the editorial mechanisms of the past. This has had great advantages. Previous Demos research, namely our project, *Plugged In*,⁵² demonstrated

the utility of social media as a vehicle for meaningful social change and activism. We are now able to access and share content at a previously unthinkable pace, and the creation of content has been democratised to a considerable extent.

However, these changes have brought new and complex problems. The ability to broadcast information with little to no editorial control lends itself to the spread of “misinformation” – the accidental proliferation of information that is not true, and “disinformation” – the deliberate proliferation of falsehoods. This has implications for “the fabric of democracy itself” according to the Department for Digital, Culture, Media and Sport Select Committee.⁵³

It is vital that people have trust in the information that they consume, in order to make informed decisions. Currently that does not appear to be the case. According to the 2018 Reuters Institute Digital News Report⁵⁴, 44% of people have trust in general media, falling to only 23% on social media. Moreover, the recently published Cairncross review found that “Half of UK adults worry about ‘fake news’ or disinformation”. A quarter do not know how to verify sources of information they find online.⁵⁵ Of course, misleading information is far from a recent phenomenon, but the technological environment allows the spread of such content on a much wider scale and at a much greater speed.

From our own polling, trust in all forms of media to deliver impartial accurate information is low across the population. Only 30% of UK adults trust academic papers or reports to deliver this, while only 25% trust newspapers. Social media and magazines were only trusted by one in ten (11% and 10% respectively).

The next chapter elaborates on this, and asks what the general public thinks more broadly about these issues.

02.

Britain inside the attention economy

To obtain a deeper understanding of some of these emerging social problems, we brought in the voices of the public.

In the previous chapter, we surveyed the literature and evidence that documents the impact of the new digital reading environment. To recap on some of the main findings:

- There is some evidence that screen-based reading differs significantly from physical reading – with less time spent on in-depth and concentrated reading.
- There is some evidence of a relationship between digital consumption and concentration in certain situations.
- Social media has mixed associations with wellbeing, but there is some evidence that excessive use tends to be detrimental on a range of outcomes.

To obtain a deeper understanding of some of these emerging social problems, we undertook two focus groups with members of the public, granting us a deeper insight into people's lived experience of the transformation in the media and content landscape. We also undertook an original, nationally representative survey of 2000 adults in the UK, to assess attitudes to these challenges at a societal level.

This chapter presents the findings of this phase, presenting a comprehensive picture of Britain in the attention economy. Some of our top line findings include:

- Two in five (42%) 18-34 year olds self-identify as addicted to social media. However, only 26% of 18-34 year olds think the amount of time they spend online is unhealthy.
- Nearly half (46%) of the public find reading books enjoyable, compared to 19% saying this about social media.
- Three in five (59%) think social media content should be edited.
- Disinformation or “fake news” ranks highest (54%), followed by mental health conditions (46%) and self-harm or suicide (45%) from a list of social challenges caused or made worse by social media.

Polling

Social media addiction and satisfaction

Social media is the most widely consumed form of media. Over half (54%) of UK adults read social media every day.

While younger people (18-34) use social media the most often – 65% use it at least once per day, as opposed to 43% of those aged 55+ – they tend to have more negative perceptions about how addicted they are, how enjoyable they find it, and how relaxed it makes them feel. A quarter (25%) of UK adults say they are addicted to social media, with a clear age correlation. Two in five (42%) 18-34 year olds are addicted, compared to 11% of those aged 55+. This aligns with the trend we observed in the first chapter of the rising worry of younger people not feeling able to control their usage of digital media – a theme further explored in the focus groups below.

Curiously, this does not translate to a direct perception that time spent on social media is inherently unhealthy. 17% of all UK adults think the amount of time they spend online is unhealthy, while 37% consider it to be healthy. However, those who are 18-34 are twice as likely to say the amount of time they spend online is unhealthy compared to those aged 55+ (26% vs 12% respectively). While young people are the most prolific users of social media, they are the group that is most likely to have negative opinions surrounding their usage of it.

When thinking about the range of social issues we identified in the previous chapters that could be caused or made worse by social media, disinformation or “fake news” ranks highest (54%), followed by mental health conditions (46%) and self-harm or suicide (45%).

Relaxation and Utility

Our findings suggest that the predominant usage of social media and digital technology more widely is based less around enjoyment, and more focused on the utility it can bring.

When it comes to relaxation, almost half (46%) of UK adults find it relaxing to read a book, while only 10% find it relaxing to read social media. Similarly, 46% of the public find reading books enjoyable, compared to 19% saying this about social media. One in five find that reading books helps them to learn a lot, and helps them to sleep (both 20%), and that it makes them feel intellectually stimulated (19%).

On the topic of utility, one in five (22%) find they can access information quickly when reading social media, compared to 10% saying this about books.

Reading social media content also makes people feel more connected to the world than reading books; 19% say they feel engaged with the world when reading social media, compared to 8% saying this when reading a book. This gives an indication that books are used more for escapism and relaxation, while social media is used more for its utility.

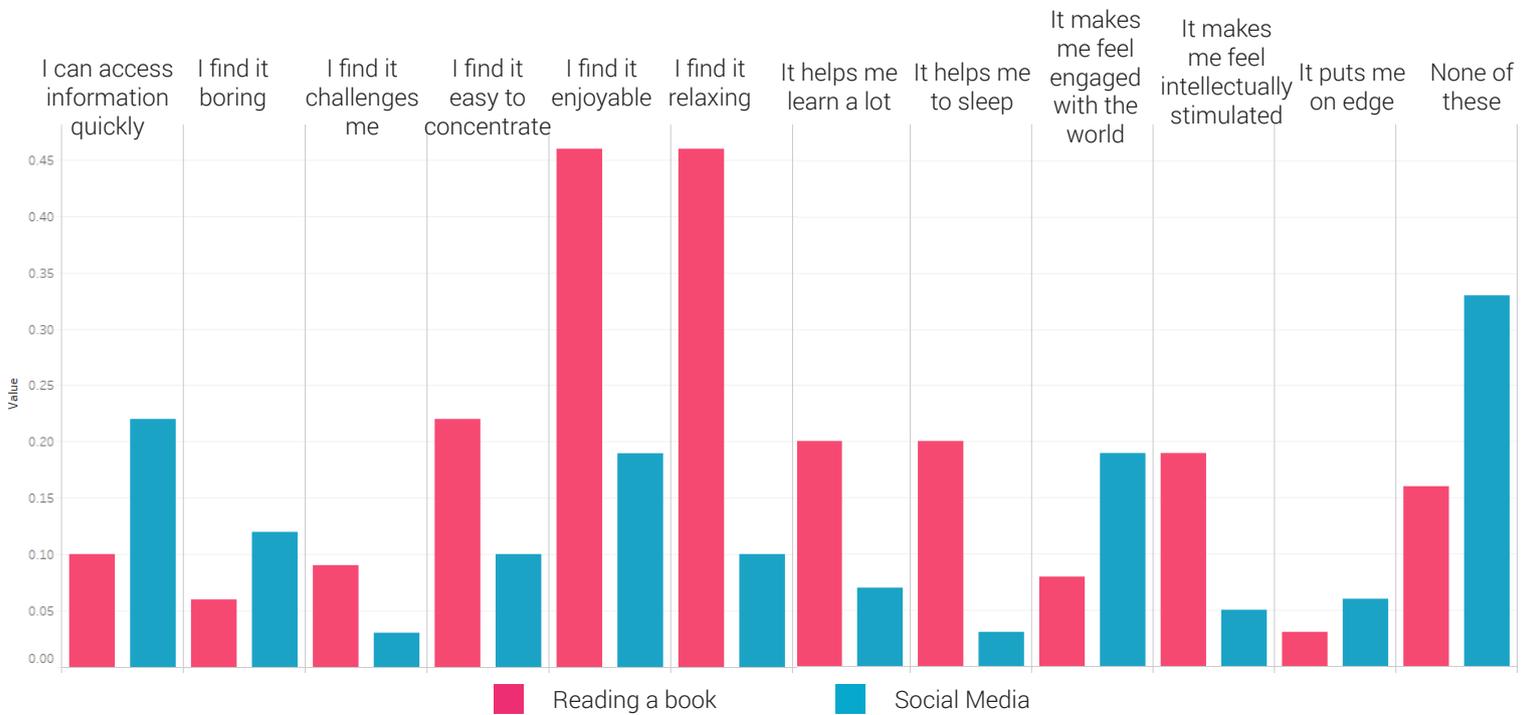


Fig 1: Thinking about reading a book or reading material via social media, which of the following apply to you? Please select all that apply.
Type of reading

Generally, each type of media reader prefers reading their media offline, with the exception of academic papers or reports; of those who have read an academic paper or report, 40% say they prefer to read them online, compared to 27% preferring to read them offline. Of the different media types presented in a graph below, two in five (40%) said they did not trust any of them to deliver impartial accurate information. Trust levels were lower the older you were; 45% of those aged 55+ said they did not trust any of the media types listed to deliver impartial accurate information, compared to 31% of 18-34 year olds.

Similarly, when thinking about media trust in delivering high-quality, thought-provoking content, trust levels were also fairly low. Academic papers or reports (35%) were most trusted to deliver this, followed by newspapers (34%).



Fig 2: Which of the following types of media do you prefer to read online (e.g. on a computer, smartphone, tablet or e-reader), or offline (i.e. possess a physical copy)

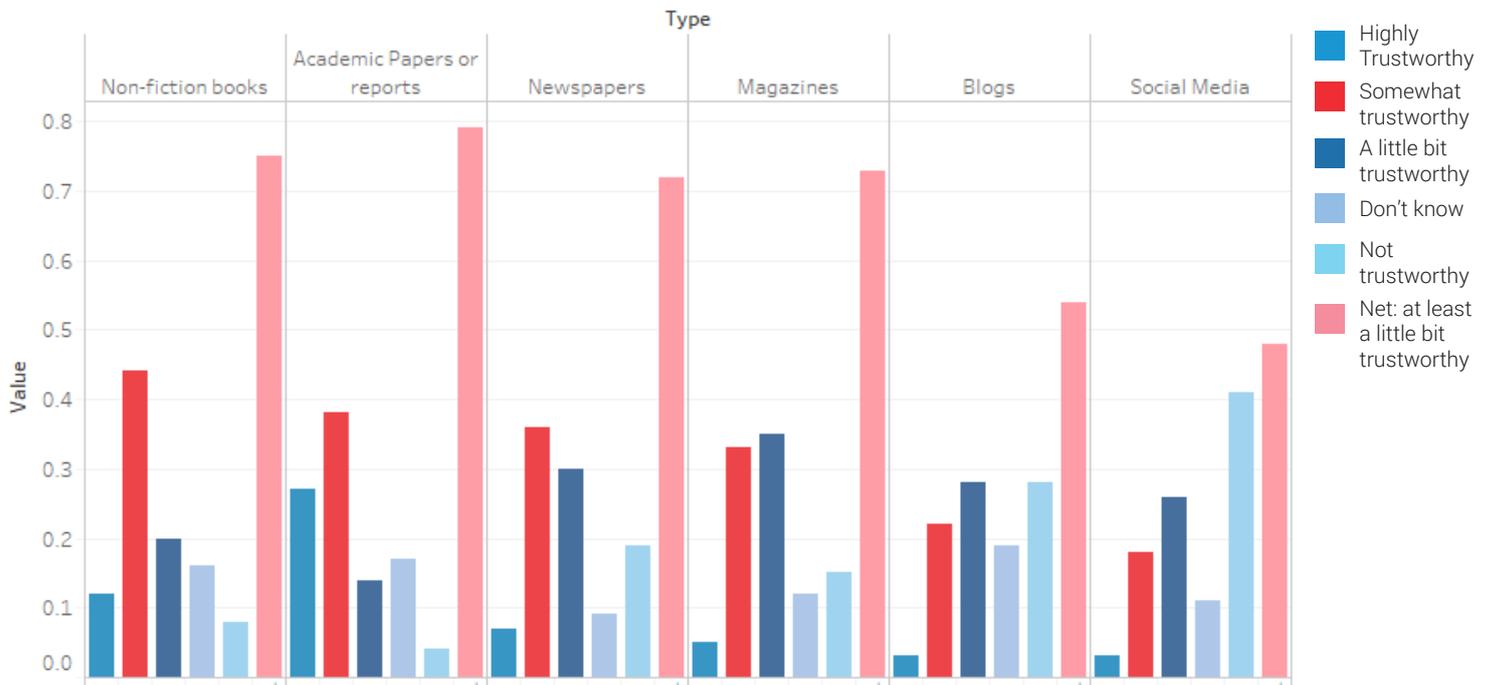


Fig 3: To what extent do you trust the following types of media to deliver impartial accurate information?

Trust in media

Public trust is low in all forms of media, especially social media. Trust levels in media delivering impartial accurate information is fairly low across the population, and even lower on social media.

Academic papers were the most trusted, with 30%, while only 25% trust newspapers. Social media was among the least trusted and magazines were only trusted by one in ten (11% and 10% respectively).



Fig 4: To what extent do you trust the following types of media to deliver high quality, thought provoking content?

Potential solutions

Interestingly, people are overwhelmingly supportive of the idea of a social media moderator. Three in five (59%) think social media content should be edited by moderators, while a quarter (24%) do not think it should be edited. This sentiment the moderators should edit content is highest among the older population; 71% of those aged 55+ think social media content should be edited by moderators, compared to under half (45%) of 18-34 year olds.

If social media was edited by moderators, the public think this would most help combat disinformation or “fake news” (48%), followed by self-harm or suicide (41%) and terrorism (35%). A third (33%) also think it could help combat mental health conditions.

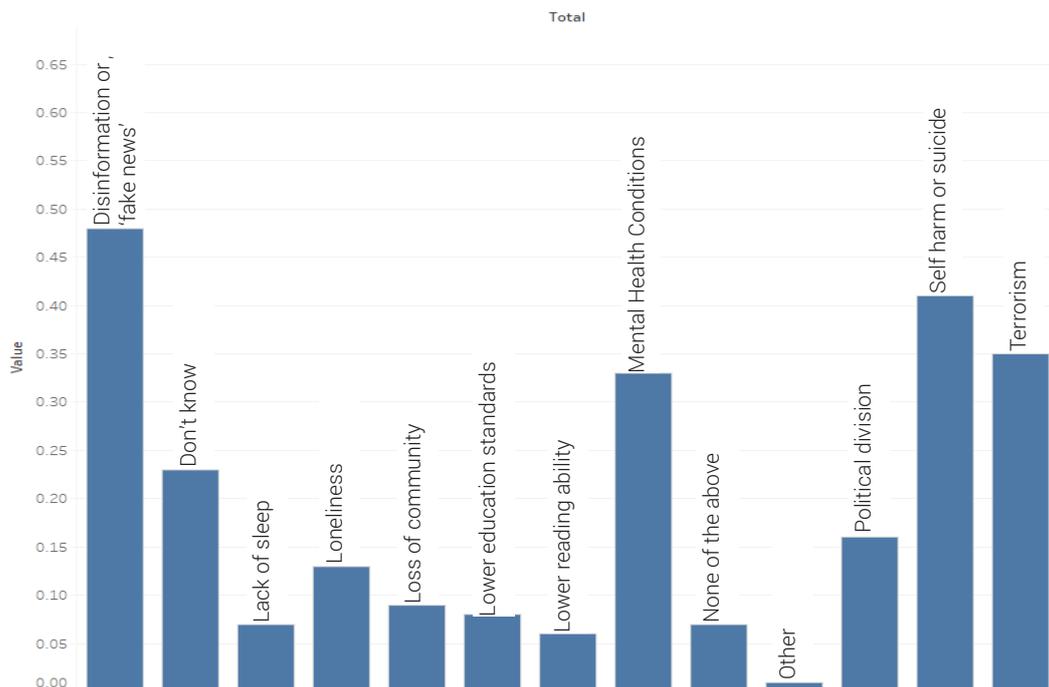


Fig 5: If social media content were edited by moderators what social issues do you think that might help? Please select all that apply.

Focus Groups

In order to further explore these findings, Demos gathered two focus groups with similar demographics, including both high and low users of social media and of mixed reading ability.

Both groups were given a short survey on their wellbeing upon arrival. The first group proceeded to read traditional printed books for fifteen minutes while the second browsed their phones for the same period of time. They were then asked questions about their reading habits, opinions on the change in the reading landscape, as well as the impact this had on them personally and on wider society. While we certainly cannot claim the following discussion to be representative of the population as a whole (or for our pre-survey reading selections to be a particularly scientific process!) the attitudes expressed do provide a useful qualitative exploration of the themes uncovered in our literature review. Both focus groups took place in the Demos offices in London.

Each focus group commenced by asking the participants how they felt after their respective time reading. Broadly speaking, the group that read the printed books reported feeling more relaxed than the group that spent time on their phones.

Both groups had extremely mixed views on the benefits and drawbacks of digital technology. Most participants saw technology as a tool to assist in the daily practicalities of life such as mapping and news, but mainly exclusively used printed books to read for pleasure. This is especially true of the older participants who tended to use the “basic” features of their devices such as making phone calls and sending SMS messages.

There was a general perception among some participants that their usage was “too much” and spoke of trying to reduce usage, frequently mentioning “phone addiction”. Both groups mentioned the ‘Screen Time’ feature recently introduced on iPhones.

The groups were negative overall about the perceived impact social media has on society in general, citing mental health concerns: fear of missing out, comparison to others, and distraction from other, “more worthwhile” social activities.

Personal reading habits

When reading for pleasure, participants in both groups were almost unanimous in their preference for long-form books (and usually, though not always, for non-screen reading). When they did read shorter-form content, it was usually on their mobile devices and for very practical purposes.

Amongst the reasons given for the preference, the feel of the book and the paper was frequently cited:

“I still read books, physical books for my pleasure but news, and apps and everything, I do everything like that on my phone, but never real books because real books are different, they’re what I want to savour and I love them and I love the feel of them and everything about them. Everything else like the news and stuff I scroll through on my phone. It’s different.”

Female Participant, Group 1

There was also a fairly regular implication that books were special and ‘more noble’ than digital content which was described as almost being disposable:

“I like reading my news and like gossip articles or any sort of stuff like that online because you can just sort of discard it, and you can open it up in a tab and swipe it away afterwards.”

Female Participant, Group 1

Some participants mentioned that they read books on e-readers such as the Amazon Kindle:

"I used to read books but now I prefer the Amazon Kindle. So, I read on Kindle nearly every day. Because, I love novels and [...] I like the internet. Cause I want to get in touch with my country, which is Mauritius. That's keeping in touch with everything happening over there and all over the world actually."

Female Participant, 50-65, Group 2

However, many preferred the physical feel of a book – seemingly supportive of the haptic dissonance hypothesis (see Chapter One):

"I just think there's something about a book, a physical book, turning the page, looking back at it. With a Kindle on the tube, I just wouldn't do it, I tried it for a bit, but I really don't like it."

Male Participant, 18-25, Group 1

While there was recognition that advances in technology had made the lives of the participants easier in many ways, physical books still held a central role in their lives:

"It's so convenient for a start, and it's a lot easier to read The Guardian app on my phone than to have The Guardian on the train – especially with the trains these days, if you opened it you'd have no space. Emails and everything are so quick, you're not wasting time waiting for post. You can look up any article and things like that. I use it for absolutely everything, but not to replace my treasured books."

Female Participant, 40-50, Group 1

As we identified in Chapter One, there is evidence that new reading behaviour can be characterised by skimming and scrolling when interacting with content on screens. This was reflected in our participants:

"I read just the first paragraph that's say and that's all you need. When I'm in Uni, I have to read big articles, I can skim through them so quickly, picking out bits of the information. When I need to read articles I can skim through that I don't need to sit down and read them. My brain can process the words so fast you don't need to sit down..."

Female Participant, 18-25, Group 2

Attention Span & New Reading Environment

There was a recognition that the new reading environment wasn't always conducive to productivity. Many got the impression that they were constantly overwhelmed with different distractions and tasks while reading on a screen:

"Reading from a screen you feel pressure to read as if you are working. When there is a lot of information there which you feel you have to get through. You tend to

rush through it. Going to the next article, email whatever. Sometimes you are not taking it off, absorbing it, not digesting it."

Male Participant, 30-45, Group 2

"Even if I'm looking for my emails, I know half of them are junk, I have to sit and delete them, they are worth deleting. It's like a whole other checklist of things you have to do. When I got three WhatsApp notifications, two Snapchats and these are more things I have to keep doing... It is quite stressful sometimes."

Female Participant, 20-30, Group 2

"You are not concentrating on one thing. Reading a book- you are concentrating in the book, you are in the moment, in a story. With a phone, If I was on BBC news, I'm doing my emails, doing work stuff. Doing it all at the same time, you can go back to each one within a second. No real concentration effort going into what you are reading."

Male Participant, 30-40, Group 2

Tech Addiction

Despite the personal benefits the participants extolled, there was a broad consensus that digital technology has had a negative overall impact on society. Multiple participants amongst both groups were concerned that the quality of real-life social interaction had declined:

"I think people lose their ability to actually engage in a conversation or will base their conversations off something they've just seen on the news. There's nothing natural, it's very superficial these days"

Female Participant, 18-25, Group 1

"Nobody speaks to anybody anymore. The conversation is lost. You can be at a bus stop with 20 people they are all around not talking."

Male Participant, 30-45, Group 2

There was much discussion about the possible addictive effects digital media has on people in general. Many sought to limit their screen time with the implication that too much could be harmful:

"I think probably with a lot of screen time generally, mainly the laptop and the phone, I try not to over indulge in it. I give myself limits."

Male Participant, 30-40, Group 1

Furthermore, many participants lamented the widespread use of phones in society,

especially amongst younger people:

"I think some people don't know when to stop. I think it can be very addictive. I look around sometimes and I can see some people are affected because they're losing their social skills, and manners, you go out to dinner, see a group of people, and half of them if not more are all on their phones instead of having a conversation and socialising, laughing and joking. They're all glued to their phones."

Female Participant, 18-25, Group 1

"It is a dumb society, kids are getting more stupid. It's shocking."

Male Participant, 40-50, Group 2

"I mean, I go to pub quite a lot. People in the pub are on the phone, they are not drinking, they are on the phone all the time."

Male Participant, 30-40, Group 1

However, some found that phone use was not a problem for them. This tended to be the opinion of older participants:

"I've had a mobile since the mid 90s but I don't feel addicted even now you've got smartphones and everything. If I left the house without it I wouldn't go back, even if I was out the whole day."

Male Participant, 40-50, Group 1

Some participants spoke of a simpler time where technology was not prevalent. Interestingly, these tended to be the younger participants:

"I think people coped back in the day. I wasn't around then. I don't know when the first mobile phone or whatever was first invented, but everyone grew up just fine just having books"

Female Participant, 18-25, Group 1

Even among the older participants, there was a sense that with the instant availability of information had made society more concerned with instant gratification, less likely to read longer-form content when they could access short-form content almost immediately:

"I think people are less patient. You can get it all instantly. You expect everything quicker now."

Female Participant, 40-50, Group 1

There was also a worry that short-form, instantly available content has hampered critical thinking skills:

"They can get stuff, information but it's all on the screen. There is no thinking outside of the box you can't solve the problem without the phone"

Male Participant, 30-40, Group 2

However, that opinion was not unanimous, with wide recognition of the benefits instant access brings:

"I think it's brilliant. I know what you're saying about people looking less patient but why would you want to spend ages looking up something if you can just find it instantly?"

Female Participant, 60-70, Group 1

Mental Health

As discussed in the literature review, there is mixed evidence as to whether digital technology, and more specifically social media, has any effect on our mental health. Our focus groups were less circumspect, with people generally perceiving the impact of social media to be negative in this respect:

"I think it affects people's sleep, people's mental health, people's wellbeing. With social media, although it does some good, it also leads to a lot of harm."

Female Participant, 18-25, Group 1

The ability to compare ourselves to many of our friends' seemingly perfect lives was raised:

"It seems to be magnified. When I was at school there were 30 girls for me to compare myself to but now with the internet, they've got hundreds that people compare themselves to"

Female Participant, 40-50, Group 1

"I feel like people don't have confidence anymore because people have quite low self-esteem. 'Cause online, you can put the perfect parts of your life and that's all everyone sees successful people want you to see that. People don't tell you about bad things, ... everyone thinks other's lives are so perfect."

Female Participant, 30-40, Group 2

There was, however, scepticism about the overall effect:

"I mean I wouldn't like to say anything because it would be based on supposition. How many mental health issues did people have before they were engaged in digital technology. A lot more research has to be done on that before we start thinking of ways of tackling it, but could be forcing those companies to become more responsible and not facilitate that kind of thing."

Female Participant, 60-70, Group 1

03.

The social role of publishing

It is important that the vast opportunities of online publishing do not come at the expense of the quality of content.

It is important that the vast opportunities of online publishing do not come at the expense of the quality of content. The past chapters have revealed that most challenges for reading online revolve not around the medium or style of content, but the substance of the content. This chapter will look at how to improve the quality of content and the structural incentives that might be able to prevent low-quality, harmful content that can have deleterious effects upon wellbeing.

The economic and social models underpinning the production of content for online markets are radically different from the models which preceded them in the offline world. In many cases the economics that incentivise the creation of risky, exploitative, and damaging content would never have been commercially viable in the traditional publishing industry.

Of course, democratisation of our content has offered a voice to those who have previously not been able to express themselves, enriching many areas of our cultural landscape. The detrimental impact on mental health, for example, is unlikely to be caused by the medium of delivery and more likely the content itself. Besides which, reverting to a world where the only written word is a physically printed one not only seems wildly impractical and potentially regressive but also avoids the crucial issue of how to build towards an economic model that incentivises quality and protects readers from harm.

This chapter therefore sets out the established social role of publishing across three key areas – the trust economy; encouraging reading and writing for pleasure; and peer review and research – before attempting to draw out some preliminary lessons about what publishing can offer the new content landscape in its desire to reduce harm and contribute towards a true society of readers.

The Trust Economy

Clearly, the publishing industry has a significant impact upon the British economy in material terms. According to research by Frontier Economics, the industry could contribute up to £7.8bn gross value added (GVA), employing up to 70,000 people when freelancers and the supply chain are taken into consideration.⁵⁶ Interestingly, this is equivalent to around £113k GVA per worker meaning that the UK's publishing industry is extraordinarily productive. The industry also enjoys a high-export profile, with physical book exports alone contributing a £1.1bn surplus to the UK's net trade position, a status which sees it as the largest physical book exporter in the world in real terms, not just per capita. When the UK faces a huge trade deficit and repeated Governments, of all stripes, have sought to boost the country's export profile, that would tend to suggest that maintaining publishing's competitiveness should be seen as a significant industrial policy goal (though it does also tend to suggest that the publishing industry, like all trade-sensitive industries, could be exposed to the impact of Brexit and future trade agreements).

However, in terms of publishing's social role, its role in shaping what might be called the "trust economy" is arguably more significant. As projects such as the Edelman Trust barometer demonstrate, British institutions are not in a strong position when it comes to trust.⁵⁷ Yet it is difficult not to see that the transformation in the content landscape

has played a significant role in eroding faith in our institutions, indeed even in our own confidence to judge information sources accurately – a study by the American Press Institute found that only 27% of Americans are personally optimistic that they can identify factual reporting as distinct from commentary and opinion.⁵⁸ Platforms have an impact here – in research conducted for the British Council in 2017, Demos found that only 16% of young people in the UK trusted news seen on Facebook, as opposed to 45% who trust established online news sites. Furthermore, 35% felt that it was fairly to very difficult to tell the difference between truth and lies on social media.⁵⁹

It is important to state that this profound erosion of the trust economy has not occurred overnight and nor clearly is it driven entirely by the changing nature of the content, media and information ecosystem. Nevertheless, the impact of social media – in news reporting and consumption in particular – is difficult to overstate. This is not only true when considering the content itself, but also the structural incentives of the attention economy social media has created: a paradigm shift in how news and information is sourced, funded, reported, received and communicated to the public has taken place.

The basic point here is that the funding stream for the new digital ecosystem is predominantly based on advertising revenue from third parties as opposed to directly from the customer. As Tim Wu's magisterial book *The Attention Merchants* highlights in depth, advertising as the primary funding source for information is nothing new and, in fairness, there are some upsides – it is frictionless, free and inclusive (i.e. disadvantaged people enjoy the same access point in price terms) and clearly maximises convenience.⁶⁰ Nevertheless, the move towards a content ecosystem dominated by and ultimately gatekept by Google, Facebook and the other tech giants has materially changed the balance within the trust economy. The problems are becoming increasingly apparent – not just in terms of the online harms already discussed, but in terms of the challenges it presents existing, established, high-quality content producers. Organisations that previously enjoyed a key role in mediating democracy itself have found their business models rendered inoperable, slavishly tied to the whims of the social media algorithms. Faced with falling revenues, this has meant the techniques that work in the new content landscape become more widespread across the whole content industry. And so we arrive in a world of “clickbait”, “churnalism”, “listicles”, relentless data capture (with strong financial incentives for bending the rules), micro-targeted adverts and a trust economy that favours advertising metrics over more normative and subjective considerations – the bottom line over trust, time, quality and even truth.

The economic model of the publishing industry is clearly based upon a different approach. Whether purchasing a book or access to an academic journal, the end consumer is usually the one who funds the bulk of the publishing activity. This makes the economic self-interest of the content producer clearer and more direct, with a much greater emphasis on building a trusting relationship with the consumer. The length of the content matters here. Long-form content requires that deeper relationship – the consumer's attention must still be retained – but cheap sensationalism, of the sort that taps deep into our innate emotional responses, is not sufficient to engage the reader over time. This shifts the content-consumer relationship towards trust, because trust is necessary to establish that deep and sometimes magical bond between writer and reader.

But so much for expounding the obvious differences between high-quality published content and the ephemera of social media – what policy or societal lessons can we draw from this? Well, perhaps that, however impractical it may seem – not to mention the huge questions of liberty, free speech and concentrating elite power it raises – there may be, as our polling suggested, latent support for a more edited internet.

How this is delivered is difficult to fathom at this stage (we will discuss this more in the following chapter), particularly when there is a societal expectation that content on the internet will be provided free of charge, and with minimal friction – digital denizens expect to be allowed to upload, read and share content without having to wait for moderation or fact-checking procedures. The public are certainly voting with their wallets in this respect, at least in the news industry – currently only 7% of UK adults pay a subscription for online news services, while only 1% have donated to an online news source.⁶¹ Nevertheless, the continued robust health of the wider publishing industry, not to mention the growing popularity of services such as Netflix and Patreon shows that an appetite exists for payment and subscription-based models of content production.

More important, is the question of who would ever be trusted to step into the breach as content curators to deliver healthier online spaces. And here, perhaps is a role for the skills and expertise of the publishing industry. Because though our polling found trust in short supply, edited content, particularly from academic or expert sources, seemed to have an edge. And there is clearly some latent support for the view that providing access to accurate, well-edited information is a key function of the publishing industry.

Writing and reading for pleasure

It may seem obvious, but the societal importance of encouraging people, especially children, to read high-quality long-form content for pleasure (of their own free will, and anticipating satisfaction) cannot be emphasised enough, not only for educational outcomes but also emotional wellbeing.

Evidence shows that those children who are the most engaged with literacy are three times more likely to have higher levels of mental wellbeing than children who are the least engaged (39.4% vs 11.8%).⁶² A landmark OECD study conducted in 2009 found that children who read for pleasure daily or nearly every day are a year ahead in reading performance versus those who never do⁶³. From our analysis of the Millennium Cohort Study, we found that reading for joy correlates with happiness at school. 62.5% of children who read for joy are happy with their school work whereas only 49.6% of non-readers say the same.

Demos' recent report, *A Society of Readers* also found that reading has transformative potential as a policy intervention that could radically improve social outcomes on issues such as loneliness, social mobility and overall health & wellbeing.

Moreover, a major literature review by The Reading Agency found that among adults, the main outcomes reported were enjoyment, relaxation and escapism. This ties in with the sentiments expressed from our focus groups that reading for pleasure provides a

way to “recharge” from the stresses of everyday life. One participant who took an hour per day away from screens to read for pleasure said:

“It relaxes me, it clears my mind. Work is a very stressful performance based environment and having that hour away, just to sort of reset [...] I’m more proactive, and get better results.”

Female Participant, 18-25

This also aligns with our polling which found that almost half (46%) of UK adults find it relaxing to read a book, a key indicator of wellbeing.

There is also a strong body of evidence that suggests writing long-form content has significant benefits for mental health, memory, and overall wellbeing. Writing therapy is a recognised way of reducing stress, and increasing mental resilience. Writing about traumatic, stressful or emotional events has been found to result in improvements in both physical and psychological health. In a 2005 study, participants were asked to write about such events for 15–20 minutes on 3–5 occasions. Those who did generally had significantly better physical and psychological outcomes compared with those who wrote about neutral topics.⁶⁴

Improved memory is also associated with long-form writing. In 2001, a study looked at the effect of emotional disclosure through expressive writing on available working memory. Participants assigned to write about their thoughts and feelings about coming to college demonstrated larger working memory gains 7 weeks later compared with 36 writers assigned to a trivial topic, and the study found that expressive writing reduces intrusive and avoidant thinking about a stressful experience, thus freeing memory resources.⁶⁵

Conversely, writing about positive life experiences also produces positive outcomes. A 2009 study tested the potential to elicit a broadened attentional focus through writing about a positive life experience and to derive health benefits from such writing. Participants wrote for 20 minutes each day for 3 consecutive days about either a positive life experience or a control topic. Writing about positive experiences led to improved physical health (measured 4–6 weeks after writing) compared to a control group.⁶⁶

In terms of the publishing industry, the policy lessons we can draw from the overwhelming evidence in favour of encouraging reading and writing should be self-evident. That is, without a flourishing publishing industry, the conditions for a genuine society of readers – or writers – simply does not exist. Equally, without sufficient policy support for reading and writing – particularly in the education system – the conditions for a flourishing publishing industry are not precipitous either. Therefore, it stands that a strong publishing industry should want more policy support for reading and writing, and vice-versa, a desire for a society more inclined to reading and writing is contingent upon a strong publishing industry.

Where the policy task becomes more difficult however, is ensuring, in the age of the attention economy, that we are creating a reading environment that allows people to concentrate long enough to enjoy long-form content without being distracted. This is

particularly important for those who might only be able to access their information and content online which, as the National Literacy Trust has shown, is more likely to be the case for disadvantaged young people (which is also one reason why calling for restrictions on screen time could have a counter-productive impact in terms of social justice).⁶⁷

Peer review and research

In theory it could be argued that with the advent of digital media, there should be as few limitations on the publication of content as possible, and that it is ultimately the responsibility of the individual to discern fact from fiction. However, as we have outlined, this point of view is not without its problems. Our polling found that public trust in social media's ability to deliver both impartial accurate information, and high-quality, thought-provoking content is low (11% and 13% respectively). Conversely, academic sources were the most trusted (30% and 35% respectively). That should spark policy interest in peer review and its ability to generate trust, given that peer review remains the primary mechanism for maintaining quality within the academic world. A 2015 study of how trustworthiness is determined found that peer review remains "king" in the digital age, being "the most trustworthy characteristic of all."⁶⁸

Frequently used in academic journals, peer review is a process whereby an author's work is scrutinised by "experts in the same field"⁶⁹ – the advantages of which are obvious. The system of peer reviewing creates "a trusted form of scientific communication."⁷⁰ This is especially important in a field where "knowledge is cumulative and builds on itself".⁷⁰ It acts as a significant obstacle for low-quality research and content and provides credibility to research that can be substantiated.

It is also fundamentally conducive to trust in the reader. Research that has been peer reviewed, thoroughly checked and scrutinised creates a certain level of assurance. A reader can usually have the assurance that a peer reviewed piece of research is of a high-quality.

However, as with all editorial processes, it can be time consuming – taking several hours of time from academics who are usually not paid to undertake the reviewer role. It has also been claimed that the peer review mechanism acts to stifle "new and fresh knowledge and new developments [in] the scientific community".⁷¹

04.

Reforming the reading environment

We set out a range of proposals for shifting the balance in the attention economy toward the production and curation of high-quality content.

Change brings new challenges, as well as new opportunities. It is never possible to halt the tide of technological innovation, and nor should we. People now have access to more information at their fingertips than at any time in human history, and if well managed, the internet remains a source of extraordinary potential for human flourishing.

But as this report has shown, new ways of reading have been accompanied by new harms. The role of government and civil society, when confronted with innovation, is to identify those harms, and introduce new regulations, incentives or systems that minimise them.

This chapter looks at the policy and regulatory landscape in which content is being produced today, and recommends ways to minimise harm, without trampling on the creativity and diversity of the online environment. We set out a range of proposals for shifting the balance in the attention economy toward the production and curation of high-quality content. We put forward ideas to improve the economics of producing that high-quality content. And, recognising the vital importance of reading to a healthy society, we recommend changes that will give individuals and communities a better chance to experience the joy and connection that comes from a great book.

A Rebalanced Attention Economy

The first step to creating a less harmful and more enlightened content environment is to understand more about it. At the moment, our knowledge base on what makes a healthy, community-spirited online space is painfully limited, but it is quite clear that the design architecture of platforms and online communities makes a substantial difference to their ethos. Not all online spaces and communities end up like angry Twitter threads or the YouTube comments channel – some like Wikipedia (a crowdsourced online encyclopedia), Stack Overflow and GitHub (forums for software developers), and even football fan forums are tremendously successful examples of civic-spirited, self-regulating, collaborative enterprises. Understanding more about the design, behavioural and psychological impulses that drive healthy online spaces such as these should be seen as one of the most important areas of public policy research. So whilst it can be something of a cliché to call for more research as a policy recommendation, this is one area where it is certainly justified:

Recommendation 1: The Government and universities should commission further research on the design and behavioural factors that lead to healthier, more community-spirited online spaces.

However, what we have clearly identified throughout this project is latent support for our online spaces – and the trust economy in particular – to become more ‘edited’. Our research seems to indicate that the public supports the idea of online spaces being edited to a much greater degree than simply excluding illegal content. They would in many cases prefer the owners of these platforms to perform a gatekeeping role: to make sensible, judicious, even-handed, impartial decisions about content in their online spaces. In short, they are asking for online content to be curated by publishers.

This, in a roundabout way, is the principle also accepted by the Government’s Online

Harms White Paper. That some content is harmful and should never pollute our online spaces seems to command widespread support amongst the public and policymakers. The challenge of course is to turn that impulse into something more practical.

This is difficult for a number of reasons. First, there are legitimate moral concerns that policing online expression raises about free speech, and the constantly litigated question of where to draw the boundaries between harmful and merely offensive content. Whilst policy making in this space must be closely informed by what the public thinks, when considering some of our most fundamental rights and liberties we must ensure that public opinion is not the only guiding consideration.

What's more, we live in a world with a content landscape, alongside entire online economies, geared towards frictionless, free media. And just because people are unhappy with social media companies and the trust economy as it stands, it should not be therefore assumed that they would support a move towards a different approach – paid subscriptions for example – to become the dominant model of disseminating content online. Research by internet theorist Erik Brynjolfsson has suggested it would take surprisingly large sums of money for people, as a cash incentive, to give up their access to this model of social media or online search.⁷² This calls for a careful balance to be struck and we make two recommendations:

Recommendation 2: The Government should work with and fund the publishing industry to develop a 'Citizen Editors' voluntary training scheme.

Recommendation 3: As part of the Digital Charter initiative, the Government should look to develop a public service publishing ethos, which should apply to all publishers, including technology platforms. The long-term priority should be to ensure that the public service publishing considerations materially alter search engine optimisation and content-promoting algorithms, so that harmful and poor-quality content is less valued.

The model we are striving for here remains a voluntarist one: self-regulation of our online spaces. The best online communities seem to be self-policed, with a strong shared ethos. However, it is quite clear that this is going to require adaptations – not least, over time, a move towards developing the 'online content moderator' into a key professional position in the future trust economy. When one considers how dark harmful content can be, and the negative experiences of many already working as moderators⁷³, this is not a position that many will be happy to fulfil – and it will require significantly more technological and psychological training when it becomes further professionalised.

In the meantime, the Government should work with experts in the publishing industry to introduce a voluntary 'Citizen Editors' training scheme for those who mediate our online spaces – from Facebook groups, to football message boards and fandom communities – to become better at content moderation. This programme should be modelled on the successful Community Organisers Expansion Programme, which has trained people in the skills needed to mobilise local people toward shared action, recognising that these skills do not just come naturally, and can be nurtured.

The incentives that drive the attention economy will need to change too. From a normative

standpoint, emotionally exploitative or even inaccurate content should not be prioritised by search engine or social media optimisation algorithms just because it is more immediately clickable, or promotes more engagement. This suggests the need for a shift away from foregrounding material solely because it has proved to be popular, and towards an approach which takes the quality of that content into account. For many platforms, this would be a seismic, and potentially fatal, change to their approach to content recommendation.

In broadcasting, there are a range of platforms, each bound by a different level of public service obligation. The BBC is a public-service-only broadcaster, in the UK at least. Other broadcasters like ITV are commercial, but have public service obligations, such as the amount of advertising they are permitted to broadcast, and the provision of a news channel. Finally, satellite and digital channels are even less regulated.

This public service obligation model could be recreated for providers of online content. One interesting model, suggested by the economist Diane Coyle, would be to create a BBC equivalent: a public service rival to the major online platforms. This may seem fanciful and, for now, should not be the aim – but nor should it be ruled out entirely if our online spaces fail to adapt.

Whether a public-service-only model is pursued or not, a middle ground could be established to create the equivalent of the public service obligations placed on some commercial broadcasters. This would be a range of publishing standards that technology companies should voluntarily adhere to in order to be categorised as “public service publishers”. The goal would be to create a positive incentive for search and social media companies to take seriously the need for their algorithms to make judgements about quality when optimising their results. This will not be easy, but recent developments toward automated fact-checking, enabled by AI, suggest the technology is within reach.

One area that needs urgent attention, however, is to ensure that the reading environment is protected from the intrusions of notifications, targeted advertising, and other interruptions that can undermine the reader’s ability to absorb information or be transported by narrative.

There have already been some encouraging steps taken in this area on a voluntary basis, with Apple adopting ‘Do Not Disturb’ and ‘Screen Time’ monitoring facilities on their devices. However, these features are far from the universal standards implemented, for example, to counter dangerous levels of sound from headphones.

The bottom line is that it is absolutely vital that young people in particular should be able to read online in a more mindful manner, without being subject to the bombardments of the attention economy. Therefore we recommend that:

Recommendation 4: The Government should work with tech companies to develop new product standards that can allow users to control their settings more easily or that have default settings that promote a better reading environment. For example, a ‘reading mode’ could immediately switch online browsing on smartphones to optimal settings for reading (e.g. blocking distracting pop-ups/adverts).

Finally, there is the huge social challenge that is young people's mental health outcomes. As we have seen from our Millennium Cohort Study analysis, the attention economy is perhaps not a benign influence in this worrying development. This is not the place for a lengthy array of policies that could help improve young people's mental health outcomes. However, we do feel that the Government has lost sight of one of the most important systemic responses to this and the online world – the promotion and strengthening of good moral character, otherwise known as character education. There are many policies that flow from this – encouraging character education pedagogies in teacher training; encouraging Ofsted to make sub-judgements within inspection criteria; a greater focus on extra-curricular activities – but in truth effective character education requires a whole school or college approach.

Recommendation 5: The Government needs to reinvigorate the character and resilience education agenda in all schools, colleges and adult education settings. This should be incorporated into Ofsted's new inspection framework.

Support for quality content creators

The next step is to realise and support those we know who produce high-quality content. The publishing industry has acted as a font for a healthy supply of high-quality, long-form content. The UK Government has traditionally recognised this fact by keeping printed books VAT exempt, so as not to impose "a tax on knowledge".⁷⁴ The same cannot be said for eBooks, which remain subject to tax at the full 20%. This has created a digital double standard which has, in part, stifled the immense opportunities the digital platform brings.

We believe that levelling this VAT treatment would act as a spur for the production and consumption of high-quality content in the modern attention economy. Of course there will always be those who prefer printed books, but such a change could release a flood of good quality content which as of yet has remained untapped. It would encourage diversity and innovation among online content producers with a new incentive for consumption, and ensure a more healthy supply of high-quality information into the rebalanced attention economy. We therefore recommend that:

Recommendation 6: The Government should zero-rate VAT on eBooks, audiobooks, digital newspapers, journals and other online publications.

As we have discussed in the previous chapter, the traditional guardians of the trust economy have had their business models rendered inoperable. Local news in particular has suffered – the number of full-time frontline journalists in the UK industry has dropped from an estimated 23,000 in 2007 to 17,000 in 2019, and the numbers are still swiftly declining.⁷⁵ We desperately crave innovative methods for rejuvenating revenue streams in the wake of the substantial changes we have outlined. In the wake of the Cairncross Review into the future of sustainable journalism, the Culture Secretary, Jeremy Wright pledged to pursue a model of charitable funding for journalistic activity. We welcome this, as a hugely important source of content for democracy, and recommend that:

Recommendation 7: The Government should make sure both it and The Charity

Commission deliver on recent promises to enable the philanthropic funding of public interest journalism, as recommended by the Cairncross review.

While commercial profitability of writing is extremely important for sustaining innovative writing, authors retain several other streams of revenue. The Society of Authors, the trade union for writers, illustrators and literary translators, estimates that in between 2015-2018, Arts Council England expects to spend approximately £46m on literature from a total budget of over £1.3bn, which represents just 3.5%.⁷⁶ Arts Council England could allocate more of its significant budget towards supporting grants that enable, among other things, training and mentoring to writing talent in the UK.

In the wake of Brexit, the industry risks losing a vital source of income, namely the funding from Creative Europe, which brings in an estimated £18.4 million per year to the UK.⁷⁷ It also serves as a primary conduit for British works to be translated to other European languages, strengthening Britain's cultural capital. We therefore recommend that:

Recommendation 8: Arts Council England should spend more on literature and the Government should encourage it to do so. It should also ensure that the UK retains its membership of Creative Europe, with funding access, after Brexit.

As the UK's current copyright legislation is woefully out of date, there is a desperate need to modernise. However, the changes proposed by the recently passed EU Copyright Directive have the potential to completely change the way content is purveyed on the internet, which have in turn made it incredibly controversial, especially articles 11 and 13.

Article 11 essentially allows journalists to charge social media companies for posting content on their sites, ostensibly reclaiming click revenue that has been lost as a result of just the headline being read, and not the full article.⁷⁸ The intention behind this has been to protect the rights of journalists for their content. However, this has created the worry that small and medium sized publishers could lose out, due to platforms such as Google and Facebook pulling their content off the platform entirely. This also presents the need to strike a balance between free expression and fair compensation for the content produced. We propose that publishers be put in control of their right to claim their material, but not to the detriment of free expression.

Recommendation 9: The Government should consult with the publishing industry on a potential publishers' waiver on the Article 11 of the Digital Single Market Directive. The objective should be to put publishers themselves in control of their own rights, so that they can pass on their licence to publish if they choose, but be compensated by tech companies, as Article 11 recommends, if they prefer.

Reading and Writing in Society

The final step is to transform the UK into a society of readers and writers, by passing on a true love and passion. To do this, we must protect the physical spaces where those seeking refuge from the attention economy can go.

There is a mountain of evidence that libraries provide an overwhelming boost, not only to literacy and wellbeing, but also to economic prosperity.⁷⁹ For children particularly, libraries provide a safe space to engage with high-quality, published content. Therefore we recommend:

Recommendation 10: The Government should invest in school and college libraries with the ambition that all schools can provide access to safe reading spaces that protect children from the attention economy whilst they read online.

In *A Society of Readers*, we advocated for two schemes: a summer entitlement to reading, and a national lifetime book gifting scheme. We would like to repeat our calls for these, while emphasizing the importance of both reading and writing.

A Society of Readers uncovered ample evidence of the scarring effect of the school summer holiday upon social mobility and disadvantaged educational attainment. This is an issue that a whole host of vested interests all too regularly duck – and Demos has long been open to a reform of the school calendar. However, even if the school holiday was reduced to 3 weeks that is, at best, a mitigation strategy. The basic problem is that outside of school, privilege will always flex its social capital muscles, with dire consequences for educational attainment, social mobility and loneliness too. Therefore, we believe it is time for the Government, working with reading charities, to develop a universal entitlement for disadvantaged children to enjoy sport, reading and cultural enrichment over the summer holidays. The evidence shows that reading programmes – such as the Summer Reading Challenge (see Chapter Three) – can prevent the ‘summer slide’ for disadvantaged kids, and many programmes do already exist. But they are not universal and many more disadvantaged pupils should take part in reading and cultural enrichment programmes over the summer.

Recommendation 11: The Government should work with reading charities to ensure that all disadvantaged children enjoy an entitlement to a universal summer reading and creative writing programme over the summer holiday as part of a broader cultural enrichment strategy.

We believe a crucial part of this encouraging reading will be encouraging a state-sponsored book gifting scheme. There are a number of civil society-led book gifting schemes that already give books to people at different stages of their life – for example, the Book Trust’s ‘Bookstart’ scheme that gifts books to children in their early years. Evaluators find it “is undoubtedly an important element in supporting parents to develop book sharing practices.⁸⁰ The Government should certainly not aim to assimilate these schemes into a state-backed one and should work with charities to draw upon their expertise. Nevertheless, we believe that it would say something subtle but profound about who we are as a nation – and the centrality of reading within that – if the state were to enshrine book gifting as an entitlement at key stages of a citizen’s life, such as: starting school, leaving school, entering the labour market, leaving prison, reaching state pension age.

Recommendation 12: The Government should develop a national lifetime book gifting scheme, enshrining book ownership and reading as a key citizen entitlement. It should also work with publishers to explore the possibility of public book banks, run by Reading Ambassadors.

Conclusion: Towards a digital
social charter

The digital era is radically transforming the way we read and publish information, and with this transformation there will be challenges and opportunities.

This report has focused on how the changing world of publishing and consumption of content is affecting individuals and communities, offering policy solutions to ensure these impacts are well-managed. In a time when information is instant, the report has found the most pressing of challenges to be that of quality and substance of content. The focus for policymakers, therefore, must be striking a balance between the benefits of open, online publishing world with the quality and substance of its content. We believe the best way to achieve this is by working with individuals, technology companies, the publishing industry, and governments to ensure everyone plays a role in regulating this online world. We think of this as a digital social charter: a common effort to secure common rewards.

The evidence around the direct impacts on physical and, to a lesser extent, mental wellbeing of individuals consuming content online remains inconclusive. We therefore believe more research should be done to help governments and tech-companies design healthier online spaces.

To ensure quality, we should be considering what can be done by governments, individuals and tech companies to create better online spaces. The Government and technology platforms in particular should be looking at how to make online platforms provide the best environment for reading online, from creating algorithms, to ensuring the highest quality content reaches readers, to developing standards for online products that enable readers to tailor their own settings. And last, but not least, individuals can also do more; publicly trained voluntary 'Citizen Editors' could become stewards for our online content, safeguarding users from online harms.

There is also more we can be doing to ensure what is posted online is of high-quality. The current business model in the 'attention economy' can sometimes incentivise low-quality content, or misinformation. To compensate this government can do more to support good quality. A zero-rate VAT could help online publications continue to provide content of high-quality, free at the point of access. In addition, the government can guide our public institutions, such as The Charity Commission and Art Council England, to do more to support the online publishing industry.

All the while, we should not forget the original reading community. As this report has highlighted, and the previous Demos report *A Society of Readers* has found, the benefits of reading are huge: from fighting loneliness to improving mental well-being. And just because we are increasingly reading content online, this should not come at the cost of offline content. We therefore believe more should be done to preserve and build on our 'society of readers' today in the UK. This can come from investment in spaces and skills, as well as capitalising on social networks through schemes such a 'national lifetime book gifting scheme' to help everyone continue to read.

Appendix One: Methodology for Millennium Cohort Study Analysis

The Millennium Cohort Study (MCS) is a national longitudinal birth cohort study following the lives of around 19,500 children born in the UK between January 2015 and April 2016. The MCS is one of the most comprehensive longitudinal studies providing information on the cohort's demographics, behavioural development and life experiences.

Our analysis is based on the MCS Wave 6 which is the most recent dataset collected from January 2015 to March 2016. The Wave 6 dataset was collected from 11,872 cohort members when cohort members were 14 years old.

Our study explores how three variables – time spent on social media, the internet and reading for joy – impact life happiness, wellbeing and health and body image of the cohort which took part in MCS Wave 6.

We defined three groups to analyse the impact of time spent on social media. A low social media use group is defined as those who use social media up to one hour per day (35 percent), medium social media use is defined as one or two hours per day (32 percent) while high social media use is defined as three or more hours per day (33 per cent).

A low internet use group is defined as those who spend less than one hour on the internet (11 percent), a medium internet use is defined as more than one hour or less than 5 hours (55 percent) and high internet use is defined as more than 5 hours and less than 7 hours on the internet (34 percent).

A frequent reader group involved people who read most days, at least once a week and at least once a month (34 percent) whereas a not frequent reader group is defined as people who read several times a year, once a year or less and never or almost never (61 percent).

We inquired into the questions on life happiness in general, happiness at school, social relationships, consumerism, body image, wellbeing and mental health and moral attitudes. We explored the gendered differences.

We ran a regression analysis to assess the strength and significance of the association.

Endnotes

- 1 The Guardian (2019) Leading the entertainment pack': UK print book sales rise again [online]
<https://www.theguardian.com/books/2019/jan/03/leading-the-entertainment-pack-uk-print-book-sales-rise-again>
- 2 Sacha Hilhorst; Alan Lockey; Tom Speight (2018) A Society of Readers [online]
<https://demosuk.wpengine.com/wp-content/uploads/2018/12/A-Society-of-Readers-Formatted.pdf>
- 3 Ofcom (2018) A decade of digital dependency [online]
<https://www.ofcom.org.uk/about-ofcom/latest/features-and-news/decade-of-digital-dependency>
- 4 Gov.uk (2019) Online Harms White Paper [online]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793360/Online_Harms_White_Paper.pdf
- 5 Bill Gates (1996) Content is King [online]
<https://www.craigbailey.net/content-is-king-by-bill-gates/>
- 6 The Times (2019) Social media doesn't make teenagers unhappy, huge study shows [online]
<https://www.thetimes.co.uk/edition/news/social-media-doesn-t-make-teenagers-unhappy-huge-study-shows-97dj6ftln>
- 7 Ziming Liu, (2005) "Reading behavior in the digital environment: Changes in reading behavior over the past ten years", *Journal of Documentation*, Vol. 61 Issue: 6, pp.700-712, <https://doi.org/10.1108/00220410510632040>
- 8 Myrberg, Caroline, and Ninna Wiberg. 2015. "Screen Vs. Paper: What Is the Difference for Reading and Learning?". *Insights* 28 (2): 49–54. DOI: <http://doi.org/10.1629/uksg.236>
- 9 Ibid
- 10 Gerlach, Jin and Buxmann, Peter, "INVESTIGATING THE ACCEPTANCE OF ELECTRONIC BOOKS – THE IMPACT OF HAPTIC DISSONANCE ON INNOVATION ADOPTION" (2011). *ECIS 2011 Proceedings*. 141.
<https://aisel.aisnet.org/ecis2011/141>
- 11 The Guardian (2013) Young adult readers 'prefer printed to ebooks' [online]
<https://www.theguardian.com/books/2013/nov/25/young-adult-readers-prefer-printed-ebooks>
- 12 Sanchez, Christopher A. & Wiley, Jennifer. (2009). To Scroll or Not to Scroll: Scrolling, Working Memory Capacity, and Comprehending Complex Texts. *Human factors*. 51. 730-8. [10.1177/0018720809352788](https://doi.org/10.1177/0018720809352788).
- 13 American Optometric Association (2019) Computer Vision Syndrome [online]
<https://www.aoa.org/patients-and-public/caring-for-your-vision/protecting-your-vision/computer-vision-syndrome>
- 14 John Hopkins Health (2019) Melatonin for Sleep: Does It Work?
<https://www.hopkinsmedicine.org/health/healthy-sleep/sleep-science/melatonin-for-sleep-does-it-work>
- 15 Gringras Paul, Middleton Benita, Skene Debra J., Revell Victoria L. (2015) Bigger, Brighter, Bluer-Better? Current Light-Emitting Devices – Adverse Sleep Properties and Preventative Strategies *Frontiers in Public Health* Volume 3 pp. 223
<https://www.frontiersin.org/article/10.3389/fpubh.2015.00233>
- 16 Przybylski, Andrew K. (2019) Digital Screen Time and Pediatric Sleep: Evidence from a Preregistered Cohort Study *The Journal of Pediatrics*, Volume 205, 218 – 223.e1
[https://www.jpeds.com/article/S0022-3476\(18\)31384-2/fulltext](https://www.jpeds.com/article/S0022-3476(18)31384-2/fulltext)
- 17 Royal College of Paediatrics and Child Health (2018) The health impacts of screen time: a guide for clinicians and parents [online]
https://www.rcpch.ac.uk/sites/default/files/2018-12/rcpch_screen_time_guide_-_final.pdf
- 18 L. Mark Carrier, Larry D. Rosen, Nancy A. Cheever, Alex F. Lim, (2015) Causes, effects, and practicalities of everyday multitasking, *Developmental Review*, Volume 35, Pages 64-78, [online]
<https://doi.org/10.1016/j.dr.2014.12.005>.
- 19 Glenn Wilson (2010) The Infomania Study [online]
www.drglennwilson.com/Infomania_experiment_for_HP.doc
- 20 Wang, Z. and Tchernev, J. M. (2012), The "Myth" of Media Multitasking: Reciprocal Dynamics of Media Multitasking, Personal Needs, and Gratifications. *Journal of Communication*, 62: 493-513. doi:10.1111/j.1460-2466.2012.01641.x
<https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1460-2466.2012.01641.x>
- 21 Marketing Science Institute (2013) The Biometrics of Consumer Engagement [online]

<http://www.msi.org/articles/the-biometrics-of-consumer-engagement/>

22 Ibid

23 Altmann, Erik M.; Trafton, J. Gregory; Hambrick, David Z. Momentary (2014) Interruptions can derail the train of thought. <http://dx.doi.org/10.1037/a0030986>

<https://www.ncbi.nlm.nih.gov/pubmed/23294345>

24 Wilmer HH, Sherman LE, Chein JM. (2017) Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and Cognitive Functioning. *Front Psychol.* 2017;8:605. [online]

25 BBC (2019) Instagram 'helped kill my daughter' [online]

<https://www.bbc.co.uk/news/av/uk-46966009/instagram-helped-kill-my-daughter>

26 Of those surveyed in the 2018 ONS Internet Access Survey 65% of respondents have used social media within the last three months, that figure rising to 93% for the 16-24 age range. <https://www.ons.gov.uk/peoplepopulationandcommunity/householdcharacteristics/homeinternetandsocialmediausage/datasets/internetaccesshouseholdsandindividualsreferencetables>

27 <https://www.telegraph.co.uk/news/2018/08/05/social-media-regressing-children-mentality-three-year-olds-says/>

28 Toma, C. L., & Hancock, J. T. (2013). Self-Affirmation Underlies Facebook Use. *Personality and Social Psychology Bulletin*, 39(3), 321–331. [online]

<https://doi.org/10.1177/0146167212474694>

29 Ibid

30 Kross E, Verduyn P, Demiralp E, Park J, Lee DS, et al. (2013) Facebook Use Predicts Declines in Subjective Well-Being in Young Adults. [online]

<https://doi.org/10.1371/journal.pone.0069841>

31 Burke, M. and Kraut, R. E. (2016), The Relationship Between Facebook Use and Well Being Depends on Communication Type and Tie Strength. *J Comput Mediat Comm*, 21: 265-281. [online] <https://onlinelibrary.wiley.com/doi/full/10.1111/jcc4.12162>

32 Andrew K. Przybylski and Netta Weinstein (2017) A Large-Scale Test of the Goldilocks Hypothesis: Quantifying the Relations Between Digital-Screen Use and the Mental Well-Being of Adolescents [online]

<https://orca-mwe.cf.ac.uk/99720/1/0956797616678438.pdf>

33 Wave Six (2015). <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>

34 For a more complete statement on our methodology see Appendix One

35 For a more complete statement on our methodology see Appendix One

36 Amy Orben & Andrew K. Przybylski (2019) The association between adolescent well-being and digital technology use [online]

<https://www.nature.com/articles/s41562-018-0506-1>

37 Steven C. Cramer, Mriganka Sur, et al. (2011) Harnessing neuroplasticity for clinical applications, *Brain*, Volume 134, Issue 6 Pages 1591–1609,

<https://doi.org/10.1093/brain/awr039>

38 Ibid

39 Independent (2018) Social Media is Giving Children Mentality of Three-year-olds, Warns Researcher [online]

<https://www.independent.co.uk/life-style/social-media-dangers-children-mentality-three-years-old-susan-greenfield-a8479271.html>

40 The Telegraph (2018) Social media is making children regress to mentality of three-year-olds, says top brain scientist [online]

<https://www.telegraph.co.uk/news/2018/08/05/social-media-regressing-children-mentality-three-year-olds-says/>

41 Susan Greenfield (2015) *Mind Change: How Digital Technologies Are Leaving Their Mark on Our Brain* Published by Random House ISBN 9780812993820

42 Nickolas G. Carr (2010) *The Shallows: How the Internet is Changing the Way We Think, Read and Remember* Published by Atlantic, ISBN 1848872259, 9781848872257

43 Gary Small et al. (2009) Your Brain on Google: Patterns of Cerebral Activation during Internet Searching

<https://www.psychologytoday.com/files/attachments/5230/136.pdf>

44 Bell Vaughan, Bishop Dorothy V M, Przybylski Andrew K. (2015) The debate over digital technology and young people *BMJ* 2015; 351

<https://www.bmj.com/content/351/bmj.h3064>

- 45 Betsy Sparrow et al (2011) Google Effects on Memory: Cognitive Consequences of Having Information at Our Fingertips [online]
https://scholar.harvard.edu/files/dwegner/files/sparrow_et_al_2011.pdf
- 46 Columbia University (2011) Study Finds That Memory Works Differently in the Age of Google [online]
<https://web.archive.org/web/20110717092619/http://news.columbia.edu/research/2490>
- 47 Nathaniel Barr, Gordon Pennycook, Jennifer A. Stolz, Jonathan A. Fugelsang (2015) The brain in your pocket: Evidence that Smartphones are used to supplant thinking, *Computers in Human Behavior*, Volume 48, Pages 473-480 [online]
<https://doi.org/10.1016/j.chb.2015.02.029>.
- 48 Wilmer HH, Sherman LE, Chein JM. (2017) Smartphones and Cognition: A Review of Research Exploring the Links between Mobile Technology Habits and Cognitive Functioning. *Front Psychol*.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5403814/#B9>
- 49 World Health Organisation (2018) Gaming Disorder [online]
<https://www.who.int/features/qa/gaming-disorder/en/>
- 50 Mental Health Today (2018) NHS commences gaming disorder treatment: when does enthusiasm become addiction? [online]
<https://www.mentalhealthtoday.co.uk/innovations/nhs-commences-gaming-disorder-treatment-when-does-enthusiasm-become-addiction>
- 51 Gov.uk (2019) Online Harms White Paper [online]
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793360/Online_Harms_White_Paper.pdf
- 52 Alex Krasodonski Jones et al (2018) Plugged In [online]
<https://www.demos.co.uk/wp-content/uploads/2018/09/Plugged-In-Final-Report2.pdf>
- 53 House of Commons Digital Media and Sport Committee (2019) Disinformation and 'fake news': Final Report [online]
<https://publications.parliament.uk/pa/cm201719/cmselect/cmcumeds/1791/1791.pdf>
- 54 Reuters Institute (2019) Reuters Institute Digital News Report 2019 [online]
https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2019-06/DNR_2019_FINAL_1.pdf
- 55 gov.uk (2019) The Cairncross Review [online]
<https://www.gov.uk/government/news/cairncross-report-recommends-levelling-of-the-playing-field-for-uk-journalism>
- 56 Frontier Economics (2017) The Contribution of the Publishing Industry to the UK Economy [online]
<https://www.publishers.org.uk/EasySiteWeb/GatewayLink.aspx?allId=25590>
- 57 Edelman (2019) 2019 Edelman Trust Barometer [online]
https://www.edelman.com/sites/g/files/aatuss191/files/2019-03/2019_Edelman_Trust_Barometer_Global_Report.pdf?utm_source=website&utm_medium=global_report&utm_campaign=downloads
- 58 American Press Institute (2017) 'My' media versus 'the' media: Trust in news depends on which news media you mean [online]
<https://www.americanpressinstitute.org/publications/reports/survey-research/my-media-vs-the-media/>
- 59 Ian Wybron, Simone Vibert, Josh Smith (2017) Next Generation UK , pp. 43-44 [online] <https://demosuk.wpengine.com/wp-content/uploads/2017/09/H030-Next-Generation-UK-Report-FINAL-web-2.pdf>
- 60 The Attention Merchants: The Epic Scramble to Get Inside Our Heads, Tim Wu 2016
- 61 Reuters Institute (2019) Reuters Institute Digital News Report 2019 [online]
https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2019-06/DNR_2019_FINAL_1.pdf
- 62 National Literacy Trust (2018) Mental wellbeing, reading and writing [online]
<https://literacytrust.org.uk/research-services/research-reports/mental-wellbeing-reading-and-writing/>
- 63 OECD (2009) PISA 2009 Results: Learning to Learn [online]
<http://www.oecd.org/pisa/pisaproducts/48852630.pdf>
- 64 Baikie, K., & Wilhelm, K. (2005). Emotional and physical health benefits of expressive writing. *Advances in Psychiatric Treatment*, 11(5), 338-346. doi:10.1192/apt.11.5.338
- 65 Klein, Kitty & Boals, Adriel. (2001). Expressive writing can increase working memory capacity. *Journal of experimental psychology. General*. 130. 520-33. 10.1037/0096-3445.130.3.520.
- 66 Chad M. Burton & Laura A. King (2009) The health benefits of writing about positive experiences: The role of broadened cognition, *Psychology & Health*, 24:8, 867-879, DOI: 10.1080/08870440801989946
- 67 George Dugdale and Christina Clark (2008) Literacy Changes Lives [online]
https://literacytrust.org.uk/documents/120/2008_09_02_free_research_-_Literacy_changes_lives_2008_

eC8a7NJ.pdf

68 Nicholas, D., Watkinson, A., Jamali, H. R., Herman, E., Tenopir, C. Volentine, R., Allard, S. And Levine, K. (2015), Peer Review: Still King In The Digital Age. Learned Publishing, 28: 15-21. <https://onlinelibrary.wiley.com/doi/abs/10.1087/20150104>

69 Kelly J, Sadeghieh T, Adeli K. (2014) Peer Review in Scientific Publications: Benefits, Critiques, & A Survival Guide.227–243. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4975196/>

70 Ibid

71 Koshy, Kirana et al (2018) Peer review in scholarly publishing part A: why do it? [online] https://journals.lww.com/ijsoncology/Fulltext/2018/02000/Peer_review_in_scholarly_publishing_part_A___why.1.aspx

72 Financial Times (2018) We need a publicly funded rival to Facebook and Google [online] <https://www.ft.com/content/d56744a0-835c-11e8-9199-c2a4754b5a0e>

73 The Verge (2019) The Trauma Floor: The Secret Lives of Facebook Moderators in America [online] <https://www.theverge.com/2019/2/25/18229714/cognizant-facebook-content-moderator-interviews-trauma-working-conditions-arizona>

74 The Guardian (2018) 'Axe the reading tax': book industry demands end to VAT on ebooks [online] <https://www.theguardian.com/books/2018/dec/05/axe-the-reading-tax-book-industry-demands-end-to-vat-on-ebooks>

75 gov.uk (2019) The Cairncross Review [online] <https://www.gov.uk/government/news/cairncross-report-recommends-levelling-of-the-playing-field-for-uk-journalism>

76 The Society of Authors (2019) Access to funding [online] <https://www.societyofauthors.org/Where-We-Stand/Access-to-funding>

77 Ibid

78 IT Pro (2019) What is Article 11 and 13? [online] <https://www.itpro.co.uk/policy-legislation/32552/what-is-article-13-and-article-11>

79 Arts Council England (2015) The health and wellbeing benefits of public libraries <https://www.artscouncil.org.uk/sites/default/files/download-file/The%20health%20and%20wellbeing%20benefits%20of%20public%20libraries.pdf>

80 5 Apps, J., Christie, S., Goouch, K. (2016). 'The role of the Bookstart Baby gifting process in supporting shared reading'. Canterbury: Canterbury Christ Church University.

Licence to publish

The work (as defined below) is provided under the terms of this licence ('licence'). The work is protected by copyright and/or other applicable law. Any use of the work other than as authorized under this licence is prohibited. By exercising any rights to the work provided here, you accept and agree to be bound by the terms of this licence. Demos grants you the rights contained here in consideration of your acceptance of such terms and conditions.

1 Definitions

- a) 'Collective Work' means a work, such as a periodical issue, anthology or encyclopedia, in which the Work in its entirety in unmodified form, along with a number of other contributions, constituting separate and independent works in themselves, are assembled into a collective whole. A work that constitutes a Collective Work will not be considered a Derivative Work (as defined below) for the purposes of this licence.
- b) 'Derivative Work' means a work based upon the Work or upon the Work and other pre-existing works, such as a musical arrangement, dramatization, fictionalization, motion picture version, sound recording, art reproduction, abridgment, condensation, or any other form in which the Work may be recast, transformed, or adapted, except that a work that constitutes a Collective Work or a translation from English into another language will not be considered a Derivative Work for the purpose of this licence.
- c) 'Licensor' means the individual or entity that offers the Work under the terms of this licence.
- d) 'Original Author' means the individual or entity who created the Work.
- e) 'Work' means the copyrightable work of authorship offered under the terms of this licence.
- f) 'You' means an individual or entity exercising rights under this licence who has not previously violated the terms of this licence with respect to the Work, or who has received express permission from Demos to exercise rights under this licence despite a previous violation.

2 Fair Use Rights

Nothing in this licence is intended to reduce, limit, or restrict any rights arising from fair use, first sale or other limitations on the exclusive rights of the copyright owner under copyright law or other applicable laws.

3 Licence Grant

Subject to the terms and conditions of this licence, Licensor hereby grants You a worldwide, royalty-free, non-exclusive, perpetual (for the duration of the applicable copyright) licence to exercise the rights in the Work as stated below:

- a) to reproduce the Work, to incorporate the Work into one or more Collective Works, and to reproduce the Work as incorporated in the Collective Works;
- b) to distribute copies or phono-records of, display publicly, perform publicly, and perform publicly by means of a digital audio transmission the Work including as incorporated in Collective Works; The above rights may be exercised in all media and formats whether now known or hereafter devised. The above rights include the right to make such modifications as are technically necessary to exercise the rights in other media and formats. All rights not expressly granted by Licensor are hereby reserved.

4 Restrictions

The licence granted in Section 3 above is expressly made subject to and limited by the following restrictions:

- a) You may distribute, publicly display, publicly perform, or publicly digitally perform the Work only under the terms of this licence, and You must include a copy of, or the Uniform Resource Identifier for, this licence with every copy or phono-record of the Work You distribute, publicly display, publicly perform, or publicly digitally perform. You may not offer or impose any terms on the Work that alter or restrict the terms of this licence or the recipients' exercise of the rights granted hereunder. You may not sublicense the Work. You must keep intact all notices that refer to this licence and to the disclaimer of warranties. You may not distribute, publicly display, publicly perform, or publicly digitally perform the Work with any technological measures that control access or use of the Work in a manner inconsistent with the terms of this licence Agreement. The above applies to the Work as incorporated in a Collective Work, but this does not require the Collective Work apart from the Work itself to be made subject to the terms of this licence. If You create a Collective Work, upon notice from any Licensor You must, to the extent practicable, remove from the Collective Work any reference to such Licensor or the Original Author, as requested.

b) You may not exercise any of the rights granted to You in Section 3 above in any manner that is primarily intended for or directed toward commercial advantage or private monetary compensation. The exchange of the Work for other copyrighted works by means of digital file sharing or otherwise shall not be considered to be intended for or directed toward commercial advantage or private monetary compensation, provided there is no payment of any monetary compensation in connection with the exchange of copyrighted works.

c) If you distribute, publicly display, publicly perform, or publicly digitally perform the Work or any Collective Works, you must keep intact all copyright notices for the Work and give the Original Author credit reasonable to the medium or means You are utilizing by conveying the name (or pseudonym if applicable) of the Original Author if supplied; the title of the Work if supplied. Such credit may be implemented in any reasonable manner; provided, however, that in the case of a Collective Work, at a minimum such credit will appear where any other comparable authorship credit appears and in a manner at least as prominent as such other comparable authorship credit.

5 Representations, Warranties and Disclaimer

a) By offering the Work for public release under this licence, Licensor represents and warrants that, to the best of Licensor's knowledge after reasonable inquiry:

i) Licensor has secured all rights in the Work necessary to grant the licence rights hereunder and to permit the lawful exercise of the rights granted hereunder without You having any obligation to pay any royalties, compulsory licence fees, residuals or any other payments;

ii) The Work does not infringe the copyright, trademark, publicity rights, common law rights or any other right of any third party or constitute defamation, invasion of privacy or other tortious injury to any third party.

b) Except as expressly stated in this licence or otherwise agreed in writing or required by applicable law, the work is licensed on an 'as is' basis, without warranties of any kind, either express or implied including, without limitation, any warranties regarding the contents or accuracy of the work.

6 Limitation on Liability

Except to the extent required by applicable law, and except for damages arising from liability to a third party resulting from breach of the warranties in section 5, in no event will licensor be liable to you on any legal theory for any special, incidental, consequential, punitive or exemplary damages arising out of this licence or the use of the work, even if licensor has been advised of the possibility of such damages.

7 Termination

a) This licence and the rights granted hereunder will terminate automatically upon any breach by You of the terms of this licence. Individuals or entities who have received Collective Works from You under this licence, however, will not have their licences terminated provided such individuals or entities remain in full compliance with those licences. Sections 1, 2, 5, 6, 7, and 8 will survive any termination of this licence.

b) Subject to the above terms and conditions, the licence granted here is perpetual (for the duration of the applicable copyright in the Work). Notwithstanding the above, Licensor reserves the right to release the Work under different licence terms or to stop distributing the Work at any time; provided, however that any such election will not serve to withdraw this licence (or any other licence that has been, or is required to be, granted under the terms of this licence), and this licence will continue in full force and effect unless terminated as stated above.

8 Miscellaneous

a) Each time You distribute or publicly digitally perform the Work or a Collective Work, Demos offers to the recipient a licence to the Work on the same terms and conditions as the licence granted to You under this licence.

b) If any provision of this licence is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this licence, and without further action by the parties to this agreement, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

c) No term or provision of this licence shall be deemed waived and no breach consented to unless such waiver or consent shall be in writing and signed by the party to be charged with such waiver or consent.

d) This licence constitutes the entire agreement between the parties with respect to the Work licensed here. There are no understandings, agreements or representations with respect to the Work not specified here. Licensor shall not be bound by any additional provisions that may appear in any communication from You. This licence may not be modified without the mutual written agreement of Demos and You.