

Towards Smart Regulation of Harmful Internet Content

Insights From Behavioral Science



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Jonathan Winter

Introduction

Against the backdrop of the 30th anniversary of the World Wide Web, a renewed assessment is taking place on the regulation that ought to oversee the internet. The scope of the discussion regarding internet policy encompasses a wide range of issues that are increasingly preoccupying public policy makers worldwide. These include the effects of susceptibility to fake news, proliferation of harmful content online and complacency when it comes to privacy and data protection. These issues, in turn, carry implications that far exceed the confinements of cyberspace and often adversely affect democratic norms, public discourse, individuals' well-being and much more.

Historically, the regulatory approach to internet content in the United States has been caricatured by what Jonathan Zittrain has describes as “a reluctance to intervene in ways that dramatically alter online architectures”. (J. Zittrain 2005, 253) Accordingly, with few exceptions, most content regulation in the United States occurs at the private or voluntary level. Indeed, attempts made to increase government restrictions of online content in the United States have largely been stricken down by the Judicial branch on the grounds that they violate the First Amendment to the United States Constitution.¹

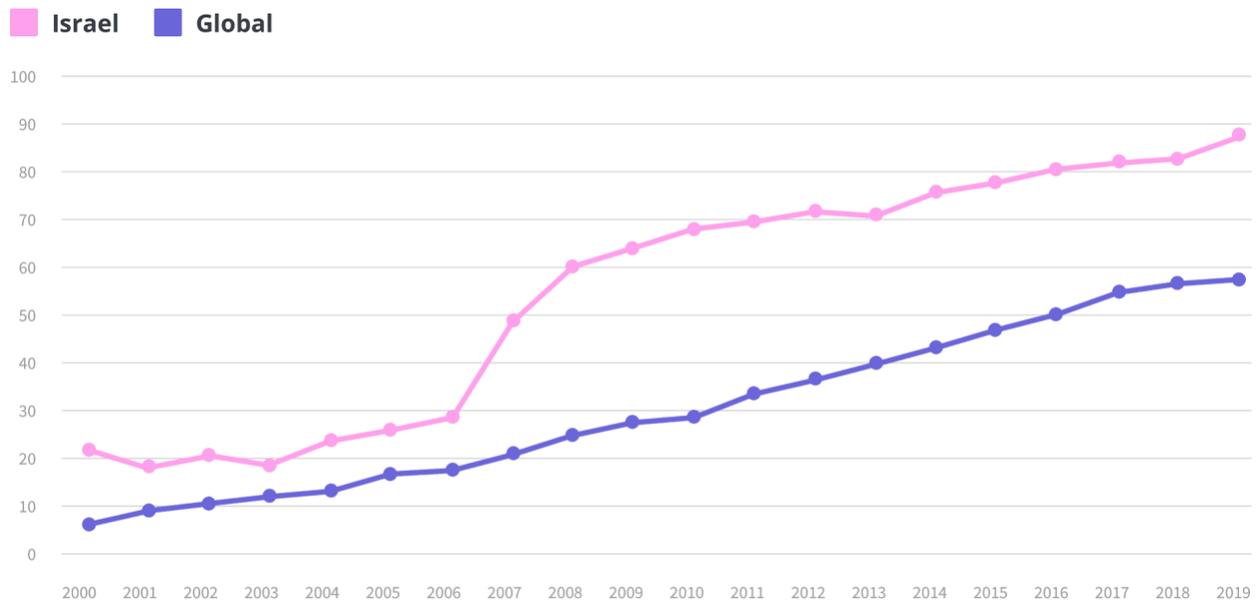
The American approach in this area stands in contrast to many other countries where governments have displayed a greater willingness to intervene in regulating content, and where Internet service providers (ISP) are often subject to state mandates.(J. L. Zittrain et al. 2017) Israel, on its part, has largely mirrored the American regulatory approach in this domain and as the Open Internet Initiative notes, has historically avoided wide government intervention in internet content.²

In recent decades, access to the internet in Israel has grown increasingly and become widespread. As figure 1 indicates, the Internet Penetration Rate in Israel is significantly higher than the global average and positions Israel amongst leading developed countries.

¹ Often cited in this regard are provisions of the 1996 Telecommunications Act and the 1998 Child Online Protection Act which have been challenged on the grounds that they infringe on freedom of speech. See (Klingler 2010, 6; Zittrain and Palfrey 2007, 229).

² See “Israel | OpenNet Initiative.” 2009. *OpenNet Initiative*. https://opennet.net/research/profiles/israel#footnote7_2z6jq4k (April 25, 2019).

Figure 1: Internet Penetration Rate; Global, Israel.

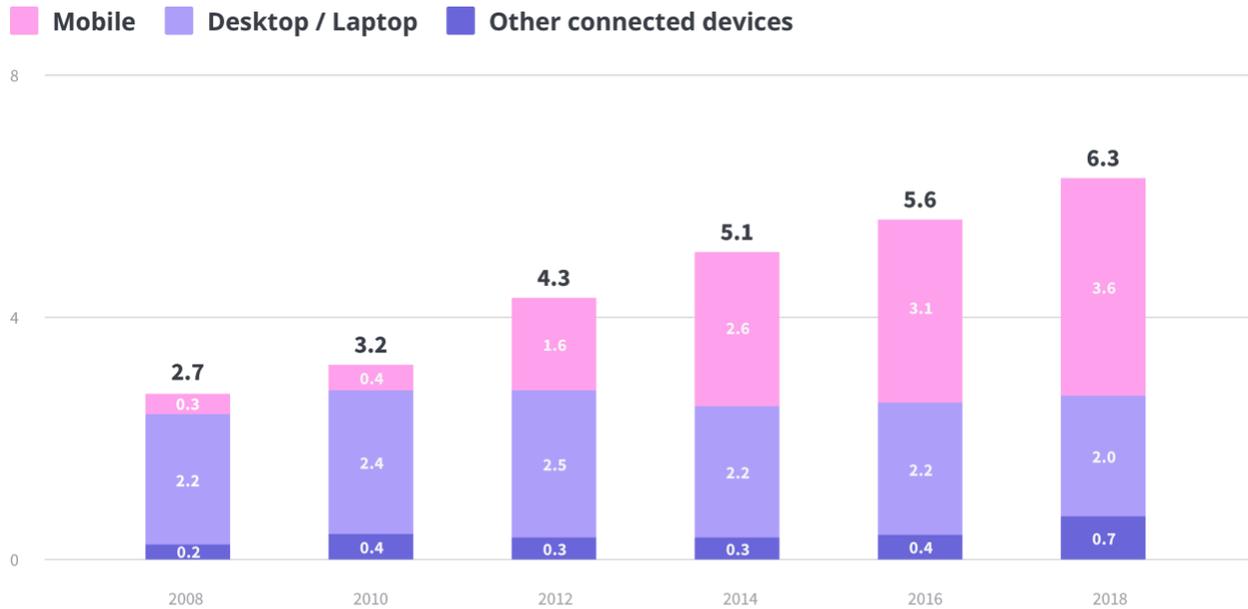


Sources: UN Data; International Telecommunication Union; Internet World Stats; ISOC ; World Bank.

In addition to the fact that a growing number of people have access to the internet in recent years, increased access to connected devices has also raised the average time spent online daily. As figure 2 shows, as of 2018 an adult American user spends on average 6.3 hours with digital media, much of that online. This trend of increase in daily time spent online is shared by Israel. In 2006, a Comscore report had Israel leading the list of countries ranked by average hours spent online, and suggested that Israelis spend an average of 57.5 hours online monthly.³ That figure increased substantially in the following decade and a half with the proliferation of connected devices and increased access to high speed internet.

³ omscore. 2006. "694 Million People Currently Use the Internet Worldwide According to ComScore Networks." *Comscore*. https://www.comscore.com/Insights/Press-Releases/2006/05/comScore-Launches-World-Metrix?cs_edgescape_cc=IL (April 25, 2019).

Figure 2: Daily hours spent with digital media per adult user, USA.



Source: Bond Capital- 2019 Internet Trends Report

As the internet became increasingly ingrained in our lives, awareness to the risk associated with its abuse rose. In recent years the effects of online dissemination of fake news have been addressed by media outlets,⁴ academic research⁵ and legislative inquiry.⁶ Concurrently, the 2018 Cambridge Analytica data scandal and the ensuing public discussion about misuse of private data for political and commercial use had reverberated globally,⁷ and was further propelled by the implementation of General Data Protection Regulation (GDPR) in Europe.

One issue enclaved in the wider discussion about internet policy, which is the focus of this report, is the spread of harmful content online and the steps regulators are taking in response to it. By in large, regulators have thus far struggled to find a fitting strategy to deal with various challenges posed by technological innovation, (Tene and Polonetsky 2013) and the spread of harmful content online is no

4 Graham, David A. 2019. "The Real Problem With Fake News." *The Atlantic*.

<https://www.theatlantic.com/ideas/archive/2019/06/fake-news-republicans-democrats/591211> (July 23, 2019).

5 Lazer, David M J et al. 2018. "The Science of Fake News." *Science* 359(6380): 1094–96.

6 Senate Judiciary Committee, Extremist content and Russian disinformation online: Working with tech to find solutions (Committee on the Judiciary, 2017);

www.judiciary.senate.gov/meetings/extremist-content-and-russian-disinformation-onlineworking-with-tech-to-find-solutions

7 Lapowsky, Issie. 2019. "How Cambridge Analytica Sparked the Great Privacy Awakening | WIRED." *Wired*.

<https://www.wired.com/story/cambridge-analytica-facebook-privacy-awakening> (June 23, 2019).

exception. In lieu of such strategy, various suggestions have been made to increase government intervention into internet content. Such intervention often consists of applying one of several content blocking methods.⁸ In Israel, a rather severe form of such intervention has been proposed, calling for the regulator to require Internet service providers to categorically block all content deemed harmful.

This report will submit that expansive government intervention in internet content, and mandating ISPs to block content and limit access to the internet, is both counter-productive and threatens fundamental democratic principles such as the right to privacy and the right to free speech. Alternatively, this report will make the case for considering a more nuanced approach to internet content policy, one which relies on insights from behavioral science. It will recommend nuanced, evidence based interventions to meet desirable policy goals in this domain. The report will suggest a framework for applying behavioral insights in internet content policy and will demonstrate how such insights can help increase the use of voluntary parental content-control software. By committing to a such an approach, regulators can promote safe and responsible behavior online without enduring the consequences associated with broad government intervention in internet content.

A more nuanced and evidence based approach to tech policy, sometimes defined as “smart regulation” is increasingly being promoted by advocacy groups, think tanks and private companies as an alternative to traditional “Command and Control” regulation. Top executives from leading tech companies have expressly stated their interest and support for smart regulation. Kent Walker, Senior Vice President for Global Affairs and Chief Legal Officer at Google, for example, has noted that regulation is needed but suggests pursuing “smart, nuanced policy initiatives and having a continuing conversation to tackle some of the challenges in cyberspace”.⁹

⁸For an overview of these methods see Internet Society, “Perspectives on Internet Content Blocking: An Overview”, March 2017: <https://www.internetsociety.org/wp-content/uploads/2017/03/ContentBlockingOverview.pdf>

⁹ Walker, Kent. 2019. “How We’re Supporting Smart Regulation and Policy Innovation in 2019.” *Google, Public Policy*. <https://www.blog.google/perspectives/kent-walker-perspectives/principles-evolving-technology-policy-2019/> (May 28, 2019).

Likewise, referring to internet regulation, Brad Smith, President and Chief Legal Officer at Microsoft argued that we need a “new generation of laws to govern a new generation of Tech”.¹⁰ Such statements are indicative of the fact that internet regulation is not a zero sum game in which the interests of regulators and private tech companies necessarily collide. Rather, a thoughtful, nuanced and evidence based strategy for dealing with harmful content online and for promoting informed and responsible online behavior would be endorsed by various parties of interest. The following sections will demonstrate a framework for such a regulatory strategy for dealing with harmful internet content in Israel.

¹⁰ Scott, Mark. “The Internet Is Broken. Can This Group Fix It?” *Politico*. <https://www.politico.eu/article/internet-governance-ottawa-regulation-balkanization-splinternet-global-jurisdiction-policy-network> (March 11, 2019).

Case Study:

Internet contact regulation in Israel

In recent years, and despite Israel's history of limited government intervention in this area, various Israeli Parliament (Knesset) members have increasingly opted towards a relatively expansive approach to internet content regulation. Specifically, calls have been made for the government to intervene and block online content deemed harmful. In almost all cases, the justification offered for this approach has been the threat posed by children's exposure to harmful, and specifically sexually explicit, content.¹¹

In 2017, a survey conducted by Bezeq, a prominent Internet Service Provider in Israel indicated that the average daily time parents allow their children (ages 6-9) to spend on digital media is 2.7 hours.¹² In a survey conducted by the Israel Internet Association (ISOC-IL) 87% of children and teenagers (ages 7-17) said that they spend an average of over two hours online every day, and 60% said they spend more than 4 hours.¹³ ISOC-IL also found that 62% of the 500 children and teenagers interviewed said they had been exposed to sexually explicit content online.

Children's exposure to harmful content online is a serious issue that ought to be addressed. Indeed, there appears to be a consensus in Israel that some regulation of internet content is necessary. However, opinions diverge on the question of the scope and nature of such regulation.

Indicative of the approach to increase government intervention into online content is a recent bill proposing requiring ISPs to block content deemed harmful by default, and to require users to opt in and register in order to get full access to the internet.¹⁴ However, as the Israel Internet Association has

¹¹ See transcripts of Knesset discussion from, 01.01.2019 (Hebrew):

<https://main.knesset.gov.il/Activity/Legislation/Laws/Pages/LawBill.aspx?t=lawsuggestionssearch&lawitemid=572152>

¹² See 2017 Bezeq Internet report:

https://www.bezeq.co.il/media/PDF/internetreport_2017.pdf

¹³ See Israel Internet Association (ISOC-IL) report from 2016:

<https://www.isoc.org.il/sts-data/24323>

¹⁴ See bill presented to Knesset, 17.12.2018 (Hebrew).

https://fs.knesset.gov.il/20/law/20_ls1_526843.pdf

previously mentioned, this approach would lead to curtailment of free speech and to an infringement on the right to privacy.¹⁵ The fact that data on online behavior will be gathered by ISPs and will eventually reach government hands poses a direct threat to the right to privacy. Meanwhile, the right to free speech will be threatened by the fact that, as recent discussions surrounding this bill reveal, the definition of “harmful content” is left vague and the identity of those authorized with designating content as harmful is unknown. This is worrying since there is no guarantee that the definition of “harmful content” would not become ever more expansive in the future, restricting free speech even further.

In addition to these threats associated with government intervention in blocking content, the effectiveness of such interventions has also been questioned. As a 2017 Internet Society report notes, content blocking mechanisms are not only often ineffective, but also run the risk of inspiring a growth in ‘underground’ services and alternative networks. By doing so, content may escape the easy view of law enforcement and find its way into the *Dark Web*.¹⁶

The objections raised to this approach in Israel have stalled the legislation of this bill so far, and the members of Knesset who originally proposed it conceded that their original hope for blocking all pornographic content from access (by either adults or minors) was not likely to be achieved.¹⁷ Nonetheless, they have signaled their intent to push forward some version of this bill in the near future.

Israel lawmakers are not alone in pursuing this approach. A recent White Paper produced by the UK Government, setting the stage for future legislation and regulation seems to signal a move in a similar direction. See UK Government Online Harms White Paper Published 8 April 2019: Though the UK white paper does not recommend blocking content at the ISP level, it does suggest equipping the government with greater power to intervene in internet content at the platform level.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/793360/Online_Harms_White_Paper.pdf

¹⁵ See ISOC-IL report submitted to the Ministry of Economy in 2017 (Hebrew) https://www.isoc.org.il/files/docs/ISOC-IL-Position_paper_Communications_Law_-_%20Content_Filtering.pdf

¹⁶ Internet Society, “Perspectives on Internet Content Blocking: An Overview”, March 2017: <https://www.internetsociety.org/wp-content/uploads/2017/03/ContentBlockingOverview.pdf>

¹⁷ See transcripts of Knesset discussion from, 01.01.2019 (Hebrew).

As stated above, online child safety is a collectively desirable goal and it is mainly on the question of the right methods to achieve this goal that disagreements could be found. The threats posed by government intervention in online content, and by forcing ISPs to categorically block content deemed harmful, are significant. Considering a more nuanced alternative approach to this problem is therefore warranted.

Alternative regulatory approach:

Increasing the voluntary use of parental content control software:

There are currently numerous content filtering software solutions available and free for use.¹⁸ These provide parents with the means of limiting the content their children are at risk of being exposed to. Furthermore, ISPs are currently required by law to present internet users with these software solutions.¹⁹ The fact that such software is free and can be used voluntarily by parents to decide what type of content they wish to block in their own devices, makes their promotion a sensible policy. However, the problem policy makers face in this pursuit is that these voluntary content-control software solutions are currently severely underused.

According to a report by the Knesset Research and Information Center (RIC), data provided by ISPs indicates that as of 2017 only between 0.1% - 1.5% of internet users made use of existing content-control software options.²⁰ This figure is even more striking when we consider that in 2014 the Ministry of Communication suggested that as many as 92% of internet users are aware of the existence of such software options.²¹

This discrepancy, between awareness and action, is where smart regulation can have a substantive impact. In contrast to government intervention by forcing ISPs to block content, a softer, more nuanced

¹⁸ For a list of such software solutions (Hebrew): <https://www.isoc.org.il/netica/keeping-the-children-safe/filter-softwares-pc>

¹⁹ See 22.5.2019 Hearing from the Engineering Administration of the Ministry of Communications (Hebrew): <https://www.gov.il/BlobFolder/rfp/23052019/he/A%20hearing%20to%20update%20the%20duty%20to%20inform%20the%20duty%20to%20filter%20offensive%20sites.pdf>

²⁰ See 14.11.2018 report by The Knesset Research and Information Center (Hebrew): <https://m.knesset.gov.il/Activity/Info/MMM/Pages/document.aspx?docId=CAS-76373-J7J2P6>.

²¹ Also cited in the 2018 report by The Knesset Research and Information Center.

It is not only in Israel where content filtering software solutions are underused. As a 2015 OFCOM report mentioned, the percentage of internet users in the UK who actually ended up activating the filtering options provided by ISPs is also very low. See Ofcom report on "internet safety measures: Strategies of parental protection for children online": https://www.ofcom.org.uk/__data/assets/pdf_file/0020/31754/Fourth-internet-safety-report.pdf ; see also: Miller, Joe. 2014. "New Broadband Users Shun UK Porn Filters, Ofcom Finds - BBC News." *BBC*. <https://www.bbc.com/news/technology-28440067> (April 23, 2019).

regulatory approach to this problem would look for ways to increase the use of existing and available solutions. Such a regulatory approach would look into the reasons for why content control software options are underused and will consider ways to formulate evidence based interventions to increase the use. To do so, it's helpful to turn to insights from behavioral science.

Behavioral insights and public policy

In recent years behavioral science has moved beyond the confinements of academia and into public policy. Insights on human behavior are increasingly being used in designing evidence based policy interventions in various domains. One source which policy makers are increasingly turning to in this regard is *Nudge Theory*.

Nudges, as defined by Richard Thaler and Cass Sunstein in their 2009 book on the topic, are ways to “alter individuals’ behavior without forbidding any options or significantly changing their economic incentives”.(Thaler and Sunstein 2009) In other words, nudges are small, and often costless intervention, that aim to shift individuals’ behavior towards a behavioral pattern that policy makers deem desirable and/or away from un-desirable patterns. All without reducing individuals’ choice options.

One useful example of how policy makers devise interventions to nudge citizens towards an agreed upon goal can be found in a recent project carried out by the Government of Ontario, Canada. Policy makers in the province had been trying to think of ways to increase the percentage of registered organ donors. Preliminary data indicated that the figure of 25% registered donors could be substantially increased. Policy makers in the province had reason to believe that many potential donors would need only a small push- a nudge, in order to commit and register as organ donors.

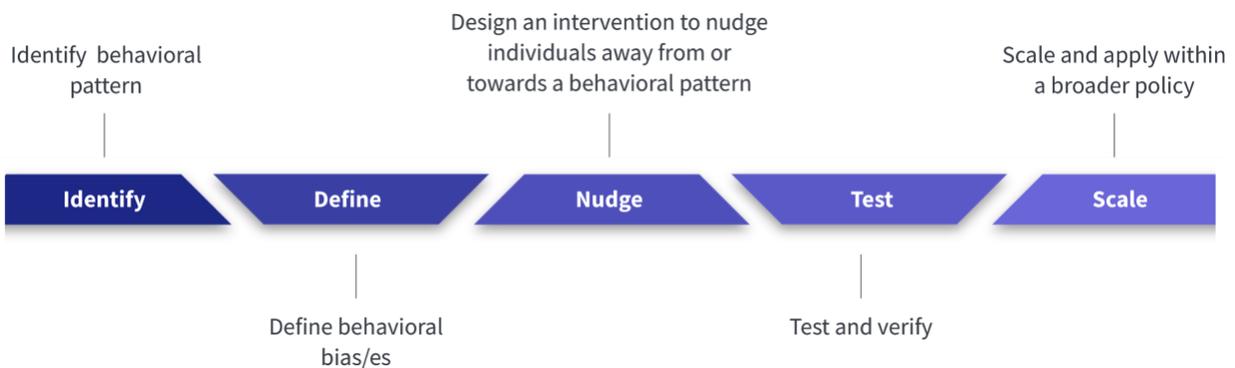
Relying on research that indicates that small changes in messaging can have a significant impact on individuals’ decisions, the team from the Government of Ontario embarked on several Randomized Control Trials to measure the effects of different appeals to citizens to register for organ donation. They tested the effects of different versions of the organ donor registration forms, the effects of timing of when these forms were handed out and the effects of simplifying the forms and making them as clear and as engaging as possible. Indeed, the results were that these evidence based interventions increased registration rates by up to 143%.

Applying behavioral insights and increasing the use of parental content-control software:

The previous example, of attempts made by the government of Ontario to increase the rates of registered organ donors illustrates well how behavioral insights can be utilized to achieve a desirable policy goal. The gap that the Government of Ontario identified between the number of citizens indicating willingness to register as organ donors and the number of those who actually registered as such was substantially decreased by designing a nuanced, evidence-based intervention- a Nudge. Attempting the same in the field of internet content policy, and with the goal of increasing the use of available, existing content control software solutions, could very well prove to be effective.

Application of behavioral insights in public policy often consists of a few steps. The first step includes identifying a behavioral pattern in question. The second step consists of mapping out the behavioral biases that lead to such behavior. In the third step interventions are considered that could ‘nudge’ individuals away from such behavior and towards a more desirable behavioral pattern. Next, policy makers must test the nudge they have designed in an empirical setting and finally scale and apply that nudge within a broad policy strategy. The following section will illustrate a possible application of behavioral insights for the case study of internet content policy in Israel and demonstrate how this framework could be useful for increasing the use of content control software.

Figure 3: Framework for applying behavioral insights in public policy



²² A description of the project can be found at the Government of Ontario’s official website: <https://www.ontario.ca/page/behavioural-insights-pilot-project-organ-donor-registration#foot-2>

Ascribing to the framework illustrated in figure 3, when attempting to increase the rates of use of content-control software, the first step is identifying the behavioral pattern in question. As previously mentioned, despite awareness to the existence of harmful content online, and despite awareness to existing and relatively costless solutions currently available, parents don't seem to commit to action in meaningful numbers. It is therefore clear that the behavior pattern we wish to change in this case is one of *avoidance*. Next, it's important to define the behavioral biases that lead to that avoidance. To do so, we turn to literature from behavioral science.

1. Underestimation of Threat

If one's child were to be wandering around unsupervised in a bad neighborhood, his or her parent would naturally feel alarmed. However, when it comes to the confinements of one's home, parents routinely seem to underestimate the dangers that loom over cyberspace. This underestimation could be explained by several biases mentioned in the literature.

The term *Status Quo Bias* refers to a psychological inertia in which, when choosing among alternatives, individuals display a bias towards sticking with the status quo. (Samuelson and Zeckhauser 1988, 47) *Status Quo Bias* has been mentioned, among other things, as being a driving force behind individuals' decision making process when it comes to committing to retirement and healthcare plans. (Knoll 2010) *Status Quo Bias* could help explain the behavioral pattern of avoidance when it comes to installing parental content control software. Because they haven't encountered harmful content previously, or because they are unaware that their children have encountered harmful content in the past (such encounters are under-reported), parents may become inclined to underestimate the probability of their children encountering harmful content in the future.

There are various ways to raise awareness to threat in an effective and measured manner and doing so could help increase the number of parents who make use of existing software solutions. It is worth noting that, as an article from the Stanford Social Innovation Review (SSIR) mentions, campaigns aimed at raising awareness are often not sufficient to lead to action. Accordingly, the writers suggest targeting the relevant

audience as narrowly as possible and creating a compelling messages with a clear calls to action. (Christiano and Neimand 2017)

If regulators design an effective appeal to raise threat awareness, and consult the relevant literature in order to determine when such an appeal would work best, and with which audience, threat awareness is likely to increase leading more parents to take protective measures and use content-control software solutions.

2. Misperception of Norms

Another behavioral bias that could help explain why existing content control software solutions are underused is *Availability Heuristic*. The term, originally coined by Amos Tversky and Daniel Kahneman, suggests that our behavior generally rests on our perception of the prevalence of such behavior. Tversky and Kahneman conclude their work by suggesting that “the most important decisions individuals make are governed by beliefs concerning the likelihood of unique events”. (Tversky and Kahneman 1973, 231) In other words, the more individuals perceive a behavioral pattern as common, the more they are likely to pursue it. Conversely, when individuals perceive a behavioral pattern as uncommon, they are more likely to avoid it. An often-cited example for this comes from a study that looked into alcohol abuse among college students. The study concluded that students who overestimated how prevalent alcohol abuse was amongst their peers were more likely to abuse alcohol themselves.(Perkins 2003, 8–9). In the most basic terms, the belief that ‘everyone is doing it’ leads people to rationalize and justify behavior that they would not otherwise engage in.

This insight could be helpful in the attempt to increase parent’s use of content-control software. It appears that the pattern of avoidance and the relative lack of such use could be partly explained by the fact that parents perceive their lack of action as being the norm. The belief that, like themselves, most others take no action serves to de-motivate individuals from taking such action. There are several examples of instances in which policy makers were able to nudge individuals away from such a belief. One such example comes from the Behavioral Insights Team (BIT) in London.

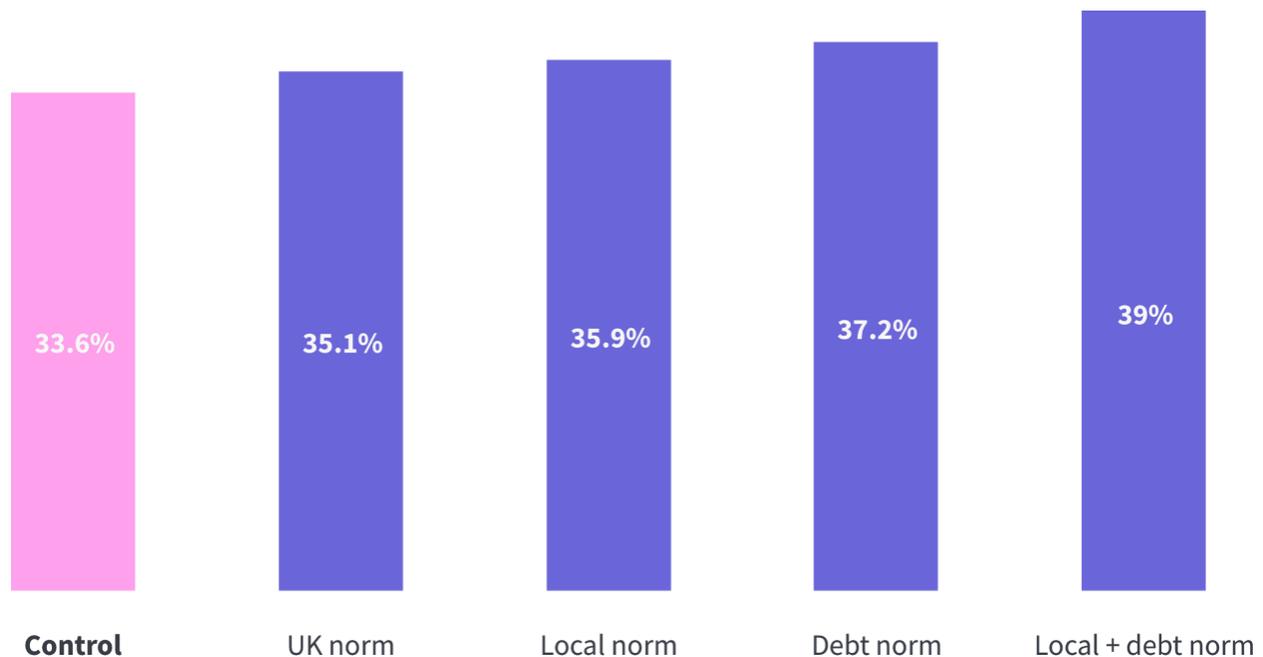
The UK Government has long tried to increase the rates of timely tax payment and reduce the rates of delays and deferments. Accordingly, the BIT was commissioned with testing several versions of appeals

to tax payers late for their payment. Relying on insights from behavioral science the BIT crafted several statements and tested their effect in the hopes that those would prove to nudge individuals who have yet to pay their taxes into doing so. (Halpern 2016, 234).

Figure 4 illustrates the effects of these statements. Each statement was added to the standard tax payment reminder letter issued by the government (Control). The effects were tested within the course of one month upon receiving notice. The BIT's work revealed that adding the single statement that 'nine out of ten taxpayers pay [their taxes] on time' (UK Norm) raised the payment rate by around 1.5%. Furthermore, relying on the work of the Social Psychologist Robert Cialdini, the BIT identified that "people are more influenced by the behavior of those they see as being more like themselves than by people in general". (Cialdini 1993) Accordingly the BIT tested a version of their first statement by pointing out that 'most people in *your local area* pay their tax on time' (Local Norm). This localized statement raised the payment rate by more than 2% over the standard government reminder.

Another statement, aiming at reducing the effects of mis-perception of norm, and ultimately raising the payment rate even further, was that "most people with a debt like yours' had already paid it " (Debt Norm). Finally, merging these statements together, the BIT tested a final statement that proved to be the most effective in raising payment rates (Local+Debt Norm). This final combined statement increased tax payment within a month upon receiving notice by 5.4% compared with the standard government reminder.

Figure 4: BIT Tax study:



*Tax payment rates by late paying individuals, one month (23 days) after receiving five different versions of a reminder letter.

The BIT tax payment project shows that when public institutions carefully craft their appeals to citizens, and rely on behavioral insights in doing so, the effect can be substantial. When it comes to internet content policy, perhaps a disclaimer indicating that likeminded parents are actively protecting their children from harmful content online could help nudge complacent parents towards action. Such a disclaimer, sent either by ISPs or directly by the Ministry of Communications, and targeted effectively, could contribute to increasing the use content-control software options.

3. Choice Architecture

A final insight from behavioral science that could help explain why the content-control software solutions, which ISPs are required by law to present users with, are scarcely being used, has to do with the *ways* in which these solutions are presented to users. Various studies indicate that carefully considering the ways in which information is presented to individuals significantly effects the likelihood of that information being absorbed. The relevant term often used in this regard is *choice architecture* (Shafir 2013, 428).

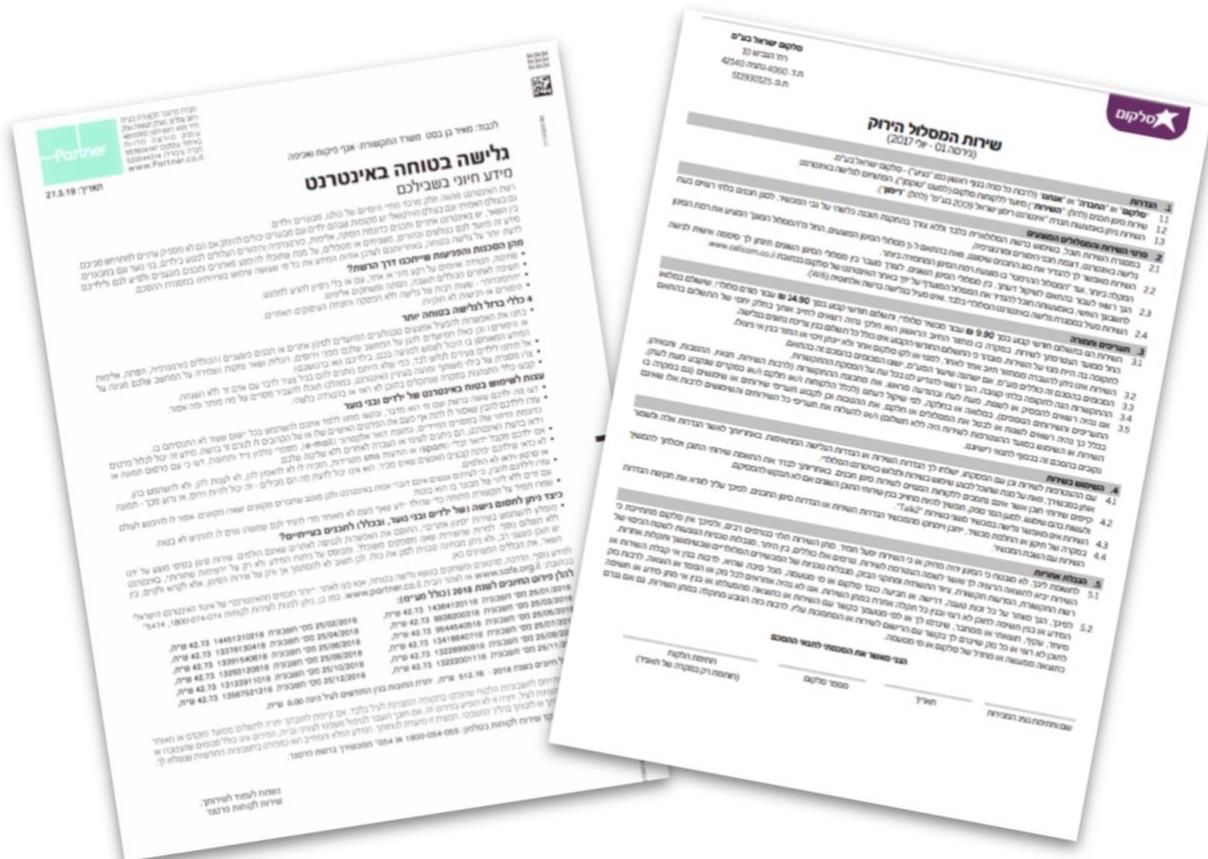
As Thaler and Sunstein put it, “Social Science research reveals that as choices become more numerous, and/or vary on more dimensions, people are more likely to adopt simplifying strategies.” (Thaler and Sunstein 2009, 224) As an example, Thaler and Sunstein reference a failed healthcare plan roll-out in the

United States (Medicare Part D). The government's intention to offer the maximum amount of options to the American people was evidently revealed to be counter-effective. The plan suffered not only from a "cumbersome design" but also included an abundance of choice that was eventually overwhelming and ultimately debilitating. (Thaler and Sunstein 2009, 368)

In light of these insights, it is clear that the prompts currently being sent by ISPs to users, informing them of available content-control software options, could benefit significantly from re-design and simplification. Figure 5 includes examples of prompts sent out by two major ISPs in Israel informing users on online safety precautions and available software options. It is worth viewing these prompts in light of what we know from behavioral science on choice architecture.

One basic tip that behavioral science offers policy makers to help increase the likelihood of information being absorbed and acted upon is *simplification*. In Richard Thaler's words "if you want to encourage something, make it easy". The term economists often use to capture this concept is "friction costs". As David Halpern notes, "the effects of friction – extra effort or hassle – matters greatly, and often much more than policymakers and citizens ever thought".(Halpern 2016, 149) Effective choice architecture will simplify the choices presented and reduce the friction costs associated with the process of subsequent decision making

Figure 5: Prompts depicting available software control solutions sent by two ISPs (Celcom and Partner)



As Halpern mentions, simplifying messages and reducing hassle and friction costs have a substantial effect. In fact, laboratory studies show that an easy-to-read message is not only more likely to be understood, but more likely to be believed. (Halpern 2016, 153) When we look at figure 5, we can see that there is much room for improvement in the ways ISPs currently present users with information about content control software. In order to increase rates of downloading and using these software solutions, the process of doing so must be as simple and as frictionless as possible. Users must be presented with the relevant information in the most engaging and clear ways possible and then channeled towards downloading the relevant software in the easiest and quickest ways possible.

Recommendations for next steps

This report suggested an alternative, nuanced and evidence based regulatory approach to confronting harmful content online. Instead of the government mandating ISPs to block content deemed harmful by default, as has been recently suggested in a bill to the Knesset, it is worth considering ways in which the Ministry of Communication can intervene to increase the voluntary use of available content control software solutions. To do so, this report recommends applying behavioral insights to identify the reasons behind the scarce use of such software and to increase such use.

Operationally, this means designing and testing interventions and then implementing them broadly. A recent report by the World Bank, listed 202 public institutions as currently applying behavioral insights in their policies world-wide. (Sánchez-Páramo, Vakis, and Zeina 2019) According to the report, Governments have incorporated behavioral insights in their public policy either in a centralized or decentralized way. Germany, for example, set up a single team to work with the German government departments to design and implement interventions. Conversely, following the success of the BIT, the UK evolved into a decentralized model, with departments across the government coordinating their own behavioral insights functions and projects.(Afif et al. 2018, 79–80) I believe that the latter structure would be best suited for Israel and that various ministries and government departments should be encouraged to take initiative and apply behavioral insights within their work to the extent they wish to do so.

In Internet Content Policy, this report recommends that the Ministry of Communication devise and test several interventions option. The recommended approach is to first design a gradual implementation program with the goal of increasing the rates of use of content control software in households with children. This will start with composing prompts and notifications relying on insights from behavioral science, some of which have been described in this report, to be delivered to parents via Email or text messages. These will be tested for their effectiveness in raising levels of threat awareness and in reducing the effects of status que bias.

Secondly, this report recommends that in addition to legally mandating ISPs to inform internet users of existing free content-control software options, the Ministry of Communication will also be involved in verifying exactly *how* users are being informed of these options. Insights from behavioral science, such

as the importance of carefully considering choice architecture, should be applied in order to increase the chances of information being absorbed and acted on. As stated above, there is ample reason to believe that if regulators consider these proposed methods and thoughtfully intervene, the threat of exposure to harmful content could be significantly reduced.

I hope that this report will introduce regulators to the potential of applying behavioral insights in internet policy and tech policy more broadly. The speed and complexity with which technological innovation is taking place warrants a new, innovative approach to regulation in many domains. Behavioral Science, as I hope I have laid out in this report, is one source upon which policy makers can draw for crafting such regulation.

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