

# Response to the Open Consultation Call

## Audience protection standards on Video-on-Demand Services

**Submitted by Dr. Neelima Sailaja, Dr. Helena Webb and Prof. Derek McAuley  
Horizon Digital Economy Research Institute, University of Nottingham**

Horizon<sup>1</sup> is a Research Institute centred at The University of Nottingham and a Research Hub within the UKRI Digital Economy programme<sup>2</sup>. Horizon brings together researchers from a broad range of disciplines to investigate the opportunities and challenges arising from the increased use of digital technology in our everyday lives. Prof. McAuley is Director of Horizon, and was a member of the Furman Digital Competition Expert Panel for HM Treasury that published the “Unlocking Digital Competition” report<sup>3</sup>, and has been Principal Investigator on a number of projects investigating user awareness, trust and agency when using algorithmic services. Neelima Sailaja is a Transitional Assistant Professor at Horizon, leading projects that investigate methods for alleviation of socio-technical challenges arising from personal data use in media services. Most recently she acquired funding from the EPSRC ( PETRAS ) for the project New Forms of Public Value at the Edge that partnered with a 10 day BBC audience trial of a Personal Data Store, an edge-based response to personal data collection and use. Helena Webb is a Transitional Assistant Professor at Horizon. She is a highly experienced socio-technical researcher. She was a Researcher-Co Investigator on UnBias and its follow-on project ReEnTrust, which explored opportunities to promote user trust in responsible algorithm driven systems. She also worked on the ESRC-funded ‘Digital Wildfire’ study, which investigated the spread of harmful content online and opportunities for the responsible governance of digital social spaces.

1. Over the years, linear television has integrated a number of measures for audience protection, which have become an accepted norm for television programming. A stark example here would be the “watershed”, the time after which programmes which might be unsuitable for children can be broadcast. However, when media shifts from linear to on-demand, such traditional approaches fail, calling for innovative and novel audience protection practices that are relevant to the new circumstances. Add to this the most significant aspect of the shift to digital - the use of audience personal data - and the inherent challenges here are exacerbated on technical, social and ethical levels. Our response aims to unpack some of these protection challenges and highlight potential avenues for effective response to them.

### Loss of audience trust

2. One of the primary challenges of data driven, digital VoD platforms within media is the loss of audience trust this process entails<sup>6</sup>. This phenomenon is reported as

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<sup>1</sup> <http://www.horizon.ac.uk>

<sup>2</sup> <https://epsrc.ukri.org/research/ourportfolio/themes/digitaleconomy/>

<sup>3</sup> <https://www.gov.uk/government/publications/unlocking-digital-competition-report-of-the-digital-competition-expert-panel>

<sup>6</sup> Sailaja, N., 2020. *Understanding the challenges of using personal data in media experiences* (Doctoral dissertation, University of Nottingham).

twofold: first is the challenge against the very nature of broadcast media wherein users trusted the content because they were assured the same content was delivered to everyone, i.e. what I see is what you see. Seen from an audience protection perspective, this loss of trust is embedded in a fear of bias in the content that is made available to the audiences, thereby influencing their attitudes, opinions and behaviours. Political allegations of ‘fake news’<sup>7</sup> leads to users questioning digital media platforms and organisations and their trustworthiness, often driving them to seek alternate sources of news media on the Internet, such as Facebook, Twitter and YouTube. However, as these platforms deliver, often contentious, user generated content, this potentially undermines the situation further, as these channels are not subject to media regulation. Likewise, “filter bubbles” and “echo chambers” not only inject bias, but also constrain the diversity in the availability of content that is ‘recommended’ on these platforms. These challenges around trust call for ethical consideration and appropriate responses that help mitigate audience protection around challenges of bias and influence when consuming media on VoD platforms.

3. The second reason for loss of audience trust stems from personal data leverage wherein broadcasters are now expected to take upon the added responsibility of being a ‘data broker’ (for millions of users worldwide), where they have to understand and act upon the various legal, social, technical and ethical mechanisms of data processing and ensure they are in the interest of the audiences, consistently guaranteeing audience protection and safety. While the track record of the service provider could help with user trust in this scenario initially, the audiences do not consider that to be a guarantee<sup>8</sup> and hence sustainable response mechanisms that demonstrate active and effective methods for audience protection becomes a mandate here.

## Accountability

4. As trust becomes a primary concern within VoD content and data practices, accountability becomes essential, and if not handled efficiently, a challenge in itself. One of the key steps towards accountability is legibility<sup>9</sup> or effective transparency. However, research has shown that audiences are not satisfied with the transparency and control currently afforded to them by data driven media platforms<sup>10</sup>.
5. This lack of accountability, transparency, and control around data practices in media, especially VoD platforms has also led to privacy concerns around the use of these

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<sup>7</sup> [https://www.washingtonpost.com/news/the-fix/wp/2017/06/27/trump-renews-attack-on-fake-news-cnn-after-retraction/?utm\\_term=.6a2087289e12](https://www.washingtonpost.com/news/the-fix/wp/2017/06/27/trump-renews-attack-on-fake-news-cnn-after-retraction/?utm_term=.6a2087289e12)

<sup>8</sup> Sailaja, N., Crabtree, A., Colley, J., Gradinar, A., Coulton, P., Forrester, I., Kerlin, L. and Stenton, P., 2019, June. The living room of the future. In *Proceedings of the 2019 ACM International Conference on Interactive Experiences for TV and Online Video* (pp. 95-107).

<sup>9</sup> Mortier, R., Haddadi, H., Henderson, T., McAuley, D. and Crowcroft, J., 2014. Human-data interaction: The human face of the data-driven society. *Available at SSRN 2508051*.

<sup>10</sup> Sailaja, N., Crabtree, A. and Stenton, P., 2017, May. Challenges of using personal data to drive personalised electronic programme guides. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems* (pp. 5226-5231).

systems. A solid example for illustration would be the suit filed against Netflix by a privately homosexual mother who was “alleging that Netflix violated fair-trade laws and a federal privacy law protecting video rental records, when it launched its popular contest in September 2006”<sup>11</sup> or the same organisation’s \$1 million personal data driven recommendation algorithm improvement contest<sup>12</sup> being cancelled following a warning from privacy advocates that data could easily be de-anonymised.

6. The result here is that audience members are left to feel vulnerable whereby they are forced to trust the service providers rather than being encouraged, through appropriate accountability responses, to organically build trust. Here, media service providers themselves also report accountability as a challenge by pointing out the different aspects of accountability that must be considered if user trust is to be preserved<sup>13</sup>. Therefore, accountability becomes a priority for both audiences and service providers in the effort towards audience protection.
7. Such accountability is often regulated by external or internal bodies through several measures that make processes transparent. For example, the GDPR and the UK DPA imposes legal accountability on any entity collecting and processing personal data, and extends to internal and external legal accountability<sup>14</sup>, which dictates accountability of the data practices both within and outside the VoD system.
8. Relevant within media and VoD, another aspect is social accountability<sup>15</sup>. This view on accountability, while not regulated, is an example of a responsible service provider understanding the need to go beyond just the legally mandated, in order to build greater user trust. It also differs from traditional definitions of accountability as this viewpoint focuses on being accountable as a societal entity, towards the society or the public, rather than a formal regulatory body. This involves taking active steps towards respecting and mitigating the social implications of using personal data that could otherwise lead to loss of user trust in the organisation.
9. A newer perspective on accountability which is of prime importance when considering audience protection on data driven VoD platforms is computational accountability. Processing of personal data, particularly when Artificial Intelligence (which are used by the recommendation and curating algorithms on VoD platforms) is involved, calls for accountability beyond legal mandates. For instance, it calls for computational accountability which refers to ‘providing an account of’ the underlying data practises to the audiences, thereby making the service and the data more accountable towards the public. This form of accountability focuses on making the computer system and the AI algorithms running it more transparent and legible.

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<sup>11</sup> <https://www.wired.com/2009/12/netflix-privacy-lawsuit/>

<sup>12</sup> <https://www.wired.com/2010/03/netflix-cancels-contest/>

<sup>13</sup> Sailaja, N., Crabtree, A., McAuley, D. and Stenton, P., 2018, June. Explicating the challenges of providing novel media experiences driven by user personal data. In *Proceedings of the 2018 ACM International Conference on Interactive Experiences for TV and Online Video* (pp. 101-113).

<sup>14</sup> Crabtree, A., Lodge, T., Colley, J., Greenhalgh, C. and Mortier, R., 2016. Building accountability into the internet of things. Available at SSRN 2881876.

<sup>15</sup> Nilsson, T., Crabtree, A., Fischer, J. and Koleva, B., 2019. Breaching the future: understanding human challenges of autonomous systems for the home. *Personal and Ubiquitous Computing*, 23(2), pp.287-307.

## Concerns around Sharing

10. As VoD platform usage increases, so do the social complexities associated with their usage. Often these platforms have accounts and profiles which are naively intended to be used by one individual. However, many accounts and profiles are shared by families, friends, colleagues and even acquaintances for social and financial reasons. Here, there are also scenarios of support wherein parents support their children's use of accounts, supporting elders, carers supporting patients etc.
11. All these complexities introduce a number of questions around audience protection. Again, first in terms of the media content that is delivered. How do VoD platforms ensure delivery of appropriate content (in terms of both interest and age appropriateness) to all users engaging with an account? If it is a shared scenario of consumption, how is the content that is served negotiated between all individuals? Who makes the decisions and how does it affect all the parties involved? Second, in terms of the personal data that these accounts manage. How is data separated and coalesced in these scenarios? In terms of children and teenagers, how much agency is given to the minors versus adults? How are the age transitions between age bands and respective data protection standards managed?
12. Currently most VoDs do not cater to such complex yet very realistic socio-technical appendices<sup>16</sup> to the popular one-to-one VoD accounts. While Netflix have started providing affordances for different profiles within one paid account, the aforementioned questions around protecting the users' data and media consumption practices are yet to be answered. While research in itself is still in an emergent phase in this context, we propose regulation affecting future VoDs to be reflective of these real world socio-technical concerns surrounding VoD use so that future design and development of these systems are inclusive of and sensitive to these nuances.

## Digital Addiction

13. Research across various disciplines has identified the tendency for VoD, alongside other digital platforms, to be associated with problematic usage, including over-use, dependency and addiction.
14. From a neurobiological perspective, the use of these platforms activates the 'reward centre' of the brain. This encourages users to spend more and more time on the platform and perhaps also to feel negative symptoms of withdrawal and craving when not using it<sup>17</sup>. Meanwhile, studies of digital trends indicate that users in western

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<sup>16</sup> Sailaja, N., Jones, R. and McAuley, D., 2021, June. Human Data Interaction in Data-Driven Media Experiences: An Exploration of Data Sensitive Responses to the Socio-Technical Challenges of Personal Data Leverage. In *ACM International Conference on Interactive Media Experiences*(pp. 108-119).

<sup>17</sup> Peper, E. and Harvey, R., 2018. Digital addiction: Increased loneliness, anxiety, and depression. *NeuroRegulation*, 5(1), pp.3-3; Fernandez, O.L. and Kuss, D., 2019. *Harmful internet use-Part I: Internet addiction and problematic use*. European Parliamentary Research Service.

nations are spending an increasing volume of time on VoD and other platforms<sup>18</sup> often resulting in negative impacts on well-being, including loss of human connection in addition to the compulsive behaviours, cravings, anxiety and feelings of withdrawal associated with other forms of addiction<sup>19</sup>. Many users report feeling they are dependent on digital devices and platforms<sup>20</sup>. Younger users, who have ‘grown up digital’ and are most active in a cultural shift away from traditional television watching behaviours, are often seen as particularly vulnerable to these harms<sup>21</sup>.

15. The design of VoD platforms typically encourages users to stay on the platform and keep watching more programming. For instance, a wide range of programmes are available at any one time and all the episodes in a single series may become available at once (a ‘series drop’). In addition, features such as auto-play from one programme to the next, ‘skip intro’ on new episodes and algorithmically generated personalised recommendations for what to watch next all encourage a continuous, seamless watching experience<sup>22</sup>. Consequently, these features encourage binge watching and even addiction, as acknowledged by the CEO of Netflix in 2017<sup>23</sup>:

“You know, think about it, when you watch a show from Netflix and you get addicted to it, you stay up late at night. We’re competing with sleep, on the margin. And so, it’s a very large pool of time.”

16. Increased time spent on a VoD platform represents increased profit, so platform companies have little incentive to deal with the threats to well-being caused by over-use, dependency and addiction. Therefore, suggestions have been made that mechanisms are needed to protect users from experiencing the harms of digital

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<sup>18</sup> Matrix, S., 2014. The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse: Young People, Texts, Cultures*, 6(1), pp.119-138; Jenner, M., 2017. Binge-watching: Video-on-demand, quality TV and mainstreaming fandom. *International journal of cultural studies*, 20(3), pp.304-320; Turner, G., 2021. Television studies, we need to talk about “binge-viewing”. *Television & New Media*, 22(3), pp.228-240.

<sup>19</sup> Wang, C., 2014. The Netflix effect and remote (ly) shared experiences: How social media enables binge-viewing; Hamilton-Ekeke, J.T. and Rugai, J., 2016. A review of digital addiction: A call for safety education. *Journal of Education and e-Learning Research*, 3(1), pp.17-22; Fernandez, O.L. and Kuss, D., 2019. *Harmful internet use-Part I: Internet addiction and problematic use*. European Parliamentary Research Service.

<sup>20</sup> Montag, C. and Walla, P., 2016. Carpe diem instead of losing your social mind: Beyond digital addiction and why we all suffer from digital overuse. *Cogent Psychology*, 3(1), p.1157281; Banerjee, S. and Gupta, N., 2018. An Online Study Based on Self-Perception of Electronic Devices and Media Platform Addiction. *International Journal of Contemporary Research and Review*, 9(06), pp.20438-20446.

<sup>21</sup> Matrix, S., 2014. The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse: Young People, Texts, Cultures*, 6(1), pp.119-138.

<sup>22</sup> Matrix, S., 2014. The Netflix effect: Teens, binge watching, and on-demand digital media trends. *Jeunesse: Young People, Texts, Cultures*, 6(1), pp.119-138; Horeck, T., Jenner, M. and Kendall, T. (2018) ‘On binge-watching: Nine critical propositions’, *Critical Studies in Television*, 13(4), pp. 499–504. doi: [10.1177/1749602018796754](https://doi.org/10.1177/1749602018796754); Jenner, M., 2018. *Netflix and the Re-invention of Television*. Springer.

<sup>23</sup> <https://www.theguardian.com/technology/2017/apr/18/netflix-competitor-sleep-uber-facebook>

addiction. These include health and safety education to encourage user awareness of their own habits<sup>24</sup> and mechanisms to allow users to exert more control over their screen time<sup>25</sup>. These latter mechanisms could include features internal to the platform such as the ability for users to turn off the auto-play and recommendation functions.

17. Digital addiction also brings forth questions around agency and symmetry of power on these platforms. With respect to agency, it highlights the need for both data legibility and user agency on these data driven systems so that the audiences can understand the mechanisms that drive their consumption patterns and are given easily useable affordances for making changes within it. When considering symmetry<sup>26</sup> of power over data, the question of how much 'knowledge' and control over the data the audiences have, over how much of it the service providers have also come into question here.

*"So its detecting who I am and say I'm watching a lot of new programmes about terrorism what guarantee do I have that this information isn't going to put me on a watch list and suddenly the camera is watching you all the time, its detecting anger when I'm watching programmes about terrorism. I mean this sort of thing could easily be interpreted in ways that would have impact on greater scrutiny" [P16].*

18. This is a quotation from Sailaja et. al(2017)'s work: "Challenges of using personal data to drive personalised electronic programme guides" [ Ref. No. 10 ], wherein an audience member expresses fear around media systems having access to the intimate and personal interests and behaviours of the users, which quickly spirals to dystopian projections of surveillance and monitoring.
19. Here again, when accounts are shared and vulnerable populations like children and elders are involved, concerns around agency and symmetry are only further exacerbated on social, ethical and even legal levels, leading to increased anxiety and fear. Such scenarios put forth the call for sensitivity that prioritises audience protection through better symmetry and increased agency, not just in a generic fashion but in a comprehensively inclusive manner that takes into account the different populations, scenarios and complexities that might be involved in the use of VoD platforms.

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<sup>24</sup> Hamilton-Ekeke, J.T. and Rugai, J., 2016. A review of digital addiction: A call for safety education. *Journal of Education and e-Learning Research*, 3(1), pp.17-22

<sup>25</sup> Allcott, H., Gentzkow, M. and Song, L., 2021. *Digital addiction* (No. w28936). National Bureau of Economic Research

<sup>26</sup> Lanier, J., 2014. *Who owns the future?*. Simon and Schuster.