

# Debate: We need data infrastructure as well as data sharing – conflicts of interest in video game research

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Industry data sharing has the potential to revolutionise evidence on video gaming and mental health, as well as a host of other critical topics. However, collaborative data sharing agreements between academics and industry partners may also afford industry enormous power in steering the development of this evidence base. In this paper, we outline how nonfinancial conflicts of interest may emerge when industry share data with academics. We then go on to describe ways in which such conflicts may affect the quality of the evidence base. Finally, we suggest strategies for mitigating this impact and preserving research independence. We focus on the development of data infrastructure: technological, social, and educational architecture that facilitates unfettered and free access to the kinds of high-quality data that industry hold, but without industry involvement.

**Keywords:** Large data; ethics; mental health; public health

When independent academics have access to data from the video game industry, extraordinary knowledge can be generated. Data sharing agreements between academia and industry are therefore widely considered to be a positive development in studying the impact of video games – including the effects of games on mental health amongst young people. In the United Kingdom, for example, the facilitation of “data sharing between the games industry, academics and players” (Department for Digital, Culture, Media, and Sport, 2022) is currently an official government priority. It is also likely that these collaborative relationships will prove beneficial to academics who are involved in them: they provide a strong foundation for grant capture, promotion applications, and impact statements.

However, it is these very benefits which lead us to the topic of this paper: conflict of interest. Historically, conflict of interest in the study of video games has primarily been discussed in relation to the financial involvement of external bodies with the generation of scientific knowledge. For example, scholars on both sides of the debate regarding violent video games have suggested that their counterparts may be swayed by the involvement of other stakeholders in funding research. It is our belief that the introduction of widespread industry data sharing into the field may frequently result in novel *nonfinancial* conflicts of interest. This refers to situations in which research outputs are potentially jeopardised by personal, professional, ideological, or intellectual interests (Viswanathan et al., 2014).

It is important to note that all academics may be subject to such nonfinancial conflicts to some extent. Indeed, whilst grant support, the “academic currency that buys prestige and promotion” (Levinsky, 2002) is tied to the success and volume of one’s research outputs, nonfinancial conflicts will always be part and parcel of doing research. However, the introduction of industry

data sharing may exacerbate such conflicts. There is significant monetary cost on the industry side to set up a data sharing arrangement: In our experience, data engineers, legal specialists, and public communication experts must be employed and have their time paid for. This cost must be balanced against an industrial benefit.

Thus, from an industry perspective, investing in establishing such data sharing agreements generally relies on alignment with corporate interest. In many cases, these may be misaligned with either public health priorities or purely scientific agenda. The need for industry to also obtain value from data sharing agreements becomes problematic when contextualised within the contemporary research ecosystems outlined above. From an academic perspective, collaborative relationships with industry stakeholders are laborious to broker, prestigious to obtain, and crucial to sustain for continued grant capture. If industry stakeholders withdraw from a data sharing agreement, all these benefits are lost. Whilst this remains the case, there is heightened risk that industrial interests transfer to the research team themselves, creating a nonfinancial conflict of interest.

Of course, not all companies may behave this way: One can easily imagine scenarios where corporate stakeholders are driven by a need for knowledge generation, thought leadership, or the promotion of responsible innovation practices which do not run counter to the creation of an unbiased evidence base regarding health. However, it is naive to assume that this will generalise to all data sharing arrangements: In diverse fields ranging from petrochemicals to pharmaceuticals, there is good evidence that some stakeholders will always seek to manipulate the evidence base in service of goals like regulatory avoidance.

Indeed, one could easily imagine the conflicts described above leading to the development of systematic biases within the literature regarding video game effects.

By this, we do not primarily refer to the direct suppression of inconvenient findings (Christian, 2017). Rather, we refer also to ‘pre-censorship’: situations in which research questions whose findings are likely to align with industry interests are primarily suggested by academic stakeholders as part of collaborations with industry in order to keep such relationships alive.

Thus, when entering data sharing arrangements with companies without considering the risks inherent in such agreements, academics risk the generation of an evidence base rife with the kind of issues that pervade areas like the study of gambling and tobacco (Livingstone & Adams, 2016). They thus also risk the diversion of time, energy, funding, and attention from the construction of world class independent evidence and knowledge.

We would suggest that the solution to this situation is not a moratorium on industry collaborations. Indeed, there may well be projects where genuine gaps in the research literature align with industry priorities. Such collaborative agreements may still lead to fruitful outputs, especially if the academics involved actively seek diverse scholars with different perspectives to access industry data, and engage in thorough disclosure of the kinds of interests outlined above, such as by following best practices outlined by the ICMJE (2021).

However, crucially, this cannot and should not be the only way that academics are able to access the kind of large-scale behavioural data that industry possesses: the risk is simply too great that industry bodies will be able to holistically guide the development of the evidence base. Instead, researchers must focus on the development of open data infrastructure: technological, social, and educational architecture that facilitates unfettered and free access to such data.

Recent research has shown that there are multiple alternative technological solutions that allow access to the kinds of data that industry holds, but without needing to broker data sharing with industry partners. For example, data donation frameworks – often operating in tandem with legal frameworks such as GDPR – allow users to first obtain the data that a company holds regarding their activity and then voluntarily share this data with research groups (Ballou, 2022). APIs and data dumps can allow researchers direct access to industry data without necessitating any collaborative relationship (e.g. Zendle, Meyer, & Ballou, 2020). Finally, bespoke tracking tools – developed by research teams – can integrate into a user’s software environment and allow the independent collection of the kind of longitudinal and behavioural data that industry thrives on, without industry involvement. There is a need to scale and systemize these efforts to truly develop the substantive area.

Crucially, however, developing and using such approaches on their own will not completely resolve conflict of interest issues that are likely to arise as industry data sharing becomes more prominent. Instead, such approaches should be made truly accessible to the wider community. An example of such an initiative may be drawn from our own practice: We have developed a tracking tool, which will allow individuals to donate their spending history, and link that data to a variety of psychometric and self-report variables. This tool is capable of generating powerful data: it will allow us to analyse temporal relationships between overspending in games and mental health, for example. However, if such an

approach were kept within the research team, or only allowed to be utilised for research questions and methods that *we* were interested in, it would do little to nurture and grow the overall literature. Thus, within this project, our core aims involve not merely using this approach ourselves – but opening it to the wider community, so that anyone may use this underpinning infrastructure to undertake any analysis that they are interested in in the furtherance of human knowledge regarding video games. This requires ongoing investment and collaboration to allow these approaches to meet their full potential. This, in our opinion, should be a government priority. Allowing the wider research community open access to such approaches, regardless of wealth or prestige, and training future generations of scholars in their use should be our main priority: not the brokerage of bespoke data sharing agreements between individual labs and industry stakeholders.

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H.W. was Deputy Chair of the Advisory Board for Safer Gambling between May 2015 and March 2020. She was remunerated by the Gambling Commission (the industry regulator) for this. She is a member of the WHO panel on gambling and in 2018/19 worked on a study looking at gambling and suicide funded by GambleAware.

[Corrections made on 22 December 2022, after first online publication: the Acknowledgements section has been updated in this version.]

## Ethical information

No ethical approval was required for this article.

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