Games Futures I

SEBASTIAN DETERDING, Imperial College London, United Kingdom KENNY MITCHELL, Roblox and Edinburgh Napier University, USA RACHEL KOWERT, Take This, USA BRAD KING, ETC Press, USA

Games Futures collect short opinion pieces by industry and research veterans and new voices envisioning possible and desirable futures and needs for games and playable media. This inaugural series features eight of over thirty pieces.

CCS Concepts: • Applied computing \rightarrow Computer games; • Software and its engineering \rightarrow Interactive games; • Information systems \rightarrow Massively multiplayer online games.

Additional Key Words and Phrases: Games, playable media, visions

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1 INTRODUCTION

Games Futures are a new format of collected short pieces envisioning possible and desirable futures and needs for games and playable media. How has the reality of games and playable media changed? What new practical, societal, and research issues and needs arise from that? How could things be radically different and better – and how might we get there?

With this intentionally vague brief, we asked over thirty luminaries and exciting new voices across to tell us their answers, across games industry and research, and across a wide range of games topics and specialisms, from computer graphics to inclusion and accessibility, from game audio to business and production, from ethical and societal issues to future immersive experiences and the metaverse, from game data science to designing games for social impact.

2 IN THIS ISSUE

We will be releasing new Games Futures throughout the first year of *Games: Research and Practice.* All can be read in full online at **games.acm.org** – or subscribe to our newsletter when it arrives to receive all new Games Futures in your inbox. In this first issue, we bring together eight exciting views and visions.

We open with MIT professor and anthropologist T.L. Taylor [6], who has reliably seen and studied new phenomena like Esports or live streaming and their wider societal ramifications years before the hit the public limelight. In "Games Matter", Taylor reminds us that "social media" and most of their issues go back a good fifty years to the first forms of networked play on text-based Bulletin Board Systems and Multi-User Dungeons (MUDs). No matter if we are discussing toxicity, gatekeeping, online community, commercialisation and exploitation of online publics, or social media governance and regulation –– games have already 'been there, done that' for decades, as

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have early Internet and Game Studies scholars analysing them. But games not only matter as a source of historical lessons and still-valid analyses for current debates: "gaming is the place to look if you want to see innovative practices and critical issues decades before they hit the mainstream." Just like they preceded contemporary broader technology debates, studying games offers a foresight into issues and debates to come.

Into this chimes Kimberley D. Voll, co-founder of the Fair Play Alliance and studio head of Brace Yourself Games. Voll argues that games today not only give insight into how other and wider sociotechnical trends and infrastructures shape our lives and society today and in the future: "*video games have become the very social parlour itself*" [7]. For the majority of the population in many countries today, online games and their surrounding online environments have become the spaces within which they commune and socialise. Whether we like it or not, this drastically increases the social responsibility of games. Voll offers the sociological concept of "social infrastructure" as a tool to think through this responsibility, including questions like maintenance, safety, universal access – and shifting from viewing games as placeless toys towards designing and understanding them as a whole public place that is embedded within our life worlds and infrastructures.

Constance Steinkuehler, professor of informatics at UC Irvine, turns Voll's argument into a call for political action: Online games companies have an immediate responsibility to protect consumers and democracies, "[a]nd it is high time that policy and law caught up to this fact." [5]. Toxicity, harassment, hate speech, disinformation, extremism and radicalisation, foreign political interference are real and present issues of online games today. They do real harm to players and their societies – but also to companies' own bottom lines. Steinkuehler highlights positive initiatives in the industry, but remains firm that current and future social media legislation needs to include online games to ensure real change.

As if in response, game designer Dan Cook, Chief Creative Officer at Spry Fox, lays out his vision of game design as "a design practice for social systems" [1]. Where digital games today are often portrayed as cynical means to extract player time and cash, Cook sees an ethical obligation for game designers to safeguard and promote players' health and happiness. To this end, he proposes four opportunities: We should align the business goals of service games with player wellbeing by showcasing how long-term thriving players mean long-term customers. We might explore how games can build social capital in a modern society optimised for efficiency and speed not human bonding. We could use games as petri dishes to study and explore more desirable and beneficial social architectures. And we should square existing sociological insights and tools with a new ethical deliberation about how to use them in games toward player thriving.

Designing games that support individual thriving and positive social change is at the heart of applied, serious, or social impact games. Lindsay Grace, professor at Miami University and long time game designer and artist working on games for change, uses the experience of the social impact games field to project its likely future trajectory – and what is needed to bend it towards positive ends [2]. To realise their potential, games for social impact need to step out of the default mode of prototypes developed by university labs or solo designers in the Global North to validate that they can 'work': we know they can. Instead, they need to start involving the global majority, and tackle questions of longevity, integration, maintenance, and infrastructure. On this way, they need to tackle the reality that applied games can and will be used for malign ends, pointing to the need for both a code of ethics for game design, and broader ludic literacies in the population.

Shifting gears to socio-technical futures, Raph Koster, veteran online game designer and CEO of Playable Worlds Inc, unpacks how all features associated with a future "metaverse" have long been realised by games in MUDs, MMOs (Massively Multiplayer Online Games), virtual worlds, or augmented reality games [3]. Viewed through this lens, we already have persistent and shared immersive virtual worlds, and new VR or AR headset technology is a red herring – the real possible

newness would lie in a persistent and pervasive interconnection of virtual worlds with each other and the physical world. And that would blend and blur prior boundaries between very different 'entertainment' and 'serious' ways of understanding and interacting with the 'same' persistent artifact or space. The important future research and practice questions – again long foreshadowed by games studies research on virtual worlds since the 1980s – emerge around the psychological, social, economic, legal, and political ramifications of this blurring.

Next, Martin Rieger, Immersive Audio Produce at VRTonung, and Dominik Zingler, Senior Audio Designer and Crytek, dig deeper into the technical bases of immersive realities by exploring the future of spatial audio [4]. As increases in graphic fidelity are become more financially and computationally costly, game companies have begun to appreciate game audio as an avenue for improving player experiences. 3D or spatial audio promises a more immersive experience where players can locate every sound in surrounding scene. One step towards this is new and better head-tracking, allowing games to adjust their sounds as they would when we move our heads in real life. The next frontier is increased realism – notably not perfect (and computing-intensive) simulation, but natural-*feeling*, high-fidelity sound rendering. This leads into, third, real-time room simulation, emulating how sound gets occluded, absorbed, or propagated by objects and surfaces in space.

Doyens of game data science Günter Wallner and Anders Drachen close our first issue by reflecting on the future of their field [8]. If ever there is a social domain of 'big data', digital games are it, with petabytes of often click-level telemetry data collected on four billions players across the globe. What are the future opportunities of this data trove? For Wallner and Drachen, they all start with "democratising the data pipeline". As Esports have shown, there is tremendous value for companies, players, and society to make game data more widely accessible. This enables new kinds of data-based player experiences, from engaging with interactive visualisations and theorycrafting around their games or teams to data-enriched live streaming and Esports broadcasting. And closing the loop to the social relevance and responsibility of games, and Cook's vision of games as petri dishes, there is already tremendous untapped value in game data for understanding society. Scholars have been producing a stream of early work showing how large-scale game data can give new insight into human cognition, mental health and ageing, the impact of policies, and of course how games themselves might impact health and wellbeing. Making good on this potential will require a continuous dialogue between industry, academia, and policy-makers – a dialogue Games Futures hopes to contribute to.

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