A Manifesto for European Video Games

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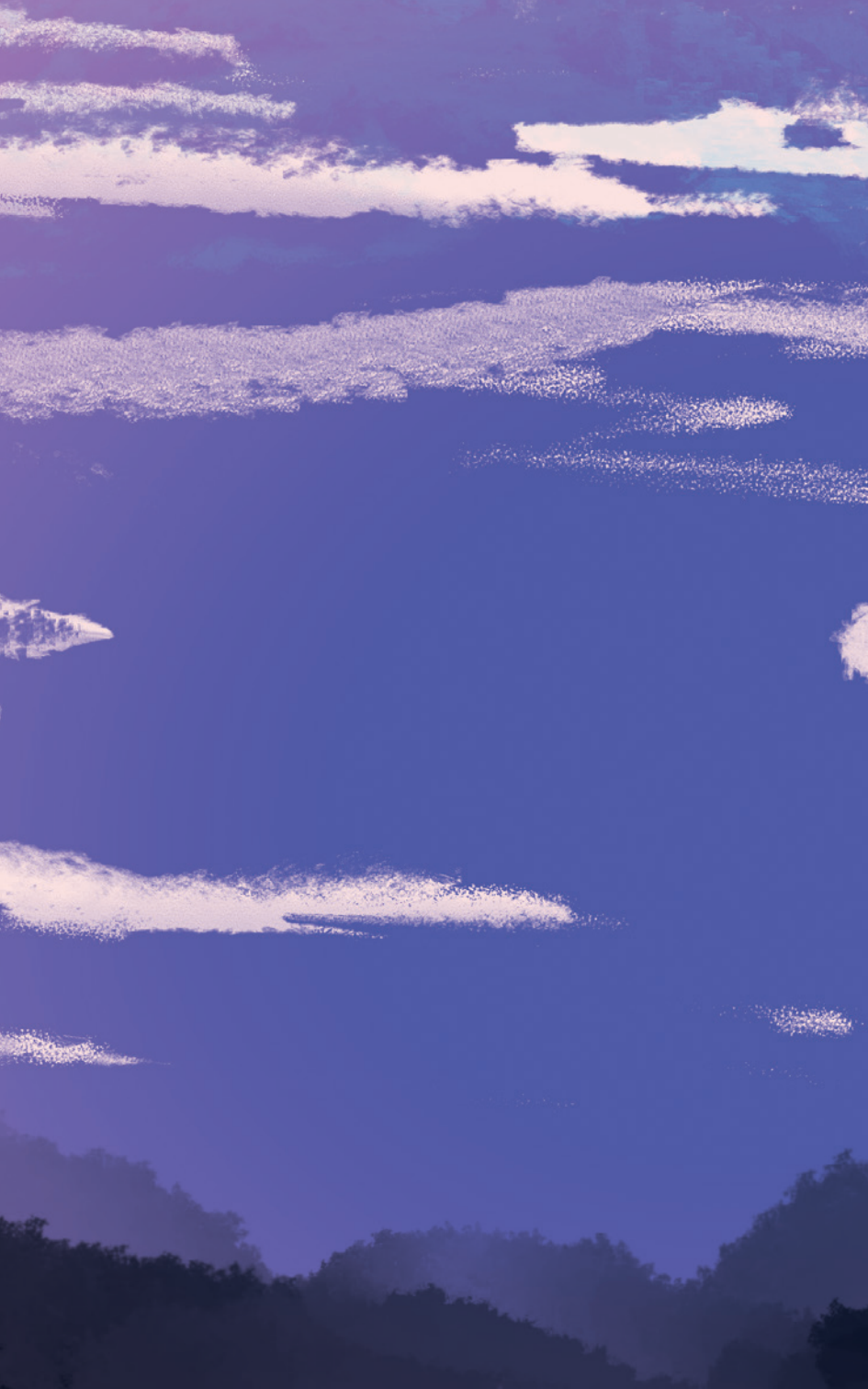Thomas Buijtenweg

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GAMING HORIZONS

A Manifesto for European Video Games

A manifesto is always political in nature. The goal is not to politely ask for change, nor necessarily to aggressively demand it, only to show a new path that leads to a better future than the course currently plotted. Change will always hurt the status quo, but social and cultural change is the only constant of the last half-century, and so policies must be self-aware and open to adaptation or revision too, even when they challenge accepted norms of the past. The mandate of the Gaming Horizons research project was to critically challenge the status quo in video games to potentially foment change. Such a change is to recognise that all types of video games (serious/applied and arts/entertainment, on phones, consoles, traditional computers, or other platforms) are already changing the political, economic, and cultural systems of Europe. These changes, and so this manifesto, need to be implemented by policy makers, but must also be supported and embraced by professional organisations, players, educators, and other stakeholders, if the already-ubiquitous medium of games is to be used in a way that is most beneficial for European society.

When we ask for change, we implicitly acknowledge the weaknesses of the present. That is not the same as denying the strengths of what we do, where we are, and how we came to be here, but a manifesto explicitly states that the future will not proceed in the most optimal way without conscious effort to change direction. The awareness that change may be needed was part of the origin of the Gaming Horizons research project from which this manifesto has grown, and this manifesto is a confirmation of the outcome that is clear: the notion of 'European video games' has an urgent problem that is not currently addressed at policy-making level or within European culture.

It may seem incongruous to write a manifesto about video games: the idea of a manifesto implies importance of the subject matter and, to many, video games appear to be a trivial pastime of no greater or lesser importance than other hobbies such as fly-fishing or pottery. However, neither of those examples has the dramatic impact on our social and cultural life that video games now have: millions of Europeans turn to video games every day for leisure and entertainment, and games are being used actively in classrooms across Europe to teach a broad range of subjects.

The consumption and impact of video games are difficult areas to quantify. The Pew Research Centre in the USA found that 50% of people in America play video games.[1] It also revealed that the majority of respondents (c. 60%) believed that most players were male, but the study found 50% were male, 48% women, and 2% were other genders. Despite the equal balance of genders playing games, only 15% of all men and 6% of all women describe themselves as 'gamers'. Such imbalances between perception and self-identification mean that studies of 'gamers' are likely to encounter numerous challenges and potential inaccuracies, depending on the delineation of the studied audience. Video games are often compared to the film industry and, if we consider that 51% of people in the US and Canada go to the cinema less than once per month and 29% never go at all[2], the cultural importance of video games in the lives of everyday citizens becomes increasingly non-trivial. When it is additionally considered that video games generated over €85bn in revenue in 2017[3] (other estimates have been significantly higher), and that this is a medium which demands active participation rather than passive consumption, the matter of video games becomes a clear and urgent area for attention and structured policy.

To bring about change, there needs to be agreement on the location from which we start. We propose five **Foundational Statements**, from which past and future policy can be critiqued and developed. This manifesto stands on the shoulders of the many game developers, researchers, critics and journalists, educators, and players who have contributed, and who still are contributing, to a growing body of evidence and to a lively, multifaceted 'gaming discourse'. It is built on the foundation of the already existing knowledge-base on gaming, viewed simultaneously as a cultural medium, a collection of technologies and an educational opportunity. The recommendations and claims are underpinned by empirical research we reviewed[4] and the communities whose voices we listened to in our interviews[5] and stakeholder workshops.

Academics generally avoid writing manifestos. We are more accustomed to measured statements describing overall fields and trends rather than giving direct advice, but there are examples that have inspired this work both in themes and tone. Some influences include:

> The 'post-structuralist' line of enquiry that explored cultural production and experiences, redefining the roles of users, audiences and creators in the current, increasingly hybrid and 'mediatised' cultural landscape. This includes influential authors, from Richard Hoggart to Sonia Livingstone;

> Feminist studies, from Donna Haraway to Judy Wajcman, that have challenged gendered, patriarchal notions of technology, and proposed new, thought-provoking conceptualizations that valorise the historically underrepresented views of women, queer communities, and minorities in general;

> The tradition of 'play studies' that goes from the seminal insights of Johan Huizinga and Roger Caillois to more recent contributions such as Mary Flanagan's work on critical play and the role of social values in technological design.

Like us, these writers saw an urgency created by the changing themes and media of modern society. The **Foundational Statements** and recommended **Actions** in this manifesto are based on thousands of hours of research. As with the writing of those that influenced us, this manifesto's certainty and vigour should not be mistaken for a lack of empirical foundations.

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[1] Duggan, M. (2015, December 15). Gaming and Gamers. Retrieved November 22, 2017, from http://www.pewinternet.org/2015/12/15/gaming-and-gamers/

[2] MPAA. (2017). Theatrical Market Statistics 2016. MPAA. Retrieved from: http://www.mpaa.org/wp-content/uploads/2017/03/MPAA-Theatrical-Market-Statistics-2016_Final-1.pdf

[3] McDonald, E. (2017, April 20). The Global Games Market 2017. Retrieved November 22, 2017, from https://newzoo.com/insights/articles/the-global-games-market-will-reach-108-9-billion-in-2017-with-mobile-taking-42/

[4] Persico, D., Bailey, C., Buijtenweg, T., Dagnino, F., Earp, J., Haggis, M., Manganello, F., Passarelli, M., Perrotta, C., Pozzi, F. (2017). Systematic Review and Methodological Framework. Gaming Horizons Deliverable D2.1. Retrieved from www.gaminghorizons.eu

[5] Persico, D., Dagnino, F., Earp, J., Manganello, F., Passarelli, M., Pozzi, F., Haggis, M., Buijtenweg, T. Perrotta, C., Bailey, C. (2017). Report on interviews with experts and informants. Gaming Horizons Deliverable D2.3. Retrieved from www.gaminghorizons.eu

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Foundational Statement 1
Playfulness is a primary, unintentional, and atavistic route to learning

Playing is an action through which we engage and learn about ourselves and the world around us. In the classical view of education, play is treated as the activity of the immature, of children, something to be shunned when structured learning begins. In this manifesto we assert that playing is entwined with learning, always has been, and that interactive media is returning us to an active state of engagement with learning materials in a playful manner. This is not the rote learning and regurgitation of facts, an approach so deeply embedded in orthodox educational practice that it persists in many quarters to the present day. Instead, it is learning for a generation that has unparalleled access to vast seas of information and must come to terms with that ever-shifting immensity. Playing is not by default 'trivialising'[6] the themes and topics that may be addressed, no more than books or films are by default trivialising their subjects.

Isolated data has little value, and locating information is as natural to young people as reading is to previous generations. Modern education still needs to provide a foundation of knowledge, but the urgent need is for skill in interpretation, understanding context, evaluating the worthiness of an answer, and finding the right questions. These are the crucial modern skills needed to become active, confident, and competent members of a digital society. These are skills of pathfinding and exploration, not of re-treading worn paths of knowledge transmission and reception. The 'Dublin Descriptors', a reference framing of healthy learning used by many educators, 'are phrased in terms of competence levels'[7]. Here, developing 'lifelong learning skills' takes precedence over performance in a single exam. Playfulness is a form of exploration and it does not mean that, in the course of a game, no facts are learnt along the way: players learn the information that they need to advance in the game world and constantly test its relevance and validity. If the data does not fit the

observable conditions of play, then it will be evaluated to be of lesser or no importance, and so active, contextualised information processing becomes a dominant paradigm of playful learning and sits in sharp contrast with spoon feeding pre-structured lessons. It may feel deeply uncomfortable to rely on playfulness as a driver of learning but, in an age where disruptive technologies breed discomfort at a regular pace, we have a responsibility to weigh up our own discomfort against the needs of people to find ways to negotiate shifting realities.

This is not new. Playfulness has always been part of us, and may be closely related to the success of our species. Embracing our playful nature may be the only method of surviving the tide of information that flows around both us and future generations.

6 Manning, S., & Murphy, S. (2017, December 03). 'Abusers will get off on this stuff': Sony under fire for 'repulsive' video game Detroit: Become Human which shows girl, 10, 'beaten to death by her father' among a host of child abuse and domestic violence acts players watch. Retrieved December 05, 2017, from http://www.dailymail.co.uk/news/article-5140165/Detroit-Human-video-game-branded-repulsive.html

7 European Commission. (2015, August 10). ECTS Users' Guide. Retrieved November 28, 2017, from http://ec.europa.eu/education/ects/users-guide/glossary_en.htm

Foundational Statement 2
All video games can improve or harm the lives of their players, regardless of type or authorial intentionality

To play is to be open to transformation. All games can be good for you, whether they were made with that purpose or not, and equally all games are capable of damaging the well-being of their players. In Gaming Horizons, we have repeatedly found that players, developers, educators, researchers, and policy makers have doubts about the motivating power of intentionally didactic games and their capacity to meet expectations. At the same time, we have encountered transformative prosocial impacts of (physical and digital) social networks, meaningful stories, historical insight, and cultural understanding that have come from video games which appear to be antisocial in their treatment of, for example, violence. An emblematic example is the science-fiction series *Assassin's Creed*, which is set in a variety of real-world historical periods and locations. This game features a character who brutally kills opponents from a competing secret organisation. The graphics are highly detailed and the audio-visual treatment is realistic, making the deaths visually impactful. At the same time, however, the game series has inspired many players to learn about the Italian Renaissance, and some to even visit the real-world locations. The appeal of its historical settings is consciously acknowledged by the developers: the latest iteration offers a 'Discovery Tour' mode, without any combat, focused on exploring the history and rituals of Ptolemaic Egypt. Other examples reported by Gaming Horizons interviewees include development of spatial reasoning through *Antichamber*, teamwork skills fostered via *League of Legends*, and physics concepts acquired by playing Portal. These are just a few of the many prosocial outcomes and personal stories from games that, at a cursory or disengaged inspection, appear antisocial. The range and effectiveness of positive changes that can flow from playing such games is the lived reality of players, but currently is largely ignored by the worlds of research and policy making.

Likewise, with the potential for change comes the possibility that games can also have negative impacts on players. Dark design patterns, intended to addict players and extract financial value from them (either directly or through marketing), concern many stakeholders. These are not just opportunism; they also reflect the pressure of surviving in the hyper-competitive games market, which is constantly pushing developers in the direction of potentially abusive mechanics. Even some educational games, built with the intention of fostering only healthy change, can confuse players with flawed rule-sets or unengaging design, interactions, or aesthetics, preventing any real transfer of knowledge or behaviours to their daily lives. Back in the 1990s, Elizabeth Christopher expressed her doubts about a serious game she reviewed: 'it was too elaborate for the amount of learning players were likely to derive. It appeared they were in danger of becoming more confused than enlightened!'[8]. Twenty years later, it is still easy to find serious games that match her experience.

Despite worthy intentions, many educational/training games (often referred to as 'serious' or 'applied' games) disappoint through the lack of quality in production and failure to engage players beyond the mandatory time spent on them in a classroom. These and other flaws can mean the intended outcomes often fail to materialise and so return on investment, educationally and economically, is low.

Like pro-social outcomes, negative outcomes of play are also possible for all types of games, regardless of the pro- or neutrally-social intentions of the developers. The lofty possibilities of games to improve the lives of players should be tempered with the knowledge that change is not always positive. The real driver pushing towards that change is the actual game experience, and not whether a specific game is intended, or categorised, as being a creative/artistic or entertainment game, or a serious or applied game expected to achieve certain outcomes. The delineation between these is blurred and a matter of design priorities at best, or merely a lens intended to garner funding at worst. What matters more is the ultimate impact on players generated through gameplay, and each game can have a transformative value for each player, regardless of notional 'game type' or what the developers intended that outcome to be.

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[8] Christopher, E. (1998). The Great International Management Games Competition. In Rolfe, J., Saunders, D., & Powell, T. (1998). Simulations and Games for Emergency and Crisis Management: The International Simulation and Gaming Research Yearbook (pp.203).

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Foundational Statement 3
Playing for its own sake is a worthwhile activity

Statement 1 emphasized the importance of playing for learning, and **Statement 2** further examined the transformative power of games. However, while keeping this potential in mind, we should not conceptualize these as the end goal of gaming. Understanding the transformations of 'play' into 'value' is important; however, this manifesto should not be understood as a Neoliberal call to instrumentalise play into a quantified 'value'. When games are only seen as part of a binary, such as working for-or-against economic interests, then their wider value is lost. If they are viewed as only the products of engineering and toolsets, detached from the contributions of the social sciences and the humanities, then they become a treadmill to force their players along a homogenising path of production, in the belief that productivity is the highest goal for all citizens. This has been especially noticeable in the trend for the 'gamification' of workplaces, which has often resulted in a shallow exploitation of game mechanics for the purposes of increasing employees' productivity. This outcome-oriented approach devalues people and ignores that cultural wellbeing is essential to raising living standards.

Political and economic harmony cannot dominate cultural expression without sacrificing the happiness of citizens. Players know that the true goal of a game is simply to engage with it, exploring its rules to find their own satisfaction. For some players, the high score will be what satisfies them, but others may desire to learn every detail of a virtual world; by the terms of production the former player has 'won', but the second player will be more engaged with the wider environment. Seeing games as only valuable when they are instruments of learning, as on-ramps to economic production and not as artistic or cultural artefacts, strips them of their wider worth for players and society.

Foundational Statement 4
All types of video games are already part of the wider discourse of our self-reflexive society

There is no act that is not political in nature. Every action and choice made by a person is, in some way, a reflection of their social context and personal history. Many actions which appear, or are claimed, to be apolitical are instead made in support of the dominant discourses of society, and actions of rebellion are counterpoised to social norms. The creation, consumption, and analysis of video game artefacts, communities, and experiences are not exempt from this.

Games, like other media, offer insights into who we are. The historical dominance of heterosexual, cisgender white men as the lead characters in games does not reflect the make-up of society or the player population, but it does reflect elements of patriarchy, colonial legacies, and classical myths that maintained popularity in the 20th century. This dominance, which has begun to wane somewhat in recent years, is symptomatic of the world in which these games were created. The stories we tell reflect our identities. Unintentional restatements of patriarchal social structures, post-colonial privilege, and socially normative identities reflect a society that is still struggling to assimilate the lessons of the 20th and early 21st centuries.

While many games have intentionally avoided overt political sentiment (and in doing so have unintentionally reinforced the orthodoxy of mainstream culture), some have embraced it. In the early 2000s, online games made by individuals or small teams would often add elements of social commentary, such as satire of American politics. This also occurred in the 1980s 'homebrew' game development community. The lack of archival or widespread study of these games, many of which were released only in online forms or on analogue media with its attendant propensity for deterioration poses a serious risk: that we will lose a social heritage similar to the early decades of the comic book industry.

Today, many games use elements of post-punk social satire in their narratives, such as the best-selling *Grand Theft Auto* series that has lambasted consumerist culture in the background of its action-packed gameplay, or the *Oddworld* series and its messages of environmentalism, anti-oppression, and equality. Such examples, and many more, show that games have always been a medium that is comfortable with social commentary.

Even if games are viewed by many as disposable toys, post-structuralist critical approaches would reject their irrelevance to social insight. Given that **Foundational Statement 1** asserts that play is a central element of the digital age, and given the enormous use of video games across half of society, it is incumbent on us to engage with them as levers for insight, and as social and cultural manifestations of modernity.

The post-modern mission of destroying the hierarchy of high-art and low-art has so far failed. Indeed, video games are frequently dismissed as low-art, if they are considered art at all. However, the frequency and strength of these dismissals is declining and, if sufficient and suitable support is provided, games will join other media as a recognised part of the cultural landscape. The question is not whether we need to take games seriously as cultural artefacts, but when we will choose to begin doing so. Or when we will no longer have any choice but to do so, to catch up with America or East Asian cultures.

Foundational Statement 5
All video games combine the Social Sciences and Humanities (SSH) with technology and innovation

Where **Foundational Statement 4** addresses the significance of the culture and content of video games, **Statement 5** refers to the processes by which games are created. Across Europe, the higher education courses for game developers award degrees in, variously, the arts, sciences, or engineering, with little consistency between countries or even intranational regions. The reality is that the creation of video games involves the collaboration of a wide variety of skills to create the whole. The professional roles involved in game development include: 2D and 3D visual artists, animators, psychologists, data scientists, hardware developers, programmers, experience designers, network specialists, writers, composers, musicians, actors, dancers, martial artists and stunt performers, accountants, HR, marketers, and team managers. This is a small sample of the skills and potential collaborators involved in the creation of a game. At a minimum, a game is made by combining some element of programming with a visual interface into an experience that players find engaging. Intentionally or not, every game applies principles from the social sciences and humanities into the creation of its core experience. If European research agendas continue to view games primarily as the outcome of engineering processes, rather than as a holistic collaboration between fields, then there will continue to be a mismatch with the priorities of the industry that may result in current and future restrictions on growth.

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With these five **Foundational Statements**, this manifesto intends to consciously situate video games as a nexus of technological and social sciences. This is not a call to change what they already are, but instead it is a recognition and restatement of the often-unacknowledged position that they already occupy.

However, as stated before, a manifesto seeks change. The outcomes of the Gaming Horizons project suggest nine **Actions** that will strengthen and support the growth of European video games as a medium with impact on politics, the economy, and culture.

Action 1

The EU should recognize and promote the arts, craft, and engineering dimensions of games so they reflect European values rather than predominantly market forces

The range of games available in the marketplace reflects many trends in consumerism and culture. Aspects of addiction, compulsion, and socially problematic behaviours such as sexism, racism, and homophobia sit alongside efforts to produce content that is socially responsible, artistically and creatively ambitious, and ethically sound. Frequently, these elements co-exist in the same games, and will impact on players differently. The Gaming Horizons project has demonstrated a commonly held view among stakeholders that video games are complex artefacts that result from a wide range of skills and interactions. Their complex and nuanced nature makes it problematic to treat and represent games in a homogeneous manner. Like European society, video games reflect many views and cultures as well as repressing others. Improving cultural outputs to support social equality and respect is an explicit goal of the EU, and frequently at odds with market forces.

The creative/arts and entertainment areas of the video game industry have made notable contributions to European life and culture. For example, the games industry drives and financially supports advances in digital graphics and processors, enhancements that later become standard features in computing generally. Furthermore, the visual processing techniques applied in game production later allow filmmakers to tell their stories with a richer palette of imagery. This contribution is valuable, and will continue, but seeing the creative and entertainment games industry as only worthwhile for the benefits it brings to other industries is a disservice to the value of the games industry itself. Sadly, this instrumentalist and trivialising view of the contribution of games is prominently reflected in the wording of current EU funding documents, which support a very limited range of video game development, primarily focused on teaching applications and engineering processes.

Games outside of the serious and applied sector are largely excluded from EU funding, particularly the major funding streams, so they are left to vie for attention of the public to maintain the financial stability of studios. The result is that some games will align with European values, but others will court controversy (for example through extremely anti-social themes and interactions) or exploit players (for example through use of compulsive gambling mechanics) to cover future production costs. If the EU wishes to influence these behaviours, it must become involved as an intelligent supporter and participant in game content, creation, and culture.

Action 2

The EU should assist in ensuring games support a balanced and diverse representation of European society

During the Gaming Horizons project it has been clear that video games currently and historically reflect the systemic biases of the cultures that produce them. Examples of this are the reflection of patriarchal views in which women's roles are regularly passive or objectified, the racist outcomes of the legacy of slavery and colonialism which result in few heroic people of colour as lead characters, the under-representation of queer communities, and racial and cultural stereotyping of non-player characters, to name a few. Video games are played by a broad swath of society, and not only by players that match the lead characters (for example, men played as *Lara Croft* in the Tomb Raider series and women played as Nathan Drake in the *Uncharted* series). It must be stressed that video games are not unique in struggling to confront the darker legacies of our pasts which still impact on lives today. In this sense they are no more culpable than cinema, television, theatre, music, and other media; and like these, games have a social duty to counteract prejudices and contribute to a brighter future for all. One immediate opportunity is to positively impact on the view of gender and minorities in society through the increased presence and visibility of diverse identities in gaming content, creation, and culture.

Games with balanced representation do currently exist and are particularly conspicuous within the 'indie' game sector, where low budgets can mean that creative risks are more likely. Both mechanics-focused games and Playable Interactive Narrative Experiences (PINEs, games based on storytelling) are using cultural contexts to bring culturally significant gameplay to audiences, but these are often experimental games without wider retail backing or market presence. It is uncertain whether such creative risks regularly reap financial rewards from the highly competitive video game market, and a lack of stable business model carries the possibility that video games will be driven by financial

necessity towards modes of expression that reflect the systemic prejudices embedded in the status quo, rather than actively participating in the shift towards a fairer and more egalitarian society.

If the market does not sufficiently support games that progress social discourse, particularly surrounding gender and minority rights, then the EU should find alternative support structures to allow these games to thrive.

Action 3

Broad-based, responsive research should be promoted to explore the deep structures of design and techniques of development underpinning all video game types

Given that **Foundational Statement 5** argues that 'all video games combine the Social Sciences and Humanities (SSH) with technology and innovation', it is necessary then to examine the production of video games in a fundamental manner. This does involve the continuation of research into the tools and technologies of their production, which has recently begun to be included in the EU's Horizon 2020 funding programme (albeit currently limited to only games for 'non-leisure purposes'[9] and thus excluding the entertainment sector). However, European competitiveness in the video game market would gain from support for research into game design, narrative design, visual arts, audio, production (i.e. team management), marketing, and the distribution methods for video games. The video game industry is one of the largest global sectors of the entertainment industry, and growing significantly faster than its closest rivals: film and television.[10] Growing the business and culture of video games in Europe should be an economic priority. The markets for video games, and correspondingly their development, are currently focused in the US and East Asian areas. There is the risk that Europe will be relegated to a permanent third position behind these (and potentially behind rapidly growing sectors in South America) if fundamental research into video game development is not adequately supported through investment. The medium is still in a growth stage, and rapid changes and evolutions are still taking place. Introducing support for top academics to become involved in this field is likely to bring strong results for the games production capacity, and cultural and critical voice, of Europe in future decades.

The research must be broad-based, alongside more narrow and applied industry collaborations, because video game companies have issues of industrial competition and privacy that make collaboration extremely challenging. Some of these projects, particularly in SSH fields, may be

long-term studies, but in general the studies must be responsive because the current pace and cycles of research are too slow to maintain industry relevance.

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[9] See, in this regard, funding calls on gaming and gamification published over the past few years: ICT-24-2016 and ICT-21-2014. Retrieved from http://ec.europa.eu/research/participants/ portal/desktop/en/opportunities/h2020/master_calls.html

[10] Nath, T. (2016, June 13). Investing in Video Games: This Industry Pulls In More Revenue Than Movies, Music. Retrieved December 08, 2017, from http://www.nasdaq.com/article/investing-in-video-games-this-industry-pulls-in-more-revenue-than-movies-music-cm634585

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Action 4

Video game research outputs and dissemination must take greater account of the innovative and very rapidly changing nature of game development or risk irrelevance: the language, dissemination media, and timeliness of research outputs must match the cultural context and expectations of content developers

The traditional channels for dissemination of research results are inadequate for a productive exchange of ideas with video game developers. Journal publications and academic conferences have almost no noticeable influence or penetration into the awareness of professional developers. It is notable that the most well-known academic article about video game design, Robin Hunicke, Marc LeBlanc, and Robert Zubek's 'MDA: A Formal Approach to Game Design and Game Research', was presented for three years at GDC in San Francisco, an industry conference attended by over 20,000 game developers, prior to it being written and delivered as an academic paper in 2004[11] and then released in an open-access format by the university. It should also be noted that Robin Hunicke, alongside fellow alumni Jenova Chen and others, is partly responsible for some of the most original and popular artistic video game success stories of this century: *Flower* and *Journey*. There is evidence that academic dissemination methods are not currently succeeding in reaching industry, and also that academic studies do have valuable knowledge and insights to share with the industry; however, the occasions when the methods of delivery are adequate to the task are too limited.

In the Gaming Horizons research, three dominant factors have been identified by stakeholders that support previous anecdotal evidence for why academic output does not reach the private sector: language, dissemination media, and timeliness. Formal academic language is frequently very precise in its meanings but at the same time it can be obscure, lacking approachability and directness. Professional developers

in high-pressure industries are accustomed to finding information in blog-posts, forums, or YouTube tutorials, and so the highly-structured and cautious language of academic output has been noted as a barrier to accessing academic value. Alongside the language gap, the typical mediums of research dissemination (journals and academic conferences) do not match the interactive platforms and information sharing processes that professionals use in their workplaces. Community based research platforms like Researchgate and Academia.edu are helping to make academic articles more accessible in principle, but the formal style and context of these articles make their content opaque compared to the sources typically used by game developers. Academic journals and articles have almost zero penetration into the game development community and so have no impact on the work developers perform. In the Gaming Horizons research we found that only developer-stakeholders that have studied games development, or were involved with games education, were able to name any research that had influenced them, and none said that they had used traditional academic sources while they were full-time game developers.

Regarding the timeliness of academic research: the typical life-cycle of a generation of console hardware is five years, for smartphones and computers it is less, and most video games are developed from concept to market in between one and three years. Research cycles of application, review, approval, development, and dissemination, work on a timescale that is not meeting the needs of the industry. For some projects, the cycle of research must be accelerated so that shorter, more industry-appropriate questions can be asked, while maintaining deeper analysis that may take longer periods. This will likely mean the complexity of the organisational elements need to be stripped back, but an efficient, lean research group is still capable of adding useful industrial insights (either in SSH or technological areas) if given sufficient funding and a tight focus. Such groups may be able to add timely insights in a way that larger research projects are compelled to miss by their scope and timespan. Due to the mismatch of timeliness, and sometimes a lack of domain-knowledge, academic groups and funding authorities can work to support issues that are either irrelevant or already solved within professional contexts. Greater collaboration with the industry early in the development of funding calls and assessment may be able to prevent the replication or redundancy of such projects.

Such collaborations will likely be challenging to establish: the games industry has developed in almost complete isolation from academic research, and the issues addressed by this **Action** are also the reason that

the reputation of, and willingness to with, academic research is so poor among developers. To overcome these barriers, academic research must find ways of addressing the needs and language of industry partners. A more rapid and adaptive research call structure may be a beginning, but it will need to be matched with an emphasis on using relevant dissemination methods: informal and direct language, online videos and tutorials, webinars, and presentations at industry conferences are some options for improving the visibility and adoption of academic research outcomes. The Open Science movement can be seen as a significant first step in this direction; however, effort will be required on both sides to bridge the gap between research and development, and the challenges highlighted in this **Action** will need to be addressed to improve the industry's willingness to cooperate. Further incentivisation is needed to encourage this kind of collaboration from the academic side: the advantages of working with the game industry (e.g. the possibility of studying gamers' anonymised behavioural data) should be brought to the forefront, and the disadvantages of adopting novel dissemination channels should be mitigated by valuing contributions of this kind when assessing researchers' academic productivity.

None of these improvements will be possible if researchers are tied to traditional career models, where peer-reviewed journal publication is of the highest importance, and more timely and informally expressed research outputs are seen as trivial in comparison: industry facing outputs must be considered as equal or, at least, contributing to the status of the researcher if they are going to motivate adoption among academics. There is a risk that snobbery and division could emerge between academics that favour traditional publication and those that adopt modern mediums, similar to the situation of fundamental versus applied researchers, and efforts must be made to avoid this through national and EU funding policies that directly support increased academic/institutional recognition of non-traditional, unconventional research outputs.

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[11] Hunicke, R., LeBlanc, M, and Zubek, R., MDA, A Formal Approach to Game Design and Game Research. In Proceedings of the Challenges in Game AI Workshop, Nineteenth National Conference on Artificial Intelligence (AAAI '04) (San Jose, California) AAAI Press, 2004.

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Action 5

Research, education, and social manifestations of video games must consciously include SSH and Responsible Research & Innovation (RRI) principles: explicitly and emphatically in research calls, as a valued constituent of the education for upcoming game developers, and through support for the cultural phenomena surrounding video games

Video games make explicit their interactions with the audience in a way unlike any prior medium, requiring new approaches for their study, archival, and interpretation, but research funding does not match their importance for the SSH and RRI interests of European citizens. Significant pieces of SSH work on video games (articles and artefacts) found during Gaming Horizons were either unfunded, underfunded, or written entirely outside of academic contexts by cultural critics in the journalistic or blogging fields.

In **Foundational Statement 4**, it was argued that 'all types of video games are already part of the wider discourse of our self-reflexive society'. When the entertainment video game genres played daily by millions of Europeans come into the research and policy spotlight, the framing that is assumed is either negative (focusing on issues like violence and addiction) or suffused with an instrumentalist view of social productivity overtly evident in much gamification and more insidious routes of 'relax so you can work harder/more'. Overall, EU funding for video game-related activities, in research and wider society, does not match their SSH and RRI potential.

The Gaming Horizons project has found that, in reference to video game research, aspects of social responsibility are typically only featured in funding calls as single-sentence requirements of modest ethical standards to be upheld. Although the presence of such requirements is welcome, this minimal inclusion implies that a more rounded examination of the RRI consequences of the work and its outcomes will not be considered.

A shift towards the inclusion of artists and other creative practitioners in research groups is welcome, because those with a background in the SSH sphere frequently bring increased awareness of RRI themes, and this trend should be encouraged to enhance the self-reflection on the work performed by researchers. Socially positive and relaxing activities, including playfulness and art appreciation, are increasingly presented as functions to optimise workforce productivity rather than human necessities for ensuring a high quality of life, and in this way the bias towards instrumentalisation of culture contributes to the lowering of living standards and quality of life. By placing the Social Sciences and the Humanities (SSH) and Responsible Research & Innovation (RRI) principles as the starting contexts of projects, and consistently reasserting their importance throughout, it may be possible to shift the discourse of society away from privileging economic contributions above all others.

Additionally, there need to be specific SSH research projects in their own right, without any or with only minor ties to engineering/technical research. Equally, in education of video game developers, aspects of social responsibility and artistic perspectives should be recognised as enhancing both the resulting work and the lives of the creators. Such connections with social and ethical responsibility already exist within the games development community, as demonstrated by Gaming Horizons, and should be encouraged in the education system to assist in students producing work that adds social value through entertainment, expression, and the creative arts. It must be recognised that such works may not be typically pro-social in their nature, but (referring to **Foundational Statements 1**, **2**, and **3**) their intrinsic playfulness brings the potential of valuable experiences even if that is purely through the pleasure of engaging with the game and regardless of its thematic content.

SSH and RRI projects and educational support will be more impactful in shaping a positive community when paired with additional cultural phenomena, such as cultural events, museum and gallery exhibitions, industry conferences, and more. Video games are an everyday part of the lives of millions of Europeans, but cultural institutions typically focus on other artistic media. SSH and RRI interests have generally been downscaled across Europe in the wake of the 2008 financial crash. When they are sustained, this is typically through recourse to Neoliberal instrumentalist arguments relating to quantitative measures of productivity; however, the happiness of Europeans is harder to put into quantitative terms and may not necessarily relate to the GDP of a country, or business sector. This is not to argue that technologically-oriented research and education must stop or be limited, but instead that it can

be focused to be more beneficial to industry, society, and the overall EU. Support for the cultural value of video games should be situated as part of a wider emphasis on the intrinsic value of SSH to a happy and healthy society that celebrates a diverse range of the expressive arts.

The interactive nature of games means that a single play of a game is an authoritative experience for the player, and is also likely to be only one of a myriad of outcomes and experiences possible from that same video game 'text'. The archival of video games presents challenges in terms of the hardware, but also the community interaction and technical context of the time; for example, some games are best understood through their relation to cutting-edge design or in the context of other titles released in the same period. In particular, games with online components may cease to exist when their creators choose to discontinue their servers, resulting in the loss of a gaming universe. How should an academic approach video games' pantheons of meaning and interaction? And how should they contextualise these within the history of the expressive arts and philosophy?

Such abstract and literary thinking is necessary to build a framework of thought that will inspire the creators of the future. It is expected that writers will read and analyse famous authors of the past, and it is commonly accepted that the understanding of these classics forms a core component of not only national and European identity, but for all nations and for humans as a species. Individual researchers, and potentially even journalistic grants, should be considered for funding where they can demonstrate a significant contribution to the corpus of understanding the SSH content and context of video games. We build understanding of ourselves through the cultural artefacts that we create, and video games are inevitably going to be part of this in the future. It would be beneficial for the European community if our academics, writers, and creators became leaders in this field.

Action 6

Support should be provided for robust and informed criticism of video game content, creation, and culture, contributing to their industrial and cultural future in both popular and academic media

Cultural criticism is a long-standing method for creative industries to engage with reflective practises that allow evolution of their mediums over time. The current state of video game criticism is, like much of the industry, somewhat in its infancy. Individual leaders of thought and viewpoints are often working supported only by crowdfunding or by operating on their own time to write and create their output outside of funded research projects. That such important foundational thinking about video games should be voluntary contributions to society devalues their long-term worth in shaping the growth of a new expressive media. As with **Action 5**, requiring such criticism to be 'robust and informed' does not necessarily mean that the language and media of this criticism needs to be formal or traditionally academic (but also does not exclude that), only that it must be given time to be developed and refined. As argued previously, without insightful reflection the evolution of the media will be guided solely by market forces and popular consensus rather than in the interests of a diverse population.

Without support of the EU and other funding institutions, such individual efforts are likely to struggle to sustain themselves and, more problematically, they are vulnerable to attack. Institutional support brings stability and confidence to critical voices, allowing them both the time to develop insights and the backing to push for important points that may challenge established norms, such as systemic racism, sexism, or homophobia. Individuals that ask for change in society to increase equal treatment are frequently victims of attacks by others that are invested in the status quo, and these can range from anonymous internet insults through to angered public figures. The impact of these is well documented elsewhere, and arose again as part of the Gaming Horizons study. If there is little or no backing and only personal motivation to continue, such voices of progress can be forced away from the media before their impact

can assist in positive change.

This support is necessary in both mainstream media, for example through the sponsorship of journalistic enquiries, and in academia, where SSH studies often struggle for funding against the more overtly applied sciences that are obvious in their direct input to economic growth. This should not be taken as an assertion that investment in SSH and the implementation of RRI practices results in a decline of economic investment or growth, only that the wellbeing of a nation can be both stimulated and measured in many ways, and that cultural contributions may lead to benefits in other regards, such as lower health costs or reduced crime. Supporting the robust and informed cultural criticism of video games is a contribution towards their industrial and cultural future, with their wider social benefits described in the **Foundational Statements**.

Action 7

The EU must nurture RRI principles as the foundation of European video game business through targeted research examining the impact of unethical game development practises

Although Gaming Horizons has shown many aspects of pro-social outcomes both embedded in games and in the personal ethics of their creators, there are always new challenges arising from the development of video game media. Of concern in current video game culture, at the time of writing, are exploitative and manipulative 'dark design' practices, which use compulsive psychology to maximise revenue from players, possibly to the player's detriment. One example of this are 'loot boxes', random collections of items that may enhance a player's experience, but which may also require a payment for each one and a substantial investment before a player gets the reward they desire. Loot boxes are not *a priori* unethical, but implementations vary and some are arguably exploitative. Other issues are likely to arise repeatedly in the future, such as the manner in which player data is tracked and analysed. A 2008 study by the U.S. National Institute of Mental Health (NIMH) found that a player's performance at various tasks in the video game *Duke Nukem* correlated significantly with depression.[12] Since that time, the quantity of data collected on players has increased enormously, leading to profound and personal insights being possible from their playing habits and performance. In conjunction with the depth of this insight comes a deep ethical and legal responsibility to protect this information, particularly in light of the General Data Protection Regulation (GDPR). It is likely that most video game companies are not prepared to exploit their data in this way, nor for the responsibility that comes from owning such intensely personal windows into the lives of players.

The length of time spent playing games, and the breadth of the population playing them, means that the risks and responsibility for (un)ethical practices may be unusually high for video games when compared to other media digital industries. When Chiara Rustici asks 'Are we taking on unnecessary data risk by over-collecting fresh personal data

(accidentally or due to lazy practices) that is not core to our business and has no ROI?'[13] the answer for many game developers be 'yes'. The growth of Artificial Intelligence is likely to impact on all technological sectors, and its combination with player data is likely to reveal insights that have potential for extremely positive and negative outcomes. Handling these implications will require specialised, media-aware researchers. Market forces alone cannot be allowed to dictate the path of such applications and design techniques to the video game sector, or society as a whole. Such applications of this data are currently rare, but there is broad potential for exploitation or the invasion of privacy.

In the popular mobile game *Pokémon Go*, players need to travel to physical locations in the world to collect virtual creatures. These locations were chosen based largely on an earlier game, Ingress, which had been most popular among affluent, white, middle-class Americans. When *Pokémon Go* was released, this meant that disadvantaged communities would be noticeably less likely to have convenient nearby physical locations at which to play the game, and correspondingly would need to pay more to get an equivalent experience to players living in an affluent neighbourhood.[14] The class-based, cultural, and racial exclusion that occurred in the game was entirely unintentional, but the impact on player communities was real. This provides a vivid example of how data systems in games can reflect systemic imbalances in privilege in society, excluding communities from play experiences that are available to others. That this imbalance could occur accidentally also highlights the potential magnitude of deliberate manipulation of data to exclude or target social groups.

With the increasing presence of Artificial Intelligence driving decisions in video game balancing and economies, a pro-active research agenda is necessary to assist in preventing physical-world systemic social biases and prejudices from manifesting in the virtual world and further deepening the digital and social divides. Industry collaboration would be beneficial, although perhaps not always necessary, and careful consideration of incentives for industry involvement will be important to achieving worthwhile insights. Some unethical practises may be unintentional outcomes of systems that could have been avoided with greater consultation and examination, but others may be driven by the need to survive, at almost any cost, in the highly competitive video game industry. With such powerful social and economic factors at play, it is imperative that the EU exercises its influence to improve the integration of RRI with the video game industry through the development of compelling fundamental and applied research calls for all video game sectors (education, arts, and entertainment games).

[12] Sussman, P. (2008, March 11). Feelings of depression? Nuke 'em! Retrieved December 08, 2017, from http://edition.cnn.com/2007/TECH/science/06/11/depression.diagnosis/

[13] Rustici, C. (2017, December 14). GDPR: the new data-protection law giving watchdogs a mega bite. Retrieved January 19, 2018, from https://www.theguardian.com/legal-horizons/2017/dec/14/gdpr-the-new-data-protection-law-giving-watchdogs-a-mega-bite

[14] Akhtar, A. (2016, August 09). Is Pokémon Go racist? How the app may be redlining communities of color. Retrieved December 08, 2017, from https://www.usatoday.com/story/tech/news/2016/08/09/pokemon-go-racist-app-redlining-communities-color-racist-pokestops-gyms/87732734/

Action 8

The EU should prioritise the development of all-round teacher competencies as a keystone for furthering game-based learning

The **Foundational Statements 1** to **5** naturally have major implications for game-based learning. Many of the education-related criticalities highlighted in this manifesto are the result of a non-critical, somewhat naive view of games and learning. Many of the players and educators interviewed in Gaming Horizons questioned the assumption that games, by definition, are a magic pill for boosting student motivation and engagement, and therefore learning. The educational landscape they describe is one in which the widespread enthusiasm for games is not always matched by a firm grasp of the complexities that game-based learning often presents. This suggests that the way forward is not so much to focus on the adoption of one particular game for learning but on helping teachers to develop the competencies they need to harness the potentials offered by existing games, of all kinds, by integrating them when designing the learning environment and planning their teaching.

Firstly, teachers require much greater awareness of the role that games play in young people's lives and personal development, regarding both potentials and pitfalls. This means that teacher education and teachers' professional development must consider the different ways that games motivate and engage, both in informal and formal contexts. Teachers should also have an appreciation of the affordances that all types of games offer for learning, and should not underestimate the impact that games have on young people's development, language and culture. This means looking beyond serious games specifically dedicated to the learning of curricular content, and exploring other avenues for game-based learning. These include critical use of entertainment games, artistically oriented games, gamification, games for media education, and game-making activities. At the same time, teachers need to be made aware of the potential risks involved with games and gamification, as well as the conditions under which games can be a means towards

inclusive education. Lastly, teacher training should focus on how to ensure that game-based activities are well planned and designed, learner centred, respectful of individual preferences and inclinations, and aligned with learning objectives. In other words, choosing to use a game in education should be part of the much broader decision-making process needed to design a learning activity. In the process, teachers should seek to foster student awareness of their relationship with games and gaming in the context of their interaction with the modern media landscape.

Action 9

The EU should promote initiatives helping citizens and society at large to understand the role games play in personal development, especially of younger players

Awareness-raising initiatives for citizens in general and parents in particular should be promoted to ensure that parents, families, and young people have a firm grasp of the role that games play in personal development, particularly of children and young people. Video game play should become a prime opportunity for parents to spend quality time with their children, to accompany them into a period of life in which they explore worlds on their own, and develop their personal and social identity. With this in mind, the EU should fund and promote initiatives helping to ensure that all those involved in decision making about gaming and education are better informed and have more nuanced attitudes to the medium.

The aim here would be to raise video game literacy at the level of families, allowing them to gain understanding and control of the games they engage with. More particularly, these initiatives will give parents a firmer grasp of the ways games contribute to, and impact on, young people, and it will help parents to deal confidently with both children and adolescents' interactions with video game content and culture. These initiatives should also promote the development of socially conscious sources of information about individual games, so as to lower the resistance and fears that lead many parents, teachers, and school leaders to adopt misguided attitudes to and restrictions on gaming. In parallel with **Action 6** (support for robust and informed criticism), future generations can be educated to critically navigate interactive media landscapes and to experience positive growth from these experiences. This would help those in education to leverage the potential gameplay offers for learning more effectively, in part through greater appreciation of the intrinsic value of play itself, pursued freely and for the sole purpose of personal enjoyment. At the same time, these initiatives should seek to enhance players' ability to self-regulate their gaming habits and to control their behaviour when playing. A key aspect here is assisting young players to reflect constructively about the different ways they can, and already do, develop their personal identity through games.

Play is our past, present, and future

We are born desiring human contact and play. This is part of who we are and how we grow. The development of commercial digital games in the last fifty years has given a new range to the possibilities for playful systems, giving them scope for complexity that is impossible in physical media. The advent of smartphones, consumer-priced Virtual Reality, and Augmented Reality means that, more than ever before, society has the opportunity to see and interact with complex systems in highly intuitive ways. Physical and digital games can address social needs directly through education and training, and less directly (but no less powerfully) through relaxation, economic and political commentary, and building social bonds. Video game communities make it possible for audiences across the planet to play together, and for developers anywhere to distribute their games around the world.

We need to exercise caution around arbitrary delineations that are intended to indicate social merit and worthiness: many games that aim to be good for society fail to produce intended results, while other games that were small-scale experiments sometimes transform lives. Games that are thematically antisocial can relieve stress, games that are prosocial can make excluded communities feel visible for the first time. The boundaries between education, arts, and entertainment games, which are currently present in policy and education, are not functioning in the interests of players of all ages and need to be radically redrawn. This is not to claim that 'all games are good'; quality and applicability criteria apply to all types of games, but these criteria are not currently functioning as desired.

We need to step away from Neoliberal instrumentalisation of leisure that frames pleasure as a path worth pursuing only when it leads to economic

productivity. Equalising opportunities for social and cultural enjoyment for the happiness of all citizens is a worthy goal for a civilised society, not an up-tick in a GDP that likely will not be reflected in the pockets of workers. Pure play undermines and outmatches the goals of productivity, because it brings no immediate economic worth (otherwise it would not be pure play) but it can also greatly enrich players' lives. Playfulness finds ways of subverting work and making outcomes in pleasure for people. Happiness and personal fulfilment should be acknowledged as a primary social objective, and video games have their role to play in this.

Pleasure is only ever consensual. To command a person to enjoy an experience is a violation which, at best, devalues the activity, at worst it destroys and reconfigures it entirely, resulting in the rejection of playfulness in learning, as well as many of the deepest structural problems of society. To play is to learn about ourselves, others, and the world, but it must be entered into willingly. Games that transform and educate must also primarily be games that the players desire to engage with. There is a craft in the creation of entertainment that needs to cross the boundaries into the serious and applied games sector, and there is a responsibility and research orientation from that sector that could also benefit the entertainment world. The boundaries between research, industry, and education, which are currently reinforced through funding, are counter-productive. Education cannot use games as a magic pill to boost motivation and engagement and expect an activity to remain the same when its context changes from willing home engagement to classroom conditions. A wider perspective on games and learning is needed, and European policy has a key role to play in fostering this change. The development and implementation of games for explicit learning purposes is but one facet of the cultural significance of games in European society. European policy must listen to game developers from outside the education/training sector and seek their engagement with these challenges. The actions in this manifesto may help bridge the gap between research and the wider industry. If this does not occur then the industry will continue to follow dominant market forces, with unpredictable outcomes for the welfare of players, developers, and society. Policy must directly engage with video game content, creation, and culture to play a role in shaping the way that games change the lives of children and adult audiences.

The name 'game' makes these things sound trivial, but we are working at the birth of a new expressive medium. What seems new and strange today will be commonplace tomorrow. The **Foundational Statements** here will be the accepted basis of the future of the medium, but the

actions are outside of the control of the manifesto's writers. If followed, they may help shape the path of video games, fulfilling their potential as culturally complex and nuanced artefacts, but if not ... games will go on, but their leadership will likely fall outside of Europe. Games are resilient because playfulness is an innate desire of all people. It is our choice whether, and how, we will interact with them.

Signed:

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For more information about Gaming Horizons please see page 38,

Foundational Statements

Foundational Statement 1 Playfulness is a primary, unintentional, and atavistic route to learning

Foundational Statement 2 All video games can improve or harm the lives of their players, regardless of type or authorial intentionality

Foundational Statement 3 Playing for its own sake is a worthwhile activity

Foundational Statement 4 All types of video games are already part of the wider discourse of our self-reflexive society

Foundational Statement 5 All video games combine the Social Sciences and Humanities (SSH) with technology and innovation

Manifesto Actions

Action 1 The EU should recognize and promote the arts, craft, and engineering dimensions of games so they reflect European values rather than predominantly market forces

Action 2 The EU should assist in ensuring games support a balanced and diverse representation of European society

Action 3 Broad-based, responsive research should be promoted to explore the deep structures of design and techniques of development underpinning all video game types

Action 4 Video game research outputs and dissemination must take greater account of the innovative and very rapidly changing nature of game development or risk irrelevance: the language, dissemination media, and timeliness of research outputs must match the cultural context and expectations of content developers

Action 5 Research, education, and social manifestations of video games must consciously include SSH and Responsible Research & Innovation (RRI) principles: explicitly and emphatically in research calls, as a valued constituent of the education for upcoming game developers, and through support for the cultural phenomena surrounding video games

Action 6 Support should be provided for robust and informed criticism of video game content, creation, and culture, contributing to their industrial and cultural future in both popular and academic media

Action 7 The EU must nurture RRI principles as the foundation of European video game business through targeted research examining the impact of unethical game development practises

Action 8 The EU should prioritise the development of all-round teacher competencies as a keystone for furthering game-based learning

Action 9 The EU should promote initiatives helping citizens and society at large to understand the role games play in personal development, especially of younger players.

About Gaming Horizons

Gaming Horizons is a European project that seeks to challenge and expand common understandings of what video games are and what they can be. The project is based on evidence collected through a range of research activities and a consultation process with stakeholders from various groups: game developers, education professionals, players and their families, researchers, policy.

To read/watch the other research outcomes and for more information, please visit: https://www.gaminghorizons.eu/

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