

<p>Institution: University of Portsmouth</p>
<p>Unit of Assessment: 36 Communication, Cultural and Media Studies; Library and Information Management</p>
<p>Title of case study: Game Changing: Games research creates new knowledge of digital games environments, improves industry perception of collaborations with academia and results in commercially successful, award-winning products</p>
<p>1. Summary of the impact An innovative approach towards researching story-telling and its relevance in games design has resulted in cultural and economic impact in the creative sector and generated novel approaches that have influenced creative practice in the games industry. As a direct result of the research, an independent games development studio has been established and two commercial game titles have been released, with commercial sales to date of approximately £1.65m. The first release, <i>Dear Esther</i>, has been a major commercial success, has also won several industry recognition awards and is cited as directly responsible for the genesis of a new gaming genre.</p>
<p>2. Underpinning research The research described was led by Dr Dan Pinchbeck, Reader in Computer Games at the University of Portsmouth, School of Creative Technologies, between March 2007 and February 2013. Pinchbeck identified a lack of research data in the area of participant experience, narrative modes and games design. In 2007-8, he was awarded an AHRC speculative research grant [Grant 1] to lead research into how story telling in virtual environments could be used to increase participants' sense of immersion and self-presence (1, 2). To create conditions under which player participation could be evaluated an innovative approach to the research was taken: to maximise the experiential engagement of players, virtual environments within games were created and made publicly available to the gaming community. The aim was to gain research insights into the role of narrative in gaming environments through creation of authentic experimental gaming processes. In contrast to a traditional, lab-based academic project, this research project made an innovative contribution to games research methodology by constructing a 'field-based' context for player interaction (3, 4). Specifically, research focussed on three game 'plug-ins' (or 'mods' applied to an existing commercial game engine) that were developed by the researchers under the AHRC grant [Grant 1]. These were made available as free download, with public engagement from the gaming community providing key feedback throughout. The principal output at this stage was the first version of a 'mod' named <i>Dear Esther</i>. <i>Dear Esther</i> broke new ground in presenting an innovative experimental design to test the limits of 'first-person' narrative environments in traditional games design. By removing all usual game play elements from predetermined 'first person' positions, players were permitted to explore the environment for themselves and, to an unprecedented extent, determine their own personalised narrative from the multiple potentials of a fragmented and randomised story. This approach had previously been considered too 'risky' by the games industry since it challenges dominant use of 'first person' in commercial gaming protocols. The fundamental research described above focussed on exploring game design spaces that were not being explored by the industry, due to their perceived experimental and uncertain nature. Industry focus at this time was largely on mainstream game development and on reissuing existing games, e.g. using the same basic structure as previous hit releases, game tie-ups with successful film franchises, and/or developing sequel releases to hit titles. In this context, the research team identified an innovative research space in which an academic group could use experimental techniques to evaluate technical and aesthetic innovation within the framework of the community of 'users'. Participant feedback was used to create original 'mod' prototypes that could be developed within the commercial sector. A fourth mod was develop under the project title <i>Everybody's Gone to the Rapture</i> that, after production of a prototype [funded by Grants 2, 3], led to a successful industry collaboration and game development contract with Frictional Games [Contract 1].</p>

The research was published in the academic literature and key findings and participant player feedback was disseminated at major games trade and industry events. The use of practice-led research methodologies was ideally suited to the encouragement of direct involvement with the gaming industry as it resulted in applied knowledge readily applicable to industry games development processes (5, 6).

3. References to the research

1. Pinchbeck, Dan (2009) *An analysis of persistent non-player characters in the first-person gaming genre 1998-2007: a case for the fusion of mechanics and diegetics*. Eludamos: Journal for Computer Game Culture, Vol 3 (No. 2). p. 261-279. ISSN 1866-6124, <http://www.eludamos.org/index.php/eludamos/article/view/vol3no2-9/138> REF 2 output: 36-dp-001
2. Pinchbeck, Dan (2009) *Shock, horror? First-person gaming, horror, and the art of ludic manipulation*. In: Horror video games: essays on the fusion of fear and play. McFarland, Jefferson, NC, pp. 79-94. ISBN 9780786441976 (available on request) REF 2 output: 36-DP-002
3. Pinchbeck, Dan (2008) *Trigens can't swim: intelligence and intentionality in first person game worlds*. Conference Proceedings of The Philosophy of Computer Games 2008. Potsdam University Press, Potsdam, p. 242-260. ISBN 9783940793492 (available on request)
4. Pinchbeck, Dan (2009) *An affordance based model for gameplay*. In: DiGRA 2009 - Breaking New Ground: Innovation in Games, Play, Practice and Theory, 1-4 September 2009, Brunel University, London. <http://www.digra.org/wp-content/uploads/digital-library/09287.31155.pdf>
5. Pinchbeck, Dan (2012) *Dear Esther: Making an Indie Success out of an Experimental Mod*. Game Developers Conference, March 2012, San Francisco, California <http://www.gdcvault.com/play/1015529/Dear-Esther-Making-an-Indie>
6. Pinchbeck, Dan (2013) *DOOM: SCARYDARKFAST*, Landmark Video Games; Publisher: University of Michigan Press, ISBN 9780472051915, REF 2 output: 36-DP-004

Grants and Contracts

[Grant 1] Title: **An exploration of the potential for new narrative experiences in first-person perspective gaming**

Principal Investigator: Dan Pinchbeck

Funder: AHRC

Scheme: Research Grants (Speculative)

Period of the grant: 01/03/2007 to 30/06/2008

Value of the grant: £55,246

[Grant 2] Title: **Thechineseroom: Commercialisation of practice-led, research-driven experimental storytelling in games**

Principal Investigator: Dan Pinchbeck

Funder: AHRC

Scheme: Follow-on Funding

Period of the grant: 06/01/2012 to 05/09/2012

Value of the grant: £95,822

[Grant 3] Title: **Everybody's Gone to the Rapture**

Contribution to top-up AHRC Follow-on Funding (Grant 2)

Funder: University of Portsmouth

Impact case study (REF3b)

Scheme: HEIF (internal use of funds)
 Period of Project: 06/01/2012 to 05/09/2012
 Value of grant: £34,000

[Contract 1] Title: **Game Development: Amnesia - A Machine for Pigs**
 Project Leader: Dan Pinchbeck
 Funder: Frictional Games AB (Sweden)
 Period of project: 01/11/2011 to 31/12/2012
 Contract value: £225,676 (ex VAT)

4. Details of the impact

As a viable route to targeting new commercial markets and creating novel game genres, our academic-industry partnerships fully demonstrate the cultural and commercial value of collaborative research and development. Consistent engagement with industry at trade events, workshops and networks throughout the development stages of the research ensured that experimental investigation was firmly located in the practical, commercial contexts of games production and in authentic player experience. The research described above has resulted in the following demonstrable impacts:

Contributing to economic prosperity via the creative sector (computer games)

The underpinning research led to the formation of 'The Chinese Room' in 2007, now a fully established, successful, independent games development studio with Pinchbeck as the Creative Director. The company employs 12 full-time staff. The Chinese Room is a major beneficiary of the underpinning research demonstrated through the commercial success of its first title (*Dear Esther*) and its most recent collaborative venture with Sony. The Chinese Room has been able to build a strong reputation in the industry based the credibility of its underlying research base.

Three commercial game titles, based on the underpinning research have been developed:

(i) *Dear Esther* – game released by *The Chinese Room*

In order to complete the commercial product, the underlying intellectual property was assigned from the University to The Chinese Room which subsequently entered into a licensing contract with Valve Corporation (US) in order to release *Dear Esther* commercially, using Valve's Steam distribution platform. The Chinese Room successfully secured ca. £55,000 Indie Development Funds to finalise the commercial product and released the game to critical acclaim, including five BAFTA nominations and winner of 7 major game industry awards (see <http://dear-esther.com/>). *Dear Esther* has, to date, secured sales of 850,000 units (compared with 100,000 for a typical Indie release) equating to US\$2 million.

(ii) *Everybody's Gone to the Rapture* – game development by *The Chinese Room* for Sony Computer Entertainment (US)

Following the research performed under Grant 1 and dissemination of the outputs within the industry, the AHRC [Grant 2] and University [Grant 3] funded further development of a commercial game prototype, under the title *Everybody's Gone to the Rapture*. The work and outputs from this project led directly to the University securing a commercial contract [Contract 1] with Frictional Games (see below). The Chinese Room is currently developing *Everybody's Gone to the Rapture*, funded by Sony Entertainment (US) for later release on the PlayStation platform (<http://www.youtube.com/watch?v=f3PG7k6vvyY>).

(iii) *Amnesia: A Machine for Pigs* – game released by *Frictional AB*, developed in collaboration with the University of Portsmouth

The popular release of *Dear Esther* demonstrates that industry and academia are successful when collaborating on innovative game projects with potential for commercial application. Because of this success, Frictional AB approached the University to partner in its development, bringing the innovative story-telling elements and atmospheric environment to its latest 'first-person' horror game: *Amnesia: A Machine for Pigs* was completed in Feb 2013 (<http://store.steampowered.com/app/239200>). Pre-release sales of the game (full-release Sept 2013) allowed Frictional AB to recover the full costs of its development, approximately £400,000. In

the TIGA Awards in 2013 *Amnesia: A Machine for Pigs* was shortlisted as Finalist in the 'Best Action Adventure Game (Small Studio)' category and won Best Audio Design.

Generating new ways of thinking that influence creative practice

Dear Esther was a unique game, at the forefront of innovation in the industry with strong following by the independent games community. It received widespread trade and press recognition with articles in *PC Gamer*, *Games TM*, *Develop*, *Edge*, *The Guardian* and *Develop* publications. A major contribution to experimentation in 'new wave' games design, the success of *Dear Esther* has had a major impact on perceptions within the games industry about how collaboration with academic institutions can be made to be highly effective. Academic 'practice-led' research (closely informed by participant 'users' in the games community) has generated innovative insights into the unexplored capacities of digital gaming. Major industry (e.g. Sony Computer Entertainment America) as well as 'indie' developers (e.g. *The Astronauts*, Poland) cite *Dear Esther* as the creative precedent for development of their own projects and the creation of a new 'walk 'em up' games genre.

Due to the University's role in brokering innovation in creative industry practice, this has enabled the collaborative links with a number of companies, including: Valve, Crytek, Sony, Splash Damage, Red Game Tools, Rebellion and Climax. The University of Portsmouth is a short-listed finalist in the TIGA Awards 2013 for 'Best Educational Institute' in the 'Business of Games' category (http://awards.tiga.org/awards_categories.php).

5. Sources to corroborate the impact

1. Letter from Director, The Chinese Room Games confirms that establishment of the studio was dependent on the under-pinning research, the games contracts undertaken by the studio and employment figures.
2. Email from Chief Executive Officer, TIGA (Games Industry Association) confirms the significance of the research in influencing creative practice and TIGA Awards and nominations.
3. Letter from Creative Director, Sony Computer Entertainment America confirming the significance of the research in creating a new gaming genre.
4. Chief Executive Officer, Frictional Games AB can corroborate that early research dissemination led to the development of *Amnesia* in collaboration with the University team, and the sales figures for *Amnesia: A Machine for Pigs*.
5. AHRC News – describes the commercial success of *Dear Esther*
<http://www.ahrc.ac.uk/News-and-Events/News/Pages/Highly-anticipated-computer-game-makes-its-budget-back-in-6-hours-upon-its-commercial-release.aspx>
6. AHRC Feature – describes the origins of *Dear Esther*, its critical acclaim and its influence on creative practice <http://www.ahrc.ac.uk/News-and-Events/Features/Pages/Dear-Esther.aspx>
7. *Dear Esther* Awards: <http://thechineseroom.co.uk/games/dear-esther/>
8. Trade Press covering the collaborative work between University and the games industry and supporting games design development through underpinning research:
 - PC Gamer* <http://www.pcgamer.com/search/pinchbeck> (10 entries)
 - Develop* <http://www.develop-online.net/news/tag/dan-pinchbeck>
 - Games™* <http://www.gamestm.co.uk/features/sound-vision-inside-the-chinese-room/>
 - Edge* <http://www.edge-online.com/features/the-chinese-rooms-dan-pinchbeck>
 - The Guardian* <http://www.theguardian.com/technology/gamesblog/2013/oct/15/horror-amnesia-a-machine-for-pigs-chinese-room>
 - GamesCityNight* <http://nights.gamecity.org/news/gctv-dan-pinchbeck-talks-dear-esther-and-thechineseroom>