

Institution: University of Chichester		
Unit of Assessment: 33		
Title of case study: Project Cars: impact in the games industry from practice-based research in soundtrack and audio design		
Period when the underpinning research was undertaken: 2014-2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Stephen Baysted	Professor of Film, TV and Games Composition	2003-present
Period when the claimed impact occurred: 2015-present		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact (indicative maximum 100 words)		
<p>Stephen Baysted's creative research practice in composition, audio direction and sound design contributed significantly to the development and successful release of 3 critically-acclaimed and globally-distributed commercial racing simulation games (<i>Project Cars</i>, <i>Project Cars 2</i> and <i>Project Cars 3</i>). This work culminated in the games' worldwide commercial success; the enhancement of over 5,000,000 gamers' experiences; the widespread dissemination of the creative and technical processes of composition, audio design and development to diverse public audiences; and the stimulation of public debate and discourse. These impacts are evident in sales figures, professional and amateur reviews, worldwide media coverage, the exploitation of <i>Project Cars</i> music in non-gaming contexts, and player engagement in various fora.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>Much of Baysted's creative research practice operates within a commercial and technologically complex and constraining context. The commercial brief acts as a series of creative parameters that stimulate and necessitate innovation and new insights into the particular genre or form being explored, and the technology serves to create technical challenges that require novel solutions. The creative processes of game music and audio design therefore sit in tension between the financial realities of the marketplace, the practicalities and limitations of technology, and the creative ambitions of the producers (R4). These innovations and insights have been widely explored within the sub-discipline of Ludomusicology (including in R4, R5 and R6).</p> <p>The underpinning research for the impacts described herein relates to the video game trilogy <i>Project Cars</i> (2015), <i>Project Cars 2</i> (2017) and <i>Project Cars 3</i> (2020): multi-platform racing simulations (and their associated marketing trailers) published and distributed globally by Bandai Namco Entertainment. Baysted was Composer and Audio Director for all 3 games. In terms of composition, Baysted's research explores questions of immersion, diegesis, 'game music literacy' and genre (R6). In terms of audio design, the outputs utilise and build upon Baysted's novel approaches to realistic vehicle sound modelling, which he developed in previous projects (<i>Need for Speed Shift</i> (2009) and <i>Shift 2: Unleashed</i> (2011)), and which here confront the challenges of new technologies (virtual reality and augmented reality) and emerging 'surround sound' formats in the domain of videogame development (Dolby Atmos™, Binaural and Ambisonic audio).</p>		

In a genre (racing simulation) where music is, conventionally, never heard within gameplay itself, and only within the introductory sections and menu systems (because it interferes with the principal auditory mechanisms necessary for actually playing the game), the composer must seek innovative ways of engaging and immersing the player within the simulated game world, preparing the player for the action that is about to take place (discussed in **R4**). In *Project Cars* (2015) (**R1**), Baysted embedded additional layers of processed audio with a broad range of real-world non-musical sounds recorded from motor racing (including 'pit to car' radio transmissions, car engine sounds and trackside ambiences) within the musical fabric itself in order to enhance the player's sense of immersion within the simulated world.

In *Project Cars 2* (2017) (**R2**), Baysted further experimented with these techniques. These innovations included the layering of recorded interviews of racing drivers describing their experiences of racing into the musical fabric as a way of heightening the player's emotional responses, deepening immersion and dramatising the experience of navigating the menu system (discussed in **R4**). This approach had never been used before in the genre. Baysted's score also transcends the music-stylistic norms and conventions of racing games by fusing contemporary cinematic orchestral language with operatic vocal writing and elements of electronica and rock.

Due to the COVID-19 pandemic, the development of *Project Cars 3* (2020) (**R3**) was delayed by approximately 4 months. This meant that the score had to be composed, recorded and mixed entirely during the first lockdown. Furthermore, the cancellation of the planned full orchestral recording sessions posed additional difficulties which were overcome by recording individual orchestral musicians remotely from their own homes.

In **R3**, Baysted collaborated with Guy Fletcher (Dire Straits) and 6 Drum and Bass artists from the UK-based record label RAM Records Ltd, to create a musical score that adapts dynamically as the player navigates the menu system. This sees the music become increasingly dramatic as the player approaches the race, heightening tension, immersion and player expectation. The starting point for the majority of the music was original Drum and Bass tracks which Baysted and Fletcher then renegotiated and reframed, and out of which 2 contrasting 'ambient' versions and a dramatic orchestral version were created. Each of the three versions is of an identical length, tempo, key and structure to the original, which enables the music to be crossfaded seamlessly between each version of the track as the player moves through the User Interface. Baysted's original orchestral music tracks were then remixed by the Drum and Bass artists. The concept, musical mechanism and cross-genre bi-directional musical collaboration is unique.

Some 30 marketing trailers have been produced to advertise the *Project Cars* trilogy, all of which have included audio design and music by Baysted, or music arranged by Baysted. Many of the trailers have also challenged the norms of the genre, including an arrangement of Beethoven's 7th Symphony final movement, and a setting of Robert Burns' poem 'Ca' the Yowes', for which there was a separate EP release due to public request.

3. References to the research (indicative maximum of six references)

Games:

R1: *Project Cars*. Bandai Namco Entertainment & Slightly Mad Studios. 2015 ASIN: B06W9JBQVL. The game was released globally in May 2015 in 3 DVD formats: Microsoft Xbox ONE, Sony Playstation 4 and Windows PC. [This output is being submitted to REF2.]

- Nominated for Jerry Goldsmith Award for Best Original Score in a Video Game (2015).

R2: *Project Cars 2*. Bandai Namco Entertainment & Slightly Mad Studios. 2017 ASIN: B06W9JBQVL. The game was released globally in September 2017 in 3 DVD formats:

Impact case study (REF3)

Microsoft Xbox ONE, Sony Playstation 4 and Windows PC; and online via Steam. [This output is being submitted to REF2.]

- Winner of Gamescom Best Simulation Game (2017).
- Nominated for Best Audio in the 25th Golden Joystick Awards (2017).
- Nominated for Best Racing Game by Wired UK (2017).

R3: *Project Cars 3*. Bandai Namco Entertainment & Slightly Mad Studios. 2020 ASIN: B089QWTJQF. The game was released globally in August 2020 in 3 DVD formats: Microsoft Xbox ONE, Sony Playstation 4 and Windows PC; and online via Steam.

- Winner of Gamescom Best Simulation Game (2020).

Book chapters:

R4: Baysted, Stephen. (2017). 'Simulation: squaring the immersion, realism and gameplay circle' in Mera, Winters & Sadoff Eds. *Routledge Companion to Screen Music and Sound*. London: Routledge. ISBN 9781138855342

R5: Baysted, S. (2019). Compositional Approaches to Film, TV and Video Games. In N. Cook, M. Ingalls, & D. Trippett (eds.), *The Cambridge Companion to Music in Digital Culture*. Cambridge: Cambridge University Press. ISBN 9781316676639.

R6: Baysted, Stephen and Summers, Tim. (2020). The Creative Process of Composing for Video Games: From Pitching to Gold Master and Beyond. In Nicolas Donin (ed.) *The Oxford Handbook of the Creative Process in Music*. New York: Oxford University Press. ISBN 9780190636197.

All outputs available on request.

4. Details of the impact (indicative maximum 750 words)

The impacts of Baysted's innovative research into sound design and soundtrack composition in racing simulation are fourfold:

- Worldwide commercial success of *Project Cars*, *Project Cars 2*, and *Project Cars 3*
- Enhancing the immersion and experience of at least 5,000,000 gamers
- Catalysing debate, discourse and commentary in and around the games industry
- Dissemination to the wider public of the creative and technical processes involved in composition, audio design and development

These impacts, all of which are materially and distinctly linked to Baysted's specific and innovative research-based contribution to the *Project Cars* trilogy, are described in detail below.

Commercial success

To date, **R1**, **R2** and **R3** have achieved combined sales in excess of 5,000,000 units worldwide (**C1**). Baysted's audio direction, sound design and music scores were crucial factors in generating this commercial success – a fact that is corroborated by a wealth of professional reviews (print and online), including from IGN (the largest games news site in the world, and [526th most-visited](#) website worldwide). The IGN reports that 'the sound is seriously stunning [...] as nice as this game looks, though, it honestly sounds even better [...] And those exhaust notes? Just listen to that F-Type Jag above – *and this is one of the road cars*' (**C2**). The scores, audio design and games have earned many prestigious international peer award nominations, including a Jerry Goldsmith Award nomination for 'Best Score in a Video Game' (2015) (**C3**), and a nomination for the Golden Joystick Award for 'Best Audio in a Game' (**C4**). Music and sound design from all 3 games was also used outside the game context, including in 30 online commercial trailers (some of which

appeared on TV and in cinema), BBC's *Top Gear* (R1 in 2017) and successful commercial soundtrack releases (on iTunes, Amazon, Spotify, Deezer, Tidal, YouTube).

Enhanced gamer experience and immersion

As mentioned above, over 5,000,000 people worldwide have purchased the *Project Cars* games, nearly all of whom have all benefitted from the distinctive and immersive soundtracks developed for them. This figure does not include multi-players per unit or secondhand buyers.

The substantial contribution to these gamer's experience and immersion is demonstrated by the millions of views of YouTube videos featuring the games' (R1, R2 and R3) sound design and soundtracks. Comments posted in reaction to these soundtracks further underpin their importance to the quality and intensity of the overall gaming experience (quotes, colloquialisms and typos here cited verbatim):

'Best soundtrack of any racing game ever.'

'When the commentator speaks, that's when you know its deeper than just racing.'

' [...] that british guy describing Eau Rouge like a poem at the beginning of the video. raises the hair on my neck everytime'.

*'This s*** is cool scary and somehow inspirational at the same time not really the music you would think to be in a racing game but I truly love it best sound track I've ever listened to.'*

“Goosebump”... These soundtracks better than a emotional game's soundtracks. Perfect!

'This is one of my all-time favorite trailer for a car pack DLC (from any racing game) and the song used for it (together with the highland theme map) certainly delivered in atmosphere! That song got so much positive feedback they actually re-recorded it to make it available for purchase. I bought it on iTunes as soon as I found out it was available.'

Catalysing debate, discourse and commentary in and around the games industry

The games have catalysed significant debate across mainstream media outlets (C5), gameplay-related fora, blogs, and music sales and share sites. The innovations in the games were also critical in R1's nomination for the Jerry Goldsmith Award (2015), R2's nomination for the Golden Joystick Award (2017), R2's nomination for Best Racing Game in the 2017 Wired UK, R2/R3's wins in Gamescom (2017 and 2020) awards, and R3's TIGA (2020) Award – all of which themselves amplified the reach and significance of these debates.

Reviews by professional critics and amateur bloggers and vloggers also generate debate in their own right. A Google search of 'Project Cars Game' and 'review' yields over 36,100 results; 'Project Cars 2' and 'review' yields over 433,000. There are over 500,000 streams of the scores on Spotify, and (as mentioned above) millions more YouTube, featuring the scores, game trailers, and gameplay featuring music and audio design. Many reviews explore the importance of the games' audio and musical features (see IGN link above) and their efficacy in enhancing player immersion. Whilst not always so eloquent as the professional reviewers, amateur gamers often pick up on (and argue about) detailed aspects of the sound design and music.

Dissemination of the creative and technical processes of composition, audio design and development

Baysted has appeared (by invitation) on 2 BBC Radio 3 *Sound of Cinema* programmes in 2018 and 2019 (the first with a live audience at the V&A Museum, the second recorded at his studio), in which his role was to help audiences understand and navigate the processes and techniques involved in composing music for video games, and how they differ from those of film (C6). Baysted has also been a panellist at many games industry and wider music industry conferences (Develop Conference, BASCA, Screen Composers Network). Furthermore, a wealth of interviews, articles and videos (in the UK and internationally) about his work have been published, discussing the creative and technical processes of game music creation, including an article in which he discusses the composition and recording process underpinning R2 (C7).

5. Sources to corroborate the impact (indicative maximum of 10 references)

C1: Testimonial statement from Ian Bell, Head of Studio, Slightly Mad Studios Ltd.

C2: Luke Reilly, 'Project Cars 2 Review: where the rubber meets the road' (18 September 2017): <https://uk.ign.com/articles/2017/09/18/project-cars-2-review>.

C3: Jerry Goldsmith Award Nomination for Best Score in a Video Game for *Project Cars* (2015): <http://filmmusicfestival.org/en/jerrygoldsmithawards/>.

C4: Hannah Dwan, 'Public voting and the nominations for the 2017 Golden Joystick Awards are now up' (27 October 2017): <https://www.telegraph.co.uk/gaming/news/public-voting-2017-golden-joystick-awards-nominees/>.

C5: Select review articles for R1, R2 and R3:

- Jaio Diniz Sanchez, 'Project Cars review – a strikingly authentic simulation', *Guardian* (14 May 2015): <https://www.theguardian.com/technology/2015/may/14/project-cars-review-a-strikingly-authentic-simulation>.
- Jack de Menezes, 'Project cars 2 review', *Independent* (27 September 2017): <https://www.independent.co.uk/life-style/gadgets-and-tech/gaming/project-cars-2-review-ps4-xbox-one-pc-a7969316.html>.
- Mike Channell, 'Project Cars 2 review: cars and tracks galore', *Top Gear* (22 September 2017): <https://www.topgear.com/car-news/gaming/project-cars-2-review-cars-and-tracks-galore>.
- Hunter Skipwith, 'Project Cars Game of the Year Edition review - as close as it gets to the real thing?', *Evo* (26 May 2016): <https://www.evo.co.uk/reviews/15973/project-cars-game-of-the-year-edition-review-as-close-as-it-gets-to-the-real-thing>.
- Scott Newman, 'Project Cars 2 review: hard as hell, worth the sweat', *Car Magazine* (6 April 2020): <https://www.carmagazine.co.uk/features/car-culture/project-cars-2-review/>.

C6: BBC Radio 3 *Sound of Cinema* appearances:

- 'Video Game Music', *Sound of Cinema*, BBC Radio 3 (October 2018): <http://www.bbc.co.uk/programmes/m0000x7z>.
- 'Video Game Music: Lines, Loops and Layers', *Sound of Cinema*, BBC Radio 3 (March 2019): <https://www.bbc.co.uk/programmes/m0002zkg>.

C7: Select interviews, articles and videos with Baysted, discussing video game composition:

- Anita Abwi, 'Stephen Baysted on getting a foothold in the industry', *PRS for Music* (17 October 2017): <https://www.m-magazine.co.uk/features/interviews/interview-stephen-baysted-2/>.
- Adam Ismail, 'Video Takes Us Inside the Development of Project CARS 2's Soundtrack', *GTPlanet* (15 August 2017): <https://www.gtplanet.net/video-takes-us-inside-development-project-cars-2s-soundtrack/>.