Three quarters of U.S. heads of households, the same report tells us, now regularly play video games. The industry is now worth over $7.5 billion in the United States alone: a figure close to that of the film industry ($9B) and increasing every year (Goodale 2005). Particularly remarkable is the widening of the audience for games – the ESA report informs us that nearly one fifth of adults over the age of 50 play games, and ‘women over the age of 18 represent a greater portion of the game-playing population (28%) than boys from ages 6 to 17 (21%)’. With such impressive statistics, it is clear that games are now a significant force in our cultural landscape – the ‘medium of the moment’. Despite the ubiquity of games now, with very few notable exceptions, there has been but a handful of articles published on games audio (see References, below).

Perhaps worth asking is why, given its importance, games audio has met with such silence in academe. When I first suggested to a colleague that I was going to begin research into this area, I was met with the response, ‘Games music? But that’s so simple!’ It is certainly not surprising to me that it is only now that games audio has reached a ‘cinematic’ quality that it is gaining some recognition. But despite appearances, even early games audio offers intriguing questions in terms of the production and reception of sound, such as I discovered in a study of the Atari VCS’s fascinating approach to tonality (Collins 2006a). The influence of early game audio on other forms of popular music has also been underestimated – the continuing prominence of just one sound, Pacman’s ‘waca waca’ (the sound the character makes when eating) is clear evidence of this. Back in the 1980s, the sound was incorporated into popular songs such as Weird Al Yankovic’s ‘Pac Man’, and Buckner and Garcia’s ‘Pacman Fever’, but has more recently been used by Aphex

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Twin, Bloodhound Gang, DMX, Lil’ Flip and many more. There have even been T-shirts selling on E-Bay which feature the words ‘waca waca’. Similarily, the Boston Bruins adapted Zombie Nation’s hit ‘Kernkraft 400’ for their ‘goal’ theme song and it has since found its way into countless mobile phones as a ringtone, but was itself adapted from a theme in a Commodore 64 game, Lazy Jones (Terminal Software 1984). There has also been a growing popularity of ‘micromusic’, also known as ‘chiptunes’ – songs based on 8-bit game machine sound. Malcolm McLaren has begun promoting the scene, and Beck released an EP of 8-bit remixes of some of his songs in 2005. Golden Shower won a Brazilian MTV Music Video award for their track ‘Video Computer System’, all based on Atari VCS sounds and images, and Swedish band Machinae Supremacy has brought 8-bit metal to the masses. For further details of all these tracks see the box below.

Another objection I’ve encountered in suggesting that others study games sound has been ‘I’m too old. I don’t play games’. Although recent research by the industry suggests this to be untrue (see above), the impression remains that many adults lack the skill sets to comprehend games or the gaming experience. Certainly, if one is uninterested in games it would be a good reason not to study them, but the excuse often seems not lack of interest, but either an insecurity over ‘what will my colleagues think’ or the inability to come to grips with the technology. It is time we recognized that games are not just the domain of children, or just for ‘play’ anymore (and, if they were, they would of course still be worth studying). Certainly, the connotation of the word ‘game’ suggests

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Weird Al’s ‘Pacman’ recorded in 1981 and released on Dr. Demento’s Basement Tapes no. 4. Buckner and Garcia’s ‘Pacman Fever’ became a hit in 1982, released on an album of the same name by Columbia, 37941. Aphex Twin’s version was released in 1992 on a single entitled ‘Pacman’, FFRRedom 110. Bloodhound Gang’s ‘Mope’ was featured on Hooray for Boobies, released on Interscope 90455 in 2000. DMX’s ‘Pacman (skit)’ was released on Flesh of My Flesh, Blood of My Blood, 1998 DefJam 538640. Lil’ Flip’s ‘Game Over’ was released on U Gotta Feel Me, Sony 92411 and was subsequently sued by Namco. Zombie Nation’s ‘Kernkraft 400’ was released on several EPs, singles, and dance compilations after achieving a No. 2 spot in 2000’s German Alternative Charts.


Machinae Supremacy’s Deus Ex Machinae was released in 2004, by MBD Records.

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2 The Video Game Critic's Atari 2600 Reviews http://www.videogamecritic.net/2600bb.htm. T-shirt was seen on http://cgi.ebay.co.uk/ws/eBayISAPI.dll?ViewItem&item=8351916906& category=15687. (Both 12 October 2005).
a lack of academic rigour, and I am always met with sniggers when I explain what I do to academics or the public. After all, if it is fun, it can’t be taken seriously (right?). But surely we should take an interest in something in which people invest so much time, and it is precisely for this reason (not to mention the current military uses of games) that it must be taken seriously.

Finally, then, is the excuse of the technophobes: ‘I don’t know programming/understand sound chips, etc.’. This explanation is understandable enough: in my opinion, to discuss games from a compositional perspective at least, it is necessary to understand the constraints and workings of technology and the process of implementation, in order to understand why composers make certain decisions, but many other aspects of games audio could still be researched, while those of us with nerdy enough dispositions piece together the technical aspects. So what could the rest of us who are less technologically inclined examine in the world of games sound? The answer to this is limitless, since the field is so new, but a few suggestions will hopefully encourage some ideas:

- business/industry aspects: acquisition and composition of popular music for games and its changing role in games, games as marketing machines for popular music and vice versa
- ethnographic/sociological studies of fan cultures around games audio (which do exist), including micromusic
- the use of nostalgic references to early games in popular music, the changing ways in which music is consumed because of games audio
- the impact of games audio on other forms of expression (see Kassabian 2003)
- the performance of live games sound: Nintendo metal, Video Games Live, etc.
- reception/semiotic studies: the many conventional ways of hearing music are changed by games audio (it is repeated, cut off, looped, interacted with and controlled by a player, there are participatory music games, there are new places of consumption, etc.)
- associated interactive audio: mobile phones, theme parks, museums, etc.

Before setting out to tackle any of these areas, it is worth considering the question of approach. Perhaps the most apparent approach to take in studying games might be from existing film theory: after all, they are both mass entertainment typically consumed on screens. But it must be remembered that games are very different from films in many ways:
sound production and reception, constraints of the technology, notions of competition, length, repeatability (yet never the same twice), non-linear narratives, changed notion of ‘audience’ in a game, etc. Perhaps the most significant differences are the participatory nature of games, and the anticipatory functions of the audio. Games sound is never ‘underscore’; it must at times be consciously listened to in order to recognize changing cues in the music and take appropriate action; the consequences for failing to listen can mean death in some types of games. The player is also involved in the co-production or timing of sound events in games: there are many popular music-based games in which the player makes the music or sings to the music, and even in regular games the timing of sound events is controlled by the player. How does this change the role of audio in games? How does this affect the reception of the music, in games and in general? Studying these aspects of games audio in particular may help us to re-evaluate our assumptions about other forms of audio-visual media, refine theories, and lead us to think about and to understand our increasing interaction with technology and sound in technology.

The field of games audio is wide open for study, and offers many interesting issues in terms of practice and theory. It is time for scholars of music to put aside prejudices and preconceptions of games audio and recognize that the study of games audio will dispel myths about the apparent ‘simplicity’ or superficiality of games and games sound. Equally important, there are so many other areas of emerging technologies that are basically untouched by academics, yet permeate our lives: mobile phones, internet use, interactive audio in public spaces, etc. It is time for collaborative efforts by scholars to begin to cover some of the new media technologies.

References and Suggested Reading


Collins, Karen, 2005, ‘From Bits to Hits: Video Games Music Changes its Tune’. 
_Film International_, No. 12, pp. 4–19.


