Writing about popular music has often caused problems for scholars attempting to make sense of its sounds. Sociologists have been accused of failing to take them seriously by focusing on the contexts of production, distribution, and consumption and ignoring the ‘text’. Treating music as a text, though, has created its own issues as musicologists use the tools of musical analysis to look at lyrics and notes, things that are easy to write down or notate. Since the turn of the century, there have been a number of developments that have impacted on how scholars approach the sounds of popular music: the Art of Record Production (ARP) conference, which started in 2005, brought together those researching music within the academy, sound engineers starting PhDs, and record producers with books to promote. Moreover, the growth of Sound Studies as an interdisciplinary field has led to an increased focus on the production of sound itself, often outwith the contexts of music making and popular music. The continued dialogue between scholars in Science and Technology Studies (STS) and sociologists of music, Sound Studies scholars, and those within Popular Music Studies (PMS) has led to more work on the technologies used to produce sounds, as well as an increasing readiness among organologists to understand the instruments of contemporary music production and look to the contexts of music making⁠. By focusing on the users of technologies, scholars are continuing to develop a more nuanced understanding about the
relationship between humans and music making technologies. But what about the sound and sounds of (popular) music? What do we do about them? What do we do with them?

The *Cult Sounds* website, developed by Immanuel Brockhaus at the University of Bern and University of Arts Bern in Switzerland, grew out of a doctoral thesis completed in 2016 about the emergence, practice and effect of the individual sounds that have dominated popular music since the 1960s. An accompanying book, *Kultsounds* (2017), is described as “the first book in the field of Sound Studies that investigates [the] technological, sociological, and aesthetic relationships of iconic sounds”. Unfortunately, for those of us who are primarily English speakers it is only available in German. For the academic reviewer this is a pity because the theoretical underpinning of the book and its roots in STS and Actor Network Theory (ANT) would have been helpful for understanding the framing of the website project.

The design of the website is clear and easy to navigate with a menu that leads to six cult sounds (Hand Clap, Orchestra Hit, Yamaha DX7 Piano, Synthesizer Bass, Male Falsetto, and Auto-Tune) and nine significant sounds (Double Tracking, Stratocaster, Synthesizer Pad, Synthesizer Bell, Scratch, Sidechain Compression, Tape-Stop Effect, Stutter Effect, and Filtering). It is not clear, though, what makes the iconic sounds iconic and the significant sounds significant. For each of the cult sounds, there is a sample as an example and a link to a page with some general information about its history, suggestions for further research, a discography of key recordings that use this particular sound, interviews with the designers and users of technologies that produce these sounds, and, in some cases, a graph showing the number of records in the *Billboard Top 40* between 1960 and 2014 in which they featured.
Some of the web pages contain a treasure trove of data and information, while others, particularly the pages about each of the nine significant sounds, are still under construction.

The pages on the site relating to the sounds of digital synthesizers developed in the 1970s and 1980s – the Orchestra Hit (or ORCH2) from the sample library of the Fairlight CMI and the Yamaha DX7 – will be helpful for anyone doing research in this area, particularly undergraduate students. The ORCH2 discography shows how this sound, which was used in Afrika Bambaataa’s ‘Planet Rock’ (1982) and much pop music produced in the early 1980s, shaped the music of later decades. It is a bit odd, however, that the sound samples only start in 1986 with Steve Winwood’s ‘Higher Love’. We are left with only a partial explanation about how this sound came to shape popular music; the story of how a version of it may have ended up in Madonna’s ‘Vogue’ (1990) or Britney Spears’ ‘Hit me Baby One more Time’ (1999) is left untold. The link to Robert Fink’s ‘The Story of ORCH5’ (2005) will fill in some of the gaps and this is where more references to academic articles and books would have strengthened the authority of the site as a resource and a way of sharing research with a wider audience. I found the material about the Yamaha DX7 much more comprehensive with excellent video interviews from key figures involved in its design, such as John Chowning and Dave Bristow, as well as other important figures in the history of synthesizers like Tom Rhea. More information about the latter two, though, would be helpful to explain why they are qualified to talk about the DX7. Bristow was involved in programming its pre-sets and Rhea distributed the MiniMoog with David Van Koevering in the 1970s but this information was gleaned from Google. Cult Sounds 2.0 might include short biographies of its interviewees and remove some glaring typos: Zapp’s ‘I Heard it through the Grapewine’? Berny Worrell? Jimmy Hendricks?
In offering a critical position, I would like to highlight three conceptual problems that might be addressed and improve this site as a tool for researchers and non-academics. The first relates to issues around realism and ideas about the authenticity of reproduced sounds in popular music. The page about the Hand Clap sound introduces a problematic distinction between ‘real’ hand claps that were used in records like Martha and the Vandella’s ‘Heat Wave’ (1963) and electronic hand claps that could be produced using drum machines in the 1980s. The sounds of clapping hands in popular music are heavily mediated by recording technologies; should these be considered more real than the electronic sounds of the Linn LM-1, which contained the digitally sampled sounds of ‘real’ hand claps? The second conceptual problem is the way in which the site maps the relationship between instruments, sounds, and genre. We are told that ‘the Roland TR-808 bass drum sound stands for Electronic Dance Music’. It has been widely used in the making of dance music but the instrument and its sounds are synonymous with many other things. What about its early adoption by Yellow Magic Orchestra in the early 1980s or its use by hip-hop producers as a ‘speaker destroyer’? Like the advice of STS scholars to ‘follow the instruments’, it might have been better to ‘follow the sounds’ and acknowledge the ways they have been used across different musical worlds.

My final point relates to the focus on these cult and significant sounds and their use only in the US Billboard charts. It is important to know that the Yamaha DX7 was used in recordings by Phil Collins, Whitney Houston, and Luther Vandross but skewing the analysis towards commercially successful acts excludes non-professional users. What sounds did amateur musicians make with these instruments, for example? A study of their use in popular music would be improved by studying their use by less popular musicians as well.
*Cult Sounds* is a valuable resource for anyone trying to understand the social shaping of musical instruments and how the sounds of popular music have changed over the last sixty years. It raises interesting questions about key sounds and the instruments used to make them: What makes certain sounds iconic? How do the listeners of popular music hear these sounds? How should the sounds of popular music be treated by Sound Studies scholars? What knowledge do we need when writing about the sounds of popular music? Some scholars have suggested that the vocabulary of those working in the field of Popular Music Studies (PMS) needs to be extended. Writing about the discourse of audio engineering and terms such as delay, reverb, and vocoding, Eliot Bates states: “It is impossible to understand the very materiality [of music], let alone the very existence of recorded music itself, without having at least a basic familiarity of the phenomena indexed by each of these terms” (2013, 24). His list could be extended to include double tracking, sidechain compression, filtering, and other sounds covered on *Cult Sounds*. In the same way, though, that McClary & Walser ([1988] 1990) highlighted how listeners cannot tell the difference between particular notes, many fans (and scholars) of popular music do not use these terms. *Cult Sounds* helped me understand them better but the learning of this language requires a greater range of online and offline resources. Do we need a *Keywords of Recorded Music? Recorded Music: The Key Concepts*? This website, and any updated material, will be part of the toolkit that will help students, scholars, and fans explore the relationship between instruments and their sounds.

**REFERENCES**


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