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Brian Moore and the Sound of Music

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For many auditory researchers, music is cited as a strong motivator for first entering the field. Brian Moore is an excellent example. His undergraduate days at Cambridge spent playing in bands (along with, presumably, some studying) led to a lifelong fascination with guitars and other stringed instruments, as his impressive home collection attests. My entry into the world of auditory perception came through studying music and sound recording with an undergraduate research project spent at the BBC Research Department in Kingswood, Warren, running some perceptual evaluations of contenders for what would become the MP3 standard. I like to think it was the audio engineering background that gained me access to Brian's lab as a fresh new PhD student in 1992, rather than Brian’s pressing need for a new pianist in his jazz band. Either way, I am very grateful for his thoughtful, rigorous, and kind mentorship throughout my PhD time and ever since.

Trained in classical piano, I hadn't played much jazz before joining Brian's band, which may explain my concentrated and slightly nervous expression in the photo (Figure 1), taken at a garden party at Wolfson College in Cambridge, where Brian has now been a fellow for over 40 years. In addition to contributing his guitar talents to college events, Brian was also an active member of the Wolfson College Choir for many years, under the direction of Lynette Alcántara. The next photo (Figure 2) shows him in the chorus of a semi-staged production of Purcell’s Dido and Aeneas. I was the harpsichordist for that performance, as well as being the regular choir accompanist during my three years at Wolfson. Clearly, by the end of that time, Brian’s patience with amateurs at the keyboard had worn thin, as after I left, he endowed a very generous music scholarship at Wolfson to support future student accompanists for the choir.



Figure 1. Brian Moore's jazz band providing the entertainment at a Cambridge garden party.



Figure 2. Brian Moore (center back) lending his voice to the chorus in a performance of Purcell's Dido and Aeneas.

From a professional perspective, Brian's interest in music-related topics goes back to the very beginning of his research career. Indeed, his first-ever publication[1] was on pitch perception, and incidentally has the combination of theoretical insight and focus on potential clinical applications that have distinguished his entire career. More direct links to music came through his study of musicians' auditory perception. Together with an undergraduate student at the time, he confirmed an earlier observation[2] that musicians were better able to hear out a single pure tone in the presence of other competing tones.[3] However, reasoning that it seemed unlikely that peripheral frequency

selectivity was different in musicians, he coupled the original paradigm with a notched-noise masking experiment. The results showed that auditory filter shapes were indeed no different in musicians than non-musicians and that the seemingly better frequency selectivity exhibited with the earlier tonal stimuli were likely due to musicians' superior analytic listening abilities with complex tone mixtures, rather than enhanced peripheral frequency selectivity – a finding that was supported in later studies.[4] He revisited the topic more recently after the unlikely claim was made that cochlear tuning at 4 kHz (but not below) was sharper in musicians than non-musicians.[5] Noting the relatively small number of participants in the original study, and the lack of prior support for the claim, Brian carried out a series of experiments, comparing various measures of peripheral tuning via psychoacoustic masking, and showed convincingly that none of them provided any evidence that musicians' frequency selectivity was sharper than that of non-musicians, even at 4 kHz.[6]

Moving from musicians to their tools, Brian's interest in musical instruments has also resulted in several interesting papers that are less well known to the audiological and psychoacoustic communities. Through a collaboration with Claudia Fritz and Cambridge colleagues Jim Woodhouse and Ian Cross, Brian was involved in studying the perception of player- and instrument-related properties of violin tones,[7,8] aspects that had previously only been studied in terms of their physical acoustic properties. Most interestingly, Brian was also involved in an early study of how perceptually salient certain aspects of violin construction were,[9] a study that eventually led to publications that came to the startling conclusion that professional violinists were not able to reliably identify, and did not prefer, famous 17th-century violins (including those of Stradivarius) over high-quality modern instruments.[10,11]

Brian, of course, has many other strings to his bow beyond psychoacoustics and music, not least of which is an extensive knowledge of wines, which he puts to good use as the current wine steward of Wolfson College. Some of my fondest memories of Cambridge are from the formal halls at Wolfson (Figure 3), and I am sure things have only improved since Brian was put in charge of supplying the libations. I have Brian to thank for encouraging me to enter the field of psychoacoustics, and for providing me with support and encouragement throughout my PhD time and beyond. No matter what your opinion regarding the general effects of musical training on perceptual and cognitive

skills or educational attainment, in my case piano lessons certainly paid off.



Figure 3 Brian Moore and the author at a formal hall in Wolfson College, Cambridge, ca. 1993.

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