

## MUSIC LEARNING: THE CREATION OF MULTIPLE INPUT AND OUTPUT LINKS

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Performing a piece of music is an extremely complex task involving the co-ordination of multiple input and output systems. The musical input may be, for instance, visual (the note on the staff), aural (the sounded event), imagined, or semantic (note name). The musical output may be the performance on the instrument on which it was learned, another instrument, sung, imagined, written, note names given etc.

At the beginning of learning, music performance may involve only one simple link between one input and one output mode, and thus not involve other types of representation or abstract knowledge. However, as musical expertise increases, so do the links between the different input and output modes, leading to an integrated mental representation of the music. The creation of this mental representation obviously involves the input and output dimensions used while learning the piece, but also many other types of musical knowledge and skill. Indeed the resulting abstract mental representation is probably independent of either the specific input and output modes.

We will investigate the hypothesis that the nature of a musician's mental representation of a particular piece of music, or indeed music in general, depends on the way in which s/he has learned the particular piece, but more importantly on the way in which s/he has learned music. More specifically, different musical teaching techniques reinforce links between particular input and output representations. Each musician's mental representation will therefore reflect the particular links that have been reinforced over the years (and of course those that have been neglected).