



5. Activating muscle through KMI – *Embodima*™ gesture

This is all original work using motor imagery precepts to create a lexicon of motor training gestures for singing teachers to use. This work is the sole copyright of Nicola Harrison 2019. No part of this series can be used in any way without prior permission from the author.

In the second of the series Kinaesthetic Motor Imagery was defined as *the accurate imagining of physical movement that is also felt* (KMI). Because the action of most of the muscles of singing cannot be seen or consciously accessed by the singer, and the coordination of them is so complex, a further tool is required to communicate to the brain which specific muscles require activation at any given part of the vocal exercise.

So how do we prompt KMI? The tool that has been devised to prompt KMI is *Embodima*™, a set of *moving hand gestures* for singers. Each gesture has a defined meaning which accurately conveys an idea from teacher to student. After the transference of the idea, this pattern of activity will remain in the student's '*motor memory*' (see previous article). By '*motor*' memory we mean a pattern of muscle activation that is stored in the brain. This is made up of the sensations produced within the body when the action is carried out. This type of sensation is known as **proprioception**¹. Once the pattern of motor activity is established in the brain, it can then be recalled by referencing that particular gesture. *

Once the gesture is integrated, the change is extremely swift and is therefore useful for replacing entrenched difficulties created by poor technique. It is also of great value in vocal rehabilitation.

In vocal pedagogy, the use of imagery has often been derided as magical thinking, when in fact pretty much every singing teacher has used it in some form or other. Otherwise how



could we begin to describe that which is not seen or felt? Imagery's poor reputation has arisen from misunderstanding as to its appropriate and effective use. Because the terms have never been universally defined or standardised, each teacher has used their own inventions, some of which may work, others of which may not. The resulting confusion has led to distrust of imagery and accusations of an unscientific basis. In actual fact, with appropriate guidance, a KMI training approach for vocalists is highly effective, well defined and open to scientific validation². Please see next article for examples.

Contributing to the poor use of imagery has been a lack of comprehension as to what an image might represent in the body. Unless an image has a physiological basis, it cannot be embodied as an idea and is therefore of little use in training the student. It is the hand gesture that allows for this embodiment to take place. By embodiment we mean the physical outcome of; gesture + KMI in the singer's muscles, body and in the sound produced.

Once the gesture has been learned physically it can be replaced by a symbol that can be written on the score. The brain recognises the symbol and the pattern of muscle activity required for the vocal task can be immediately and accurately reproduced.

Accurate, gesture -based motor images are also useful in other areas of vocal learning and performance as they distract the singer from overthinking and critical self-judgement. This allows for a more holistic, artistic and integrated approach.

¹ Watson AHD. 2009. The biology of musical performance and performance-related injury. Lanham, Md.: Scarecrow Press.

² Moorcroft L, Kenny DT, Oates J. 2015. Vibrato changes following imagery. J Voice 29(2):182-190.

*NOTE: * there is no precedent for using this form of imagery for training muscle in any discipline. It is entirely singer-based.*