Arts and Minds Seminar, October 2009

Arts and Minds autumn seminar took place once again in the beautiful setting of the Fitzwilliam Museum, as part of Cambridge University's *Festival of Ideas*. A capacity audience heard our distinguished speaker, Professor Paul Robertson, talk about '*The Secret Language of Music' – How contemporary research is revealing a universal musicality that underpins our Identity, Social Communication, Well-being and Health.* Professor Robertson is Visiting Professor of Health & Music at the Medical School, Peninsula University, Plymouth, founder leader of the renowned Medici String Quartet, and established his own charity, the *Music Mind Spirit Trust*.

He started by emphasising the importance of music for good health and mental well-being. Along with the other arts it is a fundamental part of holistic care, offering enormous benefits. Too often seen as 'icing on the cake', it should be included as a fundamental part of the therapeutic process, and 'on prescription' by GPs.

Professor Robertson went on to describe his personal belief; that music creates a 'map' of our cultural life and what we believe, which in turn enhances and supports learning through hearing and listening. Research shows that a patient's response to music can lead to a reduction in medication. Humans are largely unaware that they are tuned in to music in an internal and external pattern of beauty. Music underlies the part of the brain that supports the spoken word, and a response to music precedes speech. Moreover, auditory reactions develop quickly as an all-body experience, with the effects of other senses developing later. Babies *in utero* respond to music from the age of 24 weeks; young babies are better able to recognise wrong notes than are adults.

Music taps into keys of emotion at a profound and unconscious level, and without people being aware it can be used to inform and shape feelings. In one step it can take us into a subliminal and emotional world. Memory and relationships underlie communication, and researcher Pam Heaton has shown that music can be used to help people with autism, whose emotional response to music is as perfect as that of people without autism. It is significant that most *savants* are blind, and that profoundly deaf musicians are able to tune their instrument via sensation through their fingers.

All cultures have similar, basic rhythmic structures in their music. Mothers cooing at their new baby are teaching emotion and the beginning of language; it has even been suggested that babies encourage their parent to sing by rewarding them with a response. Music draws people into 'entrainment', creating a physiological empathy which shapes experience and levels of arousal. A concert audience tends to breathe and pulse with the performers and the performers with each other. In Germany Dr Ralph Spintge uses music, some of it specially composed to create the optimum conditions, when operating on patients. He has discovered that they need less anaesthetic if they first listen to soothing music; indeed some procedures are now undertaken without any anaesthetic - previously unthinkable. He believes that it is the rhythmic components of music that are the most effective and that the potency of music actively to change the physiological state goes beyond mere distraction.

Professor Robertson has not fully recovered from a serious stroke, which left him in a coma for several months, but he was able, nevertheless, to conclude his fascinating talk with a moving performance of a Bach Partita on his 18th century violin.

There were more questions than could be fitted into the remaining time available. These included: 1. The importance of key in music: It is increasingly likely that everybody is born with perfect pitch, which is linked to ability with spoken language. 2. Whether music can calm the agitation of Alzheimer's sufferers: Music can reach in and have an effect because it is the first experience to be assimilated and the last to be affected by the progression of the illness. 3. Whether music can affect mood in somebody with manic depression: Professor Robertson said that Kay Jameson, a researcher in this field and herself a sufferer, has described unconscious levels of arousal through music, and believes the right sort of music could be used to adjust levels of mood. 3. Whether loud music affects hearing: It does so at high levels and causes damage - there are natural limits. Violinists can develop left ear hearing loss from their instrument. But the researcher Professor Tomatis believed that as hearing loss occurs cognitive ability increases to compensate.