

Abstract Submitted
for the MAR06 Meeting of
The American Physical Society

Let physics substantiate music and music enhance physics- give principle to the other disciplines. HUI-YIING CHANG, Texas State University — A conventional practice in K-12 education is to synchronize the arts and the sciences. Physics, traditionally been considered the mother of the sciences, and music, the mother of the arts, are interdependent and help to establishing a complete understanding of the other disciplines. Intense musical expression is attained when progression aims towards infinity. Motions are made in curves across time, imitating physical phenomena. The meaning of each element is enhanced according to the relative duration and dynamics of its context. Complete musical expression considers the three dimensions of space- length, breadth and height- and the three dimensions of time- past, present and future when balancing the instrumental parts and developing the structural elements. Overall, equilibrium is sought for like gravitational forces as expressed in equations. In learning processes, sensing precedes reasoning. Music attunes one to sensitive reactions towards the environment while physics substantiates the concepts by imposing a hierarchical order, the highest form of which is elegantly beautiful and most effectively expressed in music.

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Date submitted: 28 Nov 2005

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