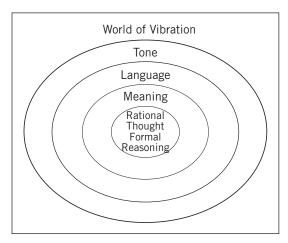
# The Profound Influence of Music on Life

by Andrew Pudewa



From: Music's Gifts to the Developing Mind (CD set)

**Musikgarten** (800) 216-6864 www.musikgarten.org Early childhood music teacher training, curriculum, and instruments

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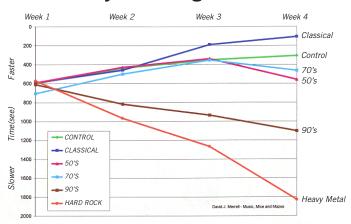
### RESEARCH FACTS OVERVIEW

- College students temporarily improved spatial-temporal IQ scores by 8-10 points after listening to Mozart, when compared with relaxation music and no music. (1)
- Preschool children given six months of keyboard instruction increased spatial-temporal IQ scores by an average of 46% over other supplemental instruction (singing, computer, free play). (2)
- Human attitudes change with music; hostility, fatigue, sadness & tension decrease with classical and "designer" music, but dramatically increase with "grunge rock."(3)
- Plants exposed to classical music flourished while those exposed to rock and heavily percussive music were less healthy and turned away from the source of sound, many finally dying. (4)
- Mice exposed to Strauss waltzes showed increased and orderly neuron development, while those exposed to "disharmonic" non-synchronized drum beats showed erratic and pathological growth of neurons. (5)
- Rats exposed to Mozart music from before birth to 60 days old were able to learn mazes over twice as fast as those with no music, whereas rats exposed to repetitive "minimalist" music were unable to navigate mazes at all. (6)
- Mice exposed for 3 weeks to Mozart were able to run mazes significantly faster than mice with no music, and mice exposed to other forms of music—70's, 50's, 90's and "heavy metal" all performed worse than the control group. (7)

Charts from David Merrell's science fair mice experiments:

# Overall Learning Overall Learning

# **Summary of Average Time Trials**



### RESEARCH CITED - PRIMARY SOURCES

## **Experiment with College Students and Listening:**

1. "Listening to Mozart enhances spatial-temporal reasoning: Towards a neurophysiological basis" (Rauscher, Shaw, Ky) *Neuroscience Letters*, #185, 1995, (pp. 44-47)

### **Experiment with Preschool Children and Music Instruction:**

2. "Music training causes long-term enhancement of preschool children's spatial-temporal reasoning" (Rauscher, Shaw, Levine, Wright, Dennis, Newcomb) *Neurological Research*, Volume 19, No. 1, February 1997 \*

# **Experiment on Mood:**

3. "The effects of different types of music on mood, tension and mental clarity" (McCraty, Barrios-Choplin, Atkinson, Tomassino) *Alternative Therapies*, Volume 4, No. 1, January 1998

# **Experiments with Plants:**

4. *The Sound of Music and Plants*, by Dorothy L. Retallack (out of print, but summaries of her work are contained in *The Secret Life of Plants*, by Peter Tomkins and Christopher Bird, HarperCollins, 1989, ISBN: 0060915870)

# **Experiments with Rats and Mice:**

- 5. "Neural plasticity of mus musculus in response to disharmonic sound" (Gervasia Schreckenberg & Harvey H. Bird) *Bulletin of the New Jersey Academy of Science*, Volume 32, No. 2, pp. 77-86, Fall 1987
- 6. "Improved maze learning through early music exposure in rats" (Rauscher, Robinson, Jens) Neurological Research, Volume 20, No. 5, 1998 \*
- 7. Music, Mice & Mazes: "The Classic/Rock Run" (1996, David Merrell, Virginia State Science Fair) Music, Mice & Mazes: "Changes Through the Ages" (1997, David Merrell, Nansemond River High School, Suffolk, VA)

### BIBLIOGRAPHY AND ADDITIONAL RESOURCES

https://www.musicandthebrain.org/news-articles-and-research-papers

Ability Development from Age Zero by Shinichi Suzuki

Amusing Ourselves to Death by Neil Postman (Penguin Books anv. edition 2005)

Crisis in Christian Music by Jack Wheaton (Hearthstone Publishing, 2000)

The Mozart Effect by Don Campbell (William Morrow & Co., October 1997)

"Rock music: An ethical evaluation" (Andrew L. Minto) Pastoral and Homiletic Review, April 1990

Striving for Excellence (audiotape set), IBLP, Box One, Oak Brook, IL 60522

Rock-n-Roll Sorcerers of the New Age Revolution (DVD) Goodfight Ministries, www.goodfight.org

A very extensive collection of summaries on music and academic performance, research, commentary http://www.edu-cyberpg.com/Music/musicsmart.html

MuSICA: Music and Science Information Computer Archive www.musica.uci.edu

<sup>\*</sup>Reprints of Neurological Research are available at www.tandfonline.com.