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The Cognitive continuum of electronic music

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BIBLIOGRAPHY

- Adorno, T. W. 1997. *Aesthetic Theory*. Gretel Adorno and Rolf Tiedemann (eds.). Translated by Robert Hullot-Kentor. University of Minnesota Press, Minneapolis, US.
- Amador, A., Margoliash, D. 2013. “A Mechanism for Frequency Modulation in Songbirds Shared with Humans”. *The Journal of Neuroscience* 33(27): 11136-11144.
- Ashline, W. L. 1995. “The Problem of Impossible Fictions”. *Style* 29(2): 215-234.
- Bal, M. 1997. *Narratology: Introduction to the Theory of Narrative*. Second Edition. University of Toronto Press, Toronto, Canada.
- Ballas, J. A., Howard, Jr., J. H. 1987. “Interpreting the Language of Environmental Sounds”. In *Environment and Behavior* 19(1): 91-114.
- Ballas, J. A., Mullins, T. 1991. “Effects of Context on the Identification of Everyday Sounds”. *Human Performance* 4(3): 199-219.
- Ballas, J. A. 1993. “Common Factors in the Identification of an Assortment of Brief Everyday Sounds”. *Journal of Experimental Psychology: Human Perception and Performance* 19(2): 250-267.
- Bar, M. 2004. “Visual Objects in Context”. *Nature Reviews, Neuroscience* 5(8): 617-629.
- Barsalou, L. W. 1999. “Perceptual Symbol Systems”. *Behavioral and Brain Sciences* 22(4): 557-609.
- Barrett, R. 2012. Personal communication on 29 May 2012.
- Barrett, R. 2013. Personal communication on 13 September 2013.
- Bartlett, J. C. 1977. “Remembering environmental sounds: the role of verbalization at input”. *Memory & Cognition* 5(4): 404-414.
- Basanta, A. 2013. “Tracing Conceptual Structures in Listener Response Studies”. *eContact!* 15(2). Accessed 2 July 2014 at http://cec.sonus.ca/econtact/15_2/basanta_listenerresponse.html
- Beaudoin, R. 2007. “Counterpart and Quotation in Ussachevsky’s *Wireless Fantasy*”. *Organised Sound* 12(2): 143-151.
- Bertelsen, L., Murphie, A. 2010. “An Ethics of Everyday Infinities and Powers: Félix Guattari on Affect and the Refrain”. In Melissa Gregg and Gregory J. Seigworth (eds.), *The Affect Theory Reader*: 138-160. Duke University Press, Durham, US.

- Bhatara, A., Tirovolas, A. K. et al. 2011. "Perception of Emotional Expression in Musical Performance". *Journal of Experimental Psychology: Human Perception and Performance* 37(3): 921-934.
- Blacking, J. 1973. *How Musical is Man?* University of Washington Press. Seattle, WA, US.
- Boulez, P. 1986. "Technology and The Composer". In Simon Emmerson (ed.), *The Language of Electroacoustic Music*: 5-14. Macmillan Press, Houndmills, UK.
- Bradley, M. M., Lang, P. J. 2000. "Affective reactions to acoustic stimuli". *Psychophysiology*, 37(2): 204-215. Cambridge University Press, Cambridge, MA, US.
- Brazil, E., Fernström M., et al. 2009. "Exploring Concurrent Auditory Icon Recognition". *Proceedings of the 15th International Conference on Auditory Display*, Copenhagen, Denmark May 18-22, 2009.
- Bridger, M. 1989. "An approach to the analysis of electro-acoustic music derived from empirical investigation and critical methodologies of other disciplines". *Contemporary Music Review* 3(1): 145-160.
- Bridger, M. 1993. "Narrativisation in Electroacoustic and Computer Music - Reflections on Empirical Research into Listeners' Response". *Proceedings of the International Computer Music Conference 1993*, Tokyo, Japan: 296-299.
- Brown, S., Merker, B. et al. 2000. "An Introduction to Evolutionary Musicology". In Nils L. Wallin, Björn Merker and Steven Brown (eds.), *The Origin of Music*. MIT Press, Boston, US.
- Bunia, R. 2010. "Diegesis and Representation: Beyond the Fictional World, on the Margins of Story and Narrative." *Poetics Today* 31(4): 679-720.
- Cage, J. 2004. "The Future of Music: Credo". In Christopher Cox and Daniel Warner (eds.), *Audio Culture: Readings in Modern Music*: 25-28. Continuum, New York, US.
- Caramazza, A., Shelton J. R. 1998. "Domain-Specific Knowledge Systems in the Brain: The Animate-Inanimate Distinction". *Journal of Cognitive Neuroscience* 10(1): 1-34.
- Chadabe, J. 1996. *Electric Sound: The Past and Promise of Electronic Music*. Prentice Hall, New Jersey, US.
- Chapin, H., Jantzen, K., et al. 2010. "Dynamic Emotional and Neural Responses to Music Depend on Performance Expression and Listener Experience". *PLoS ONE* 5(12): 1-14.
- Chion, M. 1994. *Audio-Vision: Sound on Screen*. Edited and translated by Claudia Gorbman. Columbia University Press, New York, US.
- Chowning, J. M. 1977. "The Simulation of Moving Sound Sources". *Computer Music Journal* 1(3): 48-52.
- Coker, W. 1972. *Music and Meaning: A Theoretical Introduction to Musical Aesthetics*. The Free Press, New York, US.

- Cross, I. 2010. "The Evolutionary Basis of Meaning in Music: Some Neurological and Neuroscientific Implications". In Frank Clifford Rose (ed.), *The Neurology of Music*: 1-15. Imperial College Press, London, UK.
- Cummings, A., Čeponienė, R., et al. 2006. "Auditory semantic networks for words and natural sounds". *Brain Research* 1115(1): 92-107.
- Curtis, M. E., Bharucha J. J. 2010. "The Minor Third Communicates Sadness in Speech, Mirroring Its Use in Music". *Emotion* 10(3): 335-348.
- Çamcı, A. 2012. "A Cognitive Approach to Electronic Music: Theoretical and Experiment-based Perspectives." *Proceedings of the International Computer Music Conference 2012*, 9-15 September 2012, Ljubljana, Slovenia: 1-4.
- Çamcı, A. 2013. "Diegesis as a Semantic Paradigm for Electronic Music". *eContact!* 15(2). Accessed 15 June 2013 at http://cec.sonus.ca/econtact/15_2/camci_diegesis.html
- Çamcı, A., Erkan K. 2013. "Interferences Between Acoustic Communication Threads in Enclosed Social Environments of Istanbul". *Soundscape: Journal of Acoustic Ecology* 12(1): 20-24.
- Dack, J. 1999. "Karlheinz Stockhausen's Kontakte and Narrativity". *eContact!* 2(2). Accessed 10 May 2010 at <http://cec.sonus.ca/econtact/SAN/Dack.htm>
- Delalande, F. 1998. "Music Analysis and Reception Behaviours: *Sommeil* by Pierre Henry". *Journal of New Music Research* 27(1-2): 13-66.
- Deleuze, G. 2003. *Francis Bacon: the logic of sensation*. Translated by Daniel W. Smith. Continuum, London, UK.
- Deleuze, G., Guattari, F. 1994. "Percept, Affect, and Concept". In Clive Cazeaux (ed.), *The Continental Aesthetics Reader*: 465-488. Routledge Publishing, New York, US.
- Demers, J. 2010. *Listening Through Noise, The Aesthetics of Experimental Electronic Music*. Oxford University Press, New York, US.
- Depew, D. J. 2003. "Baldwin and His Many Effects". In Bruce H. Weber and David J. Depew (eds.), *Evolution and Learning: The Baldwin Effect Reconsidered*: MIT Press, Cambridge, MA, US.
- Deutsch, D. 1980. "The Processing of Structured and Unstructured Tonal Sequences". *Perception and Psychophysics* 28(5): 381-389.
- Doornbusch, P. 2013. *A Chronology/History of Electronic and Computer Music and Related Events 1900-2013*. Accessed 20 June 2013 at <http://www.doornbusch.net/chronology/>
- Dubois, D. 2000. "Categories as Acts of Meaning: The Case of Categories in Olfaction and Audition". *Cognitive Science Quarterly* 1(1): 35-68.
- Dubois, D., Guastavino, C., et al. 2006. "A Cognitive Approach to Urban Soundscapes: Using Verbal Data to Access Everyday Life Auditory Categories". *Acta Acustica United with Acustica* 92(6): 865-874.

- Ekkekakis, P. 2012. "Affect, Mood, and Emotion". In Gershon Tenenbaum, Robert C. Eklund and Akihito Kamata (eds.), *Measurement in Sport and Exercise Psychology*: 321-332. Human Kinetics, Champaign, IL, US.
- Eitan, Z., Granot, R. Y. 2004. "How Music Moves: Musical Parameters and Listeners' Images of Motion". *Music Perception* 23(3): 221-247.
- Emmerson, S. 1986. "The Relation of Language to Materials". In Simon Emmerson (ed.), *The Language of Electroacoustic Music*: 17-40. Macmillan Press, Houndmills, UK.
- Field, A. 2000. "Simulation and reality: the new sonic objects". In Simon Emmerson (ed.), *Music, Electronic Media and Culture*: 36-55. Ashgate Publishing, Burlington, VT, US.
- Frisk, H., Östersjö, S. 2006. "Negotiating the Musical Work. An empirical study on the interrelation between composition, interpretation and performance" *Proceedings of Electroacoustic Music Studies Network (EMS) Conference 2006*, Beijing, China.
- Fraisse, P. 1963. *The Psychology of Time*. Harper & Row, New York, US.
- Gaver, W. W. 1993a. "What in the world do we hear? An ecological approach to auditory source perception". *Ecological Psychology* 5(1): 1-29.
- Gaver, W. W. 1993b. "How Do We Hear in the World?: Explorations in Ecological Acoustics". *Ecological Psychology* 5(4): 285-313.
- Genette, G. 1969. "D'un Récit Baroque". In *Figures II*: 194-222. Éditions du Seuil, Paris, France.
- Genette, G. 1980. *Narrative Discourse*. Translated by Jane E. Lewin. Cornell University Press, New York, US.
- Gibson, J.J. 1963. "The Useful Dimensions of Sensitivity". *American Psychologist* 18(1): 1-15.
- Gibson, J. J. 1966. *The Senses Considered as Perceptual Systems*. Greenwood Press, Connecticut, US.
- Gibson, J.J. 1986. *The Ecological Approach to Visual Perception*. Psychology Press, Taylor & Francis Group, New York, US.
- Godøy, R. I. 2006. "Gestural-Sonorous Objects: embodied extensions of Schaeffer's conceptual apparatus". *Organised Sound* 11(2): 149-157.
- Goldstein, E. B. 1981. "The Ecology of J.J. Gibson's Perception". *Leonardo* 14(3): 191-195.
- Gorbman, C. 1980. "Narrative Film Music". *Yale French Studies* 60: 183-203.
- Gritten, A., King, E. 2006. "Introduction". In Anthony Gritten, Elaine King (eds.), *Music and Gesture*: xix-xxv. Ashgate Publishing, Burlington, VT, US.
- Guastavino, C. 2007. "Categorization of Environmental Sounds". *Canadian Journal of Experimental Psychology* 61(1): 54-63.

- Gussenhoven, C. 2002. “Intonation and interpretation: Phonetics and Phonology”. *Proceedings of the First International Conference on Speech Prosody*, 11–13 April 2012, Aix-en-Provence, France: 47-57.
- Gygi, B., Kidd G. R., et al. 2004. “Spectral-temporal factors in the identification of environmental sounds”. *Journal of the Acoustical Society of America* 115(3) March 2004: 1252-1265.
- Gygi, B., Kidd, G. R., et al. 2007. “Similarity and categorization of environmental sounds”. *Perception & Psychophysics* 69(6): 839-855.
- Hatten, R. S. 2003. *Musical gesture: Theory and Interpretation*. Course description, Indiana University. Accessed 12 April 2014 at http://www.indiana.edu/~deanfac/blfal03/mus/mus_t561_9824.html
- Hatten, R. S. 2006. “A Theory of Music Gesture and its Application to Beethoven and Schubert”. In Anthony Gritten, Elaine King (eds.), *Music and Gesture*: 1-4. Ashgate Publishing, Burlington, VT, US.
- Hayward, S. 2006. *Cinema Studies: The Key Concepts*. 3rd edition. Routledge, New York, US.
- Herman, D. 2009. *Basic Elements of Narrative*. Wiley-Blackwell, West Sussex, UK.
- Hill, A. 2013. “Understanding Interpretation, Informing Composition: audience involvement in aesthetic result”. *Organised Sound* 18(1): 43-59.
- Holmes, T. 2008. *Electronic and Experimental Music, Technology, Music and Culture*. 3rd edition. Routledge, New York, US.
- Howard, V. A. 1972. “On Representational Music”. *Noûs* 6(1): 41-53.
- Huron, D. 2006. *Sweet Anticipation, Music and the Psychology of Expectation*. The MIT Press, Cambridge, MA, US.
- Iazzetta, F. 2000. “Meaning in Musical Gesture”. In Marcelo M. Wanderley and Marc Battier (eds.), *Trends in Gestural Control of Music*: 259-268. IRCAM-Centre Pempidou, Paris, France.
- Jekosch, U. 2005. “Assigning meaning to Sounds – Semiotics in the Context of Product-Sound Design”. In Jens Blauert (ed.) *Communication Acoustics*: 193-221. Springer-Verlag Berlin Heidelberg, Germany.
- Jenkins, J. J. 1985. “Acoustic Information for Objects, Places, and Events”. In William H. Warren, Jr. and Robert E. Shaw (eds.), *Persistence and change: Proceedings of the First International Conference on Event Perception*. Lawrence Erlbaum Associates, New Jersey, US.
- Jensenius, A. R. 2007. *ACTION – SOUND: Developing Methods and Tools to Study Music-Related Body Movement*. Ph.D. thesis. Department of Musicology, University of Oslo, Norway.
- Juslin, P. N., Västfjäll, D. 2008. “Emotional responses to music: The need to consider underlying mechanisms”. *Behavioral and Brain Sciences* 31, 2008: 559-621.
- Kendall, G. S. 2010. “Meaning in Electroacoustic Music and the Everyday Mind”. *Organised Sound* 15(1): 63-74.

- Kramer, J. D. 1978. "Moment Form in the Twentieth Century Music". *The Musical Quarterly* 64(2): 177-194.
- Krause, B. 2012. *The Great Animal Orchestra: Finding the Origins of Music in the World's Wild Places*. Profile Books, London, UK.
- Kuhns, R. 1978. "Music as a Representational Art". *British Journal of Aesthetics* 18(2): 120-125.
- Lakoff, G., Johnson, M. 2003. *Metaphors We Live By*. 2nd edition. University of Chicago Press, Chicago, US.
- Landy, L. 2007. *Understanding the Art of Sound Organization*. The MIT Press, Cambridge, MA, US.
- Langer, S. K. 1957. *Philosophy in a New Key: A Study in the Symbolism of Reason, Rite, and Art*. The New American Library, New York, US.
- Lee, B. 1996. "Correspondence Analysis". *ViSta: The Visual Statistics System, UNC L.L. Thurstone Psychometric Laboratory Research Memorandum* 94-1(c): 63-78.
- Leman, M. 2008. *Embodied Music Cognition and Mediation Technology*. The MIT Press, Cambridge, MA, US.
- Leman, M. 2012. "Musical Gestures and Embodied Cognition". *Actes des Journées d'Informatique Musicale (JIM 2012)*, 9–11 May 2012, Mons, Belgium.
- Leydesdorff, L. 2008. "The Communication of Meaning in Anticipatory Systems: A Simulation Study of the Dynamics of Intentionality in Social Interactions". *American Institute of Physics Conference Proceedings* 1051: 33-49. Melville, NY, US.
- Lim, Y., Donaldson, J., et al. 2008. "Emotional Experience and Interaction Design". In Christian Peter and Russell Beale (eds.), *Affect and Emotion in Human-Computer Interaction: From Theory to Applications*: 116-129. Springer-Verlag Berlin Heidelberg, Germany.
- Marcell, M. M., Borella D., et al. 2000. "Confrontation Naming of Environmental Sounds". *Journal of Clinical and Experimental Neuropsychology* 22(6): 830-864.
- Marler, P. 2001. "Origins of Music and Speech: Insights from Animals". In Nils L. Wallin, Björn Merker and Steven Brown (eds.), *The Origins of Music*: 31-48. The MIT Press, Cambridge, MA, US.
- Massumi, B. 1987. "Notes on the Translation and Acknowledgements". In Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*. Translated by Brian Massumi: xvi-xix. The University of Minnesota Press, Minneapolis, US.
- Massumi, B. 2002. *Parables for the Virtual: Movement, Affect, Sensation*. Duke University Press, Durham, US.
- Massumi, B. 2010. "The Future Birth of the Affective Fact: The Political Ontology of Threat". In Melissa Gregg and Gregory J. Seigworth (eds.), *The Affect Theory Reader*: 52-70. Duke University Press, Durham, US.
- McCartney, A. S. J. 1999. *Sounding Places: Situated Conversations Through the Soundscape Compositions of Hildegard Westerkamp*. Ph.D. thesis. York University, Toronto, Canada.

- Meelberg, V. 2006. *New Sounds, New Stories: Narrativity in Contemporary Music*. Ph.D. thesis. Leiden University Press, Leiden, NL.
- Meelberg, V. 2009. "Sonic Strokes and Musical Gestures: The Difference between Musical Affect and Musical Emotion". *Proceedings of the 7th Triennial Conference of European Society for the Cognitive Sciences of Music (ESCOM 2009)*, Jyväskylä, Finland: 324-327.
- Merer, A., Ystad, S., et al. 2008. "Semiotics of Sounds Evoking Motions: Categorization and Acoustic Features". In Richard Kronland-Martinet, Sølvi Ystad, and Kristoffer Jensen (eds.), *CMMR 2007*, LNCS 4969: 139-158. Springer-Verlag Berlin Heidelberg, Germany.
- Merriam-Webster Dictionary*, Encyclopedia Britannica. Accessed 20 October 2013 at <http://www.merriam-webster.com>
- Meyer, L. B. 1956. *Emotion and Meaning in Music*. University of Chicago Press, Chicago, US.
- Miller, G. A. 2003. "The cognitive revolution: a historical perspective". *TRENDS in Cognitive Sciences* 7(3): 141-144.
- Mikkonen, K. 2011. "'There is no such thing as pure fiction': Impossible worlds and the principle of minimal departure reconsidered". *Journal of Literary Semantics* 40(2): 111-131.
- Mithen, S. 2005. *The Singing Neanderthals: The Origins of Music, Language, Mind and Body*. Harvard University Press, Cambridge, MA, US.
- Moore, B. C. J., Hedwig, G. 2002. "Factors Influencing Sequential Stream Segregation". *Acta Acustica united with Acustica* 88(3): 320-333.
- Moore, B. C. J., Hedwig, G. 2012. "Properties of Auditory Stream Formation". *Philosophical Transaction of the Royal Society B* 367(1591): 919-931.
- Nattiez, J. 1990. *Music and Discourse*. Translated by Carolyn Abbate. Princeton University Press, New Jersey, US.
- Nono, L. 1960. "The Historical Reality of Music Today". *The Score*, July 1960: 41-45.
- Novo, P. 2005. "Auditory Virtual Environments". In Jean Blauert (ed.) *Communication Acoustics*: 277-297. Springer-Verlag Berlin Heidelberg, Germany.
- Nussbaum, C. O. 2007. *The musical Representation; Meaning, Ontology, and Emotion*. The MIT Press, Cambridge, MA, US.
- Ohala, J. J. 1983. "Cross-language Use of Pitch: An Ethological View". *Phonetica* 40(1): 1-18.
- Omar, R. Henley, S. M. D., et al. 2011. "The structural neuroanatomy of music emotion recognition: Evidence from frontotemporal lobar degeneration". *NeuroImage* 56(3): 1814-1821.
- Orgs, G., Lange, K., et al. 2006. "Conceptual priming for environmental sounds and words: An ERP study". *Brain and Cognition* 62(3): 267-272.
- Oxford Dictionary of English*. 3rd Edition. Oxford University Press, 2012.

- Östersjö, S. *SHUT UP 'N' PLAY! Negotiating the Musical Work*. Ph.D. thesis. Malmö Academies of Performing Arts, Sweden.
- Özcan, E. 2008. *Product Sounds: Fundamentals & Applications*. Ph.D. thesis. Delft Technical University, Industrial Design Department, NL.
- Özcan, E., van Egmond, R. 2007. "Memory for product sounds: The effect of sound and label type". *Acta Psychologica* 126(3): 196-215.
- Özcan, E., van Egmond, R. 2009. "The effect of visual context on the identification of ambiguous environmental sounds". *Acta Psychologica* 131(2): 110-119.
- Paul, D. 1997. "Karlheinz Stockhausen By David Paul". Originally published in *Seconds* 44, 1997. Accessed 17 February 2014 at http://www.stockhausen.org/stockhausen/%20by_david_paul.html
- Pecher, D., Zeelenberg, R., et al. 2003. "Verifying Different Modality Properties for Concepts Produces Switching Costs". *Psychological Science* 14: 119-124.
- Pedersen, T. H. 2005. *The Semantic Space of Sounds: Lexicon of Sound-describing Words*. DELTA Tech. Note March 2005.
- Peirce, C. S. 1885. "On the Algebra of Logic: A Contribution to the Philosophy of Notation". *American Journal of Mathematics* 7(2): 180-196.
- Pinker, S. 2003. *The Blank Slate: The Modern Denial of Human Nature*. Penguin Books, London, UK.
- Plato. 1985. *The Republic*. Translated by Richard W. Sterling and William C. Scott. Norton, New York, US.
- Raimbault, M., Dubois, D. 2005. "Urban soundscapes: Experiences and knowledge". *Cities* 22(5): 339-350.
- Richman, B. 2001. "How Music Fixed "Nonsense" into Significant Formulas: On Rhythm, Repetition, and Meaning". In Nils L. Wallin, Björn Merker and Steven Brown (eds.), *The Origins of Music*: 301-314. The MIT Press, Cambridge, MA, US.
- Roads, C. 2001. *Microsound*. The MIT Press, Cambridge, MA, US.
- Roads, C. Forthcoming. *Composing Electronic Music: A New Aesthetic*. Oxford University Press, New York, US.
- Robindoré, B. 2005. "Forays into Uncharted Territories: An Interview with Curtis Roads". *Computer Music Journal* 29(1): 11-20.
- Rosenbloom, E. 2011. *Morton Subotnick on the Creation and Legacy of Silver Apples of the Moon*. Interview accessed 15 May 2011 at <http://www.ascap.com/playback/2011/04/wecreatemusic/p-morton-subotnick-on-the-creation-and-legacy-of-silver-apples-of-the-moon.aspx>
- Russel, J. A. 2003. "Core Affect and the Psychological Construction of Emotion". *Psychological Review* 110(1): 145-172.

- Russolo, L. 1967. "The Art of Noise: futurist manifesto, 1913". In *A Great Bear Pamphlet*. Something Else Press, New York, US.
- Ryan, M. 1980. "Fiction, Non-factuals, and the Principle of Minimal Departure". *Poetics* 9(4): 403-422.
- Salimpoor, V. N., van den Bosch, I., et al. 2013. "Interactions Between the Nucleus Accumbens and Auditory Cortices Predict Music Reward Value". *Science* 340: 216-219.
- Schafer, R. M. 1994. *Our Sonic Environment and The Soundscape: The Tuning of the World*. Destiny Books, Rochester, VT, US.
- Scherer, K. R., Oshinsky, J. S. 1977. "Cue Utilization in Emotion Attribution from Auditory Stimuli". *Motivation and Emotion* 1(4): 331-346.
- Schutz, A. 1967. *The Phenomenology of the Social World*. Translated by George Walsh and Frederick Lehnert. Northwestern University Press, US.
- Schwartz, Weaver, M. et al. 1999. "A little mechanism can go a long way". Open Peer Commentary on Barsalou's "Perceptual Symbol Systems" in *Behavioral and Brain Sciences* 22(4): 631-632.
- Seigworth, G. J., Gregg, M. 2010. "An Inventory of Shimmers". In Melissa Gregg and Gregory J. Seigworth (eds.), *The Affect Theory Reader*: 1-28. Duke University Press, Durham, US.
- Shouse, E. 2005. "Feeling, Emotion, Affect". *M/C Journal* 8(6). Accessed 06 June 2014, at <http://journal.media-culture.org.au/0512/03-shouse.php>
- Sievers, B., Polansky, L., et al. 2013. "Music and movement share a dynamic structure that supports universal expressions of emotion". *PNAS* 110(1): 70-75.
- Simoni, M. (ed.). 2006. *Analytical Methods of Electroacoustic Music*. Routledge, New York, US.
- Sloboda, J. A. 1989. "Music as a language". In Frank R. Wilson and Franz L. Roehmann (eds.), *Music and Child Development*: 28-43. MMB Music, St. Louis, MO, US.
- Smalley, D. 1996. "The listening imagination: Listening in the electroacoustic era". *Contemporary Music Review* 13(2): 77-107.
- Smalley, D. 1997. "Spectromorphology: explaining sounds-shapes". *Organised Sound* 2(2): 107-126.
- Sousa, D. P. 2008. *Nuria Schönberg-Nono: Around Music*. Interview accessed 19 May 2014 at <http://www.artenotempo.pt/en/ant-talks/nuria-schoenberg-nono>
- Spinoza, B. 1994. *A Spinoza Reader: The Ethics and Other Works*. Edited and translated by Edwin M. Curley. Princeton University Press, New Jersey, US.
- Stockhausen, K. 1962. "The Concept of Unity in Electronic Music". Translated by Elaine Barkin. *Perspectives of New Music* 1(1), Autumn 1962: 39- 48.

- Stockhausen, K. 1963. "Momentform: Neue Beziehungen zwischen Aufführungsdauer, Werkdauer und Moment". In *Texte zur Musik vol. 1: Aufsätze 1952–1962 zur Theorie des Komponierens*: 189-210. DuMont Schauberg, Cologne, Germany.
- Stockhausen, K. 1972. *Four Criteria of Electronic Music*. Lecture given at Oxford Union, Oxford, UK on 6 May 1972. Video available from <http://www.karlheinzstockhausen.org>
- Stockhausen, K. 1989. "Four Criteria of Electronic Music". In Robin Maconie (ed.), *Stockhausen on Music: Lectures and Interviews*: 88-111. Marion Boyars, New York, US.
- Stanislavski, C. 1948. *An Actor Prepares*. Translated b Elizabeth R. Hapgood. Routledge, New York, US.
- Tajadura-Jiménez, A., Västfjäll, D. 2008. "Auditory-Induced Emotion: A Neglected Channel for Communication in Human-Computer Interaction". C. Peter and R. Beale (eds.), *Affect and Emotion in HCI*, LNCS 4868: 63-74. Springer-Verlag Berlin Heidelberg, Germany.
- Taylor, H. M. "The Success Story of a Misnomer." *Offscreen: Discourses on Diegesis*, 11(8-9).
- Thagard, P. 2014. "Cognitive Science". In Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*. Accessed 12 June 2014 at <http://plato.stanford.edu/archives/fall2014/entries/cognitive-science/>
- Thomas, N. J. T. 2010. "Mental Imagery". In Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy*. Accessed 20 May 2014 at <http://plato.stanford.edu/archives/spr2014/entries/mental-imagery/>
- Toop, R. 1981. "Stockhausen's electronic works; sketches and work-sheets from 1952–1967". In *Interface Journal of New Music Research* 10(3-4): 149-197.
- Trainor, L. J., Tsang, C. D., et al. 2011. "Preference for Sensory Consonance in 2- and 4-Month-Old Infants". In *Music Perception* 20(2): 187-194.
- Trehub, S. 1999. "Human Processing Predispositions and Musical Universals". In Nils L. Wallin, Björn Merker and Steven Brown (eds.), *The Origins of Music*: 427-448. The MIT Press, Cambridge, MA, US.
- Truax, B. 1984. *Acoustic Communication*. 2nd Edition. Ablex Publishing, Norwood, NJ, US.
- Truax, B. 1996. "Soundscape, Acoustic Communication and Environmental Sound Composition". *Contemporary Music Review* 15(1): 49-65.
- Vaggione, H. 2001. "Some Ontological Remarks about Music Composition Processes". *Computer Music Journal* 25(1), March 2001: 54-61.
- VanDerveer, N. J. 1979. *Ecological Acoustics: Human Perception of Environmental Sounds*. Ph.D. thesis. University Of Cornell, Ithaca, NY, US.
- Van Petten, C., Rheinfelder, H. 1995. "Conceptual Relationships Between Spoken Words and Environmental Sounds: Event-related Brain Potential Measures. *Neuropsychologia* 33(4): 485-508.

- Varèse, E., Wen-chung, C. 1966. "The Liberation of Sound". *Perspectives on New Music* 5(1): 11-19.
- Vigliocco, G., Vinson, D. P., et al. 2002. "Semantic distance effects on object and action naming". *Cognition* 85(3): B61-B69.
- Vines, B. W., Krumhansl, C. L., et al. 2011. "Music to my eyes: Cross-modal interactions in the perception of emotions in musical performance". *Cognition* 118(2): 157-170.
- Walton, K. 1994. "Listening with Imagination: Is Music Representational?" *The Journal of Aesthetic and Art Criticism* 52(1): 47-61.
- Warren Jr., W. H., Kim, E. E., et al. 1987. "The way the ball bounces: visual and auditory perception of elasticity and control of the bounce pass". *Perception* 16(3), 1987: 309-336.
- Weale, R. 2006. "Discovering How Accessible Electroacoustic Music Can Be: The Intention/Reception Project". *Organised Sound* 11(2): 189-200.
- Windsor, L. 1995. *A Perceptual Approach to the Description and Analysis of Acousmatic Music*. Ph.D. thesis. Department of Music, University of Sheffield, UK.
- Windsor, L. 2000. "Through and around the acousmatic: the interpretation of electroacoustic sounds". In Simon Emmerson (ed.), *Music, Electronic Media and Culture: 7-35*. Ashgate Publishing, Burlington, VT, US.
- Wishart, T. 1986. "Sound Symbols and Landscapes". In Simon Emmerson (ed.), *The Language of Electroacoustic Music: 41-60*. Macmillan Press, Houndmills, UK.
- Wishart, T. 1996. *On Sonic Art*. Simon Emmerson (ed.). Harwood Academic Publishers, Amsterdam, NL.
- Wurmfeld, S. 1993. "Presentational Painting". In *Catalogue for The Art Gallery, Hunter College, MFA Building*, October 20-November 20 1993.
- Xenakis, I. 1992. *Formalized Music: Thought and Mathematics in Composition*. Edited by Sharon Kanach. Pendragon Press, Stuyvesant, NY, US.
- Zampronha, E. 2005. "Gesture in Contemporary Music: On The Edge Between Sound Materiality and Signification". In *Transcultural Music Review* 9.
- Zoble, E. J., Lehman, R. S. 1969. "Interaction of Subject and Experimenter Expectancy Effects in A Tone Length Discrimination". *Behavioral Science* 14(5): 357-363.

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