CURRICULUM VITAE ALBERT S. BREGMAN

Revised March 19, 2016

Office Address: Department of Psychology

1205 Dr. Penfield Avenue

Montreal, Quebec Canada H3A 1B1

Telephone: (514) 398-6103 Facsimile: (514) 484-2592

Electronic mail: al.bregman@mcgill.ca

BIOGRAPHICAL INFORMATION

Citizenship: Canadian

Education

B.A., 1957 University of Toronto, The General Course (Ethics)

M.A., 1959 University of Toronto, Psychology

Ph.D., 1963 Yale University, Psychology

Academic and Research Positions Held:

1999-	Post-retirement appointment at rank of Emeritus Professor, Department of Psychology, McGill University
1976-1999	Professor, Department of Psychology, McGill University
1969-1976	Associate Professor, Department of Psychology, McGill University
1965-1969	Assistant Professor, Department of Psychology, McGill University
1963-1965	Instructor, Department of Psychology, Harvard University
1962-1965	Research Associate, Center for Cognitive Studies, Harvard University

HONOURS AND AWARDS

Listed in

Who's Who in Science, Canadian Who's Who.

- 2012 Oueen Elizabeth II Diamond Jubilee Medal
- 2004 Donald O. Hebb Award for Distinguished Contributions to Psychology as a Science. Canadian Psychological Association
- 1995 Fellow of the Royal Society of Canada
- Jacques Rousseau medal for interdisciplinary contributions. Acfas. Formerly called Association canadienne-française pour l'avancement des sciences (French Canadian Association for the Advancement of Science), currently called Association francophone pour le savoir (French Speakers' Association for Knowledge).

1984-1986

Killam Research Fellow (Canada Council) Salary replacement for two years to support the writing of the book, *Auditory Scene Analysis*.

- 1984 Fellow, American Psychological Association ¹
- 1978 Fellow, Canadian Psychological Association ¹
- 1961 Sheffield Scientific Fellowship, Yale University
- 1960 Wilson University Fellowship, Yale University
- 1957 University of Toronto Graduate Fellowship

TEACHING

Teaching Interests:

Auditory perception
Theoretical issues in psychology

Theories of cognition

Research methods in psychology

¹ no longer a member of this association

Courses Taught

Harvard University:

Undergraduate laboratory course in experimental psychology Graduate seminar in learning theory

McGill University:

Graduate seminars:

Auditory Perception and Speech

Perception and Cognition

Computer-based Laboratory Techniques in Psychology

Undergraduate courses:

Auditory Perception Theories of Cognition
Topics in Cognitive Psychology Computer and Man

Experimental Problems in Contemporary Psychological

Thinking

Psychology Theory

Foundations of Modern Psychology

(honours theory seminar)

Honours Research Seminar

STUDENTS, POSTDOCTORAL FELLOWS, AND OTHER SCIENTIFIC PERSONNEL TRAINED OR SUPERVISED

WITH CURRENT POSITION IF KNOWN (DATE OF MOST RECENT INFORMATION SHOWN IN PARENTHESES)

Laboratory Managers / Programmers

1986-2006 Pierre Ahad , M.A., Manager, McGill Auditory Research Lab, currently Auditory Research Consultant, Montreal, Canada

1981-1984 Sharif Qureshi, M.Sc. Engineer, Canada

Philippe Grall, M.Sc., Consultant, Intégration de Systèmes Microélectroniques.

Formerly Associate Professor, Département Télécommunications, Institut des Sciences de l'Ingénieur de Toulon et du Var, Université Sud Toulon Var, Toulon, France (2006)

Gary Dannenbring, Ph.D. in Psychology, McGill, Director of Planning and Evaluation, Prairie Lakes Area Education Agency, Pocahontas, Iowa. (2015)

Gary Bernstein, M.Sc. Director, Network and Communication Services, McGill University, Montreal, Quebec, Canada (Retired 2015)

Programmers

- Dan Salomon PDP-11 MITSYN project. (Formerly at Dept. of Computer Science, University of Alberta. No current information)
- 1988-1993 Claude Foucart, M. Eng.. Project in partial fulfillment of B.Eng. degree. École Polytechnique de l'Université de Montréal. Currently Chief of Biomedical Engineering, Jewish General Hospital, Montreal, Quebec, Canada (2007).

Postdoctoral Fellows

- 2000-01 Carolyn Bey (co-supervised with Robert Zatorre) Maître de Conférences, Laboratoire de Psychologie Cognitive, Université de Provence, Marseille, France. (2008)
- 1995-97 Sheila Williams, Retired from Psychology. Fencing coach. Family historian, South Yorkshire, England. (2015).
- 1992-94 Todd Mondor, Professor, Department of Psychology, & Associate Dean (Graduate Studies), University of Manitoba, Winnipeg, Manitoba, Canada. Co-supervised with Robert Zatorre. (2015)
- 1992-93 Richard Parncutt, Professor of Systematic Musicology, University of Graz, Austria. (2008)
- 1991-93 Punita Singh, Acoustic Consultant, Sound Sense; Book publisher, New Delhi, India. (2006)
- 1988-89 Brian Roberts, Professor of Auditory Perception, Psychology Department, School of Life and Health Sciences, Aston University, Birmingham, England (2015)
- 1988-90 Valter Ciocca, Director, School of Audiology & Speech Sciences, Faculty of Medicine. The University of British Columbia, Vancouver, BC (2015)
- 1988-89 Magda Chalikia. Chairwoman, Psychology Department., Minnesota State University at Moorhead, Minnesota, USA. (2015)
- 1985-86 Marilyn French-St. George. President, NewOpp.ca (2015)
- 1981-82 Blas Espinosa-Varas. Associate Professor, Dept. of Communication Sciences and Disorders, Univ. of Oklahoma Health Sciences Center., Oklahoma City, Oklahoma, USA. (2005)
- 1975-77 Gary Dannenbring. Director of Planning and Evaluation, Prairie Lakes Area Education Agency, Pocahontas, Iowa. (2015)

Graduate Students (With Current Position, If Known)

Doctoral Degrees

In progress, 2016. Francesco Tordini (co-Directed with Jeremy Cooperstock, Dept. of Electrical and Computer Engineering)

- 2005 Bradley Vines (co-directed with Daniel Levitin and Robert Zatorre), Director of Neuroscience, Nielson Neuro, Cincinnati area. (2015)
- 2000 Martine Turgeon, Chargée de cours at Université du Québec à Chicoutimi (2014)
- 1998 Lisa Weaver, Psychologist Fergus Counselling Services, Fergus, Ontario, Canada (2015)
- 1991 Wendy Rogers, Psychologist, Fredericton, NB (2015)
- 1988 Valter Ciocca, Director, School of Audiology & Speech Sciences, Faculty of Medicine. The University of British Columbia, Vancouver, BC (2015)
- 1985 Magda Chalikia. Chairwoman, Psychology Department., Minnesota State University at Moorhead, Minnesota, USA. (2015)
- 1984 Howard Steiger, Chief, Eating Disorders Program, Douglas Hospital, Verdun, Quebec, Canada; Professor of Psychiatry and Associate Member in Psychology, McGill University, Montreal, Quebec, Canada. (2015)
- 1979 Tony Wolff, Managing Partner, Spectrum Behavioral Health, Arnold, Maryland. (2015)
- 1975 Gordon Logan, Centennial Professor of Psychology, Vanderbilt Unniversity (2015)
- 1974 Gary Dannenbring, Director of Planning and Evaluation, Prairie Lakes Area Education Agency, Pocahontas, Iowa. (2015).

Master's Degrees

- 2003 Jung-Kyong Kim (co-supervised with Dr. Daniel Levitin). Doctoral student, McGill Psychology Dept., supervised by Robert Zatorre. (2005)
- 1999 Poppy Crum, Ph.D. Berkeley; Senior Scientist, Dolby Laboratories, San Francisco, California (2016)
- 1994 Martine Turgeon, Chargée de cours at Université du Québec à Chicoutimi (2014)
- 1986 James Wright, Ph.D. (Music). Associate Professor, School for Studies in Art & Culture (Music), Supervisor of Performance Studies, Carleton University, Ottawa, Canada (2015)
- 1985 Valter Ciocca, Director, School of Audiology & Speech Sciences, Faculty of Medicine. The University of British Columbia, Vancouver, BC (2016)
- 1983 Janet Gabel (no information)
- 1980 Howard Steiger, Chief, Eating Disorders Program, Douglas Hospital, Verdun, Quebec, Canada; Professor of Psychiatry and Associate Member in Psychology, McGill University, Montreal, Quebec, Canada. (2016)

Visiting Graduate Students

- 2000-01 Yuko Tagami, exchange student from Ph. D. program, University of Kyoto, Japan. (2002)
- 1990-91 Gaston Hilkhuysen, exchange student from University of Leiden, Statistical consultant, Delft, Netherlands. (2005)

Undergraduate Students

The following McGill undergraduate students were co-authors on the lab's papers in auditory organization:

Jack Abramson, André Achim, Kathy Capreol, Connie Colantonio, Poppy Crum, Peter Doehring, Jean Kim, Robert Levitan, Christine Liao, Stephen McAdams, Leanne Melnerich, Julie O'Reilly, Steven Pinker, Alex Rudnicky, Howard Steiger, Yves Tougas, Christina Van Loon, Bruce Walker.

Other McGill Undergraduates who worked in the auditory research lab.

Cori Atlin, Christina Besner. Marie Duan, Robert Guadagno, Meghan Kilgore, Judith Luck, Natalie Mota, Melissa Rapoport, Jack Torobin.

Non-Auditory Graduate Students

- 1979 Michael Mills (McGill Ph.D. in Communications, supervised by A. Bregman). Designed the graphic and user interface aspects of the Apple QuickTime Multimedia system and other multimedia products. Most recent employment: User Experience Designer/Prototyper at Google, Currently retired. (2016)
- 1969 Nancy Wargny, (M.A. with A. Bregman; Ph.D. with John Macnamara). Professor, Vanier College, Montreal, Quebec, Canada. (2015)
- 1969 Shannon Moeser, Ph.D. McGill, Associate Professor, Retired, Memorial University of Newfoundland, St. John's, Newfoundland. (2016)
- 1969 Maggie Bruck (M.A. with A. Bregman; Ph.D. in psychology of language) Professor, Department of Psychiatry and Behavioral Sciences, Johns Hopkins School of Medicine, Baltimore, Maryland, USA (2015)
- 1967 Barbara Norcross, M.A. McGill, (Barbara Norcross-Renner) Psy. D. Clinical Psychology. Pacific University. Clinical psychologist, University of Portland Counseling Center, Portland Oregon. (2008)

The following McGill undergraduates were co-authors on non-auditory research papers.

Neil Charness, Alan Putterman, A. L. Robert, Irving Snider, Judith Wiener, Rhona Strasberg (Weinstein).

Administrative Assistants

Marylou Freel, Tina Dornbusch, Francine Bouffard.

PROFESSIONAL AND ADMINISTRATIVE ACTIVITIES

International Activities

March 11, 2015

Online guest lecture, School of Computing, Edinburgh Napier University, Edinburgh, Scotland.

April-May 2004.

Taught two master classes and a delivered a public lecture on auditory scene analysis at the Department of Musical Sciences, New University of Lisbon, Portugal.

March 2-8, 2003.

Taught in Helsinki Winter School in Cognitive Neuroscience, Lammi Biological Station, Finland

Sept 2000-July 2001

Supervised Yuko Tagami, Exchange doctoral student from the University of Kyoto, Japan.

Oct-Nov 1999

Seven weeks of collaborative research with Minoru Tsuzaki of the ATR Human Information Processing Research Laboratories, in Kyoto, Japan and one week with Yoshitaka Nakajima at the Kyushu institute of Design in Fukuoka, Japan. Eight lectures/colloquia at universities and research laboratories in Japan.

Oct. 1993 One-week series of graduate seminars at the University of Thessaloniki in Greece on "Auditory Scene Analysis".

Feb 1992 Initiated and organized an electronic mail list, AUDITORY, on the topic of Auditory Perception. Administered by Dr. Dan Ellis of the Dept. of Electrical Engineering, Columbia University, it includes over 2500 researchers and practitioners of auditory arts and sciences in universities, industries, and organizations in about 45 countries (as of Aug 2011).

Current Memberships in Academic Societies

Royal Society of Canada (Fellow)

Canadian Society for Brain, Behaviour and Cognitive Sciences

Psychonomic Society

Society for Music Perception and Cognition

Professional Activities

Member of the Executive Board, Society for Music Perception and Cognition, July 2001- May 2003.

Member of the Scientific Advisory Council for the XXVI International Congress of Psychology, Montreal, Aug. 16-21, 1996. Member July 1992- Aug. 1996.

Member of the Program Committee, Signal Processing Sub-Conference, 12th International Conference on Pattern Recognition, in Jerusalem, Israel. Oct. 1994. Member since December, 1992.

Member of Sensory/Perceptual Working Group. NRC (USA). Committee on Basic Research in the Behavioral and Social Sciences. (1985) Contributing to the volume, The Behavioral and Social Sciences (1988).

Associate Editor for the journal, Music Perception

Occasional reviewer of manuscripts for the following journals:

Acustica

Canadian Journal of Psychology.

Cognition.

Cognitive, Affective and Behavioral Neuroscience

Journal of the Acoustical Society of America.

Journal of Experimental Psychology: Human Percept. and Performance.

Music Perception

Neuroscience

Neuroscience Letters

Perception

Perception & Psychophysics

Psychological Bulletin

Quarterly Journal of Experimental Psychology.

Speech Communication

Theory and Psychology

Occasional reviewer of grants for the following agencies:

Natural Sciences and Engineering Research Council (Canada)

Ontario Mental Health Foundation (Canada)

National Science Foundation (USA)

Office of Naval Research (USA)

National Institutes of Health (USA)

Air Force Office of Scientific Research (USA)

Cognitive, Affective, & Behavioral Neuroscience

Member of Grant Selection Committee for Psychology for the Natural Sciences and Engineering Research Council of Canada (1979)

Chairman of Program Committee, Lake Ontario Visionary Establishment, (LOVE) conference on human perception & cognition 1973; Member 1973-75.

Organizing committee, International Conferences on Pattern Recognition, 1993-94 Scientific Advisory Council, XXVI International Congress of Psychology, 1994-96

RESEARCH

Current Research Interests

The perceptual organization of temporally extended events, particularly in audition; relation to visual perception, to pattern-recognition by computers and to Gestalt psychology. General theories and approaches to psychology, such as connectionism, Piaget, Chomsky, nativism, Bregman's theory of "ideals and transformations". The concept of the "schema" in psychology.

Audiological test based on my research

Trenque, Pierre & König, Ernest. (1988), The chirp streaming test. *Audiology*, 27, 65-88.

Research Grants Held

- (a) Total number of grants held as principal investigator: 17
- (b) List of major grants:

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Continuous support for research on "Perception and Learning of Complex Patterns" Natural Sciences and Engineering Council of Canada (formerly National Research Council) NSERC - A0127.

- 1995-98 National Institute of Mental Health (USA). for research on "Perceptual organization of sound in human listeners"
- 1994-97 Grant from Province of Quebec, Ministry of Education (FCAR).
 Principal investigator of a team grant shared with Robert Zatorre and
 Richard Parncutt. 1994-97.
- Infrastructure grant to provide personnel, service contracts and supplies for a computer-based laboratory for NSERC-sponsored researchers in the McGill Psychology Department. Natural Sciences and Engineering Research Council of Canada (NSERC-A0703).
- 1971-72 Grant to purchase a PDP-11 computer system (with six other researchers) National Research Council of Canada (NRC-E-3221).
- 1976-77 Grant to purchase computer equipment for eleven NRC-sponsored researchers in the McGill Psychology Department. National Research Council of Canada (NRC-E-3790)
- 1984-86 Killam Research Fellowship. Salary replacement for two years.

Major equipment grant to furnish a computer-based laboratory for research in auditory perception and speech. Natural Sciences and Engineering Council of Canada (E0015).

PUBLICATIONS

Book:

Bregman, A.S. (1990). *Auditory Scene Analysis: The Perceptual Organization of Sound*. Cambridge, Mass.: Bradford Books, MIT Press. (Paperback, 1994)

Audio Compact Disk:

Bregman, A.S., & Ahad, P. (1996) *Demonstrations of Auditory Scene Analysis: The Perceptual Organization of Sound*. Audio compact disk. (Distributed by MIT Press).

Article about my work:

Schick, August. (1996) Von der Psychophysik zum Auditory Stream: Ein Streifzug von Fechner zu Albert Bregman. (From psychophysics to the auditory stream: An expedition from Fechner to Albert Bregman.) *Proceedings of the Congress of the German Society for Acoustics, Oldenburg, Germany, 1996.*

Articles in Encyclopedias and Handbooks:

- Bregman, A.S. (in press, 2016) Auditory scene analysis. In S. Gepshtein, L. Maloney, & M. Singh (Eds.) *The Oxford Handbook of Computational Perceptual Organization*. New York: Oxford University Press.
- Bregman, A.S. (2007) Auditory scene analysis. In A.I. Basbaum, A. Koneko, G.M. Shepherd & G.Westheimer (Eds.) *The Senses: A Comprehensive Reference, Vol. 3, Audition*, P. Dallos & D. Oertel (Volume Eds.) San Diego: Academic Press, 2008, Pp. 861-870.
- Bregman, A.S. (2008) Auditory scene analysis. In *Encyclopedia of Neuroscience*. (L.R. Squire, Editor.) Oxford: Academic Press.
- Bregman, A.S. (2004) Auditory scene analysis. In N.J. Smelzer & P.B. Baltes (Eds.) *International Encyclopedia of the Social and Behavioral Sciences*. Amsterdam: Pergamon (Elsevier). Pp. 940-942.

Papers in Refereed Journals

- Bregman, A.S.,(2015). Progress in understanding auditory scene analysis. *Music Perception*, 33 (1), 12-19.
- Sussman, E., Bregman, A.S., & Lee, W. (2014). Task-switching and neural representations of ambiguous sound input. *Neuropsychologia*, 64, 218-229.

- Crum, P.A., & Bregman, A.S. (2006) The effects of unit formation on the perception of a changing sound. Quarterly journal of Experimental Psychology. 59(3), 543-556.
- Turgeon, M., Bregman, A.S., & Roberts, B. (2005). Rhythmic masking release: Effects of asynchrony, temporal overlap, harmonic relations, and source separation on crossspectral grouping. Journal of Experimental Psychology: Human Perception & Performance. 31 (5), 939-953.
- Sussman, E., Bregman, A. S., Wang, W.J., & Khan, F.J. (2005). Attentional modulation of electrophysiological activity in auditory cortex for unattended sounds in multistream auditory environments. Cognitive, Affective, & Behavioral Neuroscience, 5 (1), 93-110.
- Bregman, A.S. (2005). Auditory Scene Analysis and the Role of Phenomenology in Experimental Psychology. Canadian Psychology, 46 (1), 32-40.
- Turgeon, M., Bregman, A.S., & Ahad, P.A. (2002). Rhythmic masking release: Contribution of cues for perceptual organization to the cross-spectral fusion of concurrent narrow-band noises. Journal of the Acoustical Society of America, 111 (4), 1819-1831.
- Bregman, A.S., Ahad, P., & Van Loon, C. (2001). Stream segregation of narrow-band noise bursts. Perception & Psychophysics. 63(5)790-797.
- Parncutt, R., & Bregman, A.S. (2000). Tone profiles following short chord progressions: Top-down or bottom-up? *Music Perception*, 18 (1), 25-57.
- Bregman, A. S., Ahad, P. A., Crum, P. A. C. & O'Reilly, J. (2000). Effects of time intervals and tone durations on auditory stream segregation. Perception & Psychophysics, 62(3), 626-636.
- Bregman, A.S., Colantonio, C., & Ahad, P.A. (1999) Is a common grouping mechanism involved in the phenomena of illusory continuity and stream segregation? Perception & Psychophysics, 61 (2).
- Rogers, W.L., & Bregman, A.S. (1998). Cumulation of the tendency to segregate auditory streams: Resetting by changes in location and loudness. Perception & Psychophysics, 60 (7), 1216-1227.
- Singh, P.G., & Bregman, A.S. (1997). Effect of different timbre attributes on the perceptual segregation of complex-tone sequences. Journal of the Acoustical Society of America, 102 (4), 1943-1952.
- Bregman, A.S. (1995) Constraints on computational models of auditory scene analysis, as derived from human perception. Invited tutorial paper. Journal of the Acoustical Society of Japan (E), 16, 3, 133-136.
- Bregman, A.S. (1994) What is auditory scene analysis? (In special issue on auditory scene analysis). Journal of the Acoustical Society of Japan, 50 (12), 1007-1010.
- Bregman, A.S., Ahad, P., & Kim, J. (1994) Resetting the pitch analysis system. 2: Role of sudden onsets and offsets in the perception of individual components in a cluster of overlapping tones. Journal of the Acoustical Society of America, 96, 2694-2703.

- Mondor, T.A., & Bregman, A.S. (1994) Allocating attention to frequency regions: The frequency sensitivity effect revisited. *Perception & Psychophysics*, 56, 268-276.
- Bregman, A.S., Ahad, P., Kim, J., & Melnerich, L. (1994) Resetting the pitch analysis system. 1: Effects of rise time of tones in noise backgrounds or of harmonics in a complex tone. *Perception & Psychophysics*, 56, 155-162.
- McPherson, L.M.P., Ciocca, V., & Bregman, A.S. (1994) Organization in audition by similarity in rate of change: Evidence from tracking individual frequency glides in mixtures. *Perception & Psychophysics*, 55 (3), 269-278.
- Rogers, W.L., & Bregman, A.S. (1993). An experimental evaluation of three theories of auditory stream segregation. *Perception & Psychophysics*, *53*, *179-190*.
- Singh, P.G., & Bregman, A.S. (1993) Spectro-temporal factors in the perceptual segregation of tonal sequences. *Journal of the Acoustical Society of America*, 93 (4), 2363.
- Chalikia, M.H., & Bregman, A.S. (1993). The perceptual segregation of simultaneous vowels with harmonic, shifted, or random components. *Perception & Psychophysics*, 53, 125-133.
- Singh, P.G., & Bregman, A.S. (1992) Perceptual segregation of tones embedded in modulated noise maskers. *Journal of the Acoustical Society of America*, 91(4), Pt.2, 2333-2334.
- Singh, P.G., & Bregman, A.S. (1992). Scaling the perceptual clarity of the presence or absence of target tones embedded in modulated noise maskers. *Journal of the Acoustical Society of America*, 92(4), Pt. 2, 2362.
- Ciocca, V., Bregman, A.S., & Capreol, K.L. (1992). The phonetic integration of speech and nonspeech sounds: Effects of perceived location. *Quarterly Journal of Experimental Psychology.*, 44A, 577-593.
- Rogers, W.L., & Bregman, A.S. (1991). Auditory streaming: a central change-sensitive process. *Canadian Psychology*, 32 (2A), 290 (A).
- Roberts, B., and Bregman, A.S. (1991). Effects of the pattern of spectral spacing on the perceptual fusion of harmonics. *Journal of the Acoustical Society of America*, 90 (6), 3050-3060.
- Bregman, A.S., Liao, C., & Levitan, R. (1990). Auditory grouping based on fundamental frequency and formant peak frequency. *Canadian Journal of Psychology*, 44 (3), 400-413.
- Bregman, A.S., Levitan, R., & Liao, C. (1990). Fusion of auditory components: Effects of the frequency of amplitude modulation. *Perception & Psychophysics*, 47, 68-73.
- Roberts, B., & Bregman, A.S. (1990) Effects of the pattern of spectral spacing on the perceptual fusion of harmonics. *Journal of the Acoustical Society of America*, 88 (S1), S146 (A).
- Tougas, Y., & Bregman, A.S. (1990). Auditory streaming and the continuity illusion. *Perception & Psychophysics, 47, 121-126.*

- Chalikia, M.H., & Bregman, A.S. (1989). The perceptual segregation of auditory signals: Pulse train segregation and vowel segregation. *Perception & Psychophysics*, 46 (5), 487-496.
- Bregman, A.S., & Tougas, Y. (1989). Propagation of constraints in auditory organization. *Perception & Psychophysics*, 46, 395-396.
- French-St. George, M., & Bregman, A.S. (1989). Stream segregation as a function of predictability of frequency and timing. *Perception & Psychophysics*, 46, 384-386.
- Ciocca, V., & Bregman, A.S. (1989). The effects of auditory streaming on duplex perception. *Perception & Psychophysics*, 46, 39-48.
- Ciocca, V., & Bregman, A.S. (1987). Perceived continuity of gliding and steady-state tones through interrupting noise. *Perception & Psychophysics*, 42, 476-484.
- McAdams, S., & Bregman, A. (1987) L'audition des flux musicaux. *Marsyas: Revue de pédagogie musicale et choréographique, numro 3-4, décembre.*
- Wright, J.K., & Bregman, A.S. (1987) Auditory stream segregation and the control of dissonance in polyphonic music. *Contemporary Music Review*, *2*, *63-92*.
- Tougas, Y. & Bregman, A.S. (1985). The crossing of auditory streams. *Journal of Experimental Psychology: Human Perception and Performance*, 11, 788-798.
- Steiger, H., Negrete, J.C., Bregman, A.S., & Boudreault, M.F. (1985) Central auditory processing in alcoholics: transient ototoxic effects and their relation to field dependence. *Drug and Alcohol Dependence*, 16, 39-50.
- Bregman, A.S., Abramson, J., Doehring, P. & Darwin, C.J. (1985) Spectral integration based on common amplitude modulation. *Perception & Psychophysics*, *37*, *483-493*.
- Bregman, A.S., & Doehring, P. (1984) Fusion of simultaneous tonal glides: the role of parallelness and simple frequency relations. *Perception & Psychophysics*, *36*, *251-256*.
- Steiger, H. & Bregman, A.S. (1982) Competition among auditory streaming, dichotic fusion, and diotic fusion. *Perception & Psychophysics*, 32, 153-162.
- Steiger, H. & Bregman, A.S. (1982) Negating the effects of binaural cues: competition between auditory streaming and contralateral induction. *Journal of Experimental Psychology: Human Perception and Performance*, 8, 602-613.
- Bregman, A.S. & Mills, M.I. (1982) Perceived movement: the Flintstone constraint. *Perception*, 11, 201-206.
- Bregman, A.S. (1982) Analyzing spectra that won't stand still. *Canadian University Music Review*, *3*, *31-48*.
- Steiger, H. & Bregman, A.S. (1981) Capturing frequency components of glided tones: frequency separation, orientation and alignment. *Perception & Psychophysics*, 30, 425-435.
- Bregman, A.S. (1981) Chomsky without language. Cognition, 10, 33-38.

- Bregman, A.S. & Steiger, H. (1980) Auditory streaming and vertical localization: interdependence of "what" and "where" decisions in audition. *Perception & Psychophysics*, 28, 539-546.
- Bregman, A.S. (1980) The conceptual basis of perception and action. *Presentations on Art Research*, 4, 73-86.
- McAdams, S., & Bregman, A.S. Hearing musical streams. (1979) *Computer Music Journal*. *3*. 26-43.
- Dannenbring, G.L. & Bregman, A.S. (1978) Streaming vs. fusion of sinusoidal components of complex waves. *Perception & Psychophysics*, 24, 369-376.
- Bregman, A.S. & Pinker, S. (1978) Auditory streaming and the building of timbre. *Canadian Journal of Psychology*, *32*, *19-31*.
- Bregman, A.S. (1978) Auditory streaming: competition among alternative organizations. *Perception & Psychophysics*, 23, 391-398.
- Bregman, A.S. (1978) Auditory streaming is cumulative. *Journal of Experimental Psychology: Human Perception and Performance*, 4, 380-387.
- Bregman, A.S. & Dannenbring, G.L. (1977) Auditory continuity and amplitude edges. *Canadian Journal of Psychology*, *31*, *151-159*.
- Bregman, A.S. (1977) Perception and behavior as compositions of ideals. *Cognitive Psychology*, *9*, 250-292.
- Dannenbring, G.L. & Bregman, A.S. (1976) Stream segregation and the illusion of overlap. *Journal of Experimental Psychology: Human Perception and Performance*, 2, 544-555.
- Dannenbring, G.L. & Bregman, A.S. (1976) The effect of silence on auditory stream segregation. *Journal of the Acoustical Society of America*, 59, 987-989.
- Bregman, A.S. & Rudnicky, A. (1975) Auditory segregation: stream or streams? Journal of Experimental Psychology: Human Perception and Performance, 1, 263-267.
- Moeser, S.D. & Bregman, A.S. (1973) Imagery and language acquisition. *Journal of Verbal Learning and Verbal Behavior*, 12, 91-98.
- Charness, N. & Bregman, A.S. (1973) Transformation in the recognition of visual forms. *Canadian Journal of Psychology*, 27, 367-380.
- Bregman, A.S. & Dannenbring, G. (1973) The effect of continuity on auditory stream segregation. *Perception & Psychophysics*, 13, 308-312.
- Bregman, A.S. & Achim, A. (1973) Visual stream segregation. *Perception & Psychophysics*, 13, 451-454.
- Moeser, S.D. & Bregman, A.S. (1972) The role of reference in the acquisition of a miniature artificial language. *Journal of Verbal Learning and Verbal Behavior*, 11, 759-769.

- Bregman, A.S. & Campbell, J. (1971) Primary auditory stream segregation and perception of order in rapid sequences of tones. *Journal of Experimental Psychology*, 89, 244-249.
- Snider, I.J. & Bregman, A.S. (1970) The effect of GSR confirmed perception of bisensory input on immediate verbal memory. *Psychophysiology*, 7, 169-177.
- Bregman, A.S. & Wiener, J.R. (1970) Effects of test trials in paired-associate and free recall learning. *Journal of Verbal Learning and Verbal Behavior*, *9*, 689-698.
- Putterman, A.H., Robert, A.L. & Bregman, A.S. (1969) Adaptation of the wrist to displacing prisms. *Psychonomic Science*, 16, 78-80.
- Bregman, A.S. & Strasberg, R. (1968) Memory for the syntactic form of sentences. Journal of Verbal Learning and Verbal Behavior, 7, 396-403.
- Bregman, A.S. (1968) Forgetting curves with semantic, phonetic, graphic, and contiguity cues. *Journal of Experimental Psychology*, 78, 539-546.
- Bregman, A.S. (1967) Distribution of practice and between-trials interference. *Canadian Journal of Psychology*, 21, 1-14.
- Bregman, A.S. & Chambers, D.W. (1966) All-or-none learning of attributes. *Journal of Experimental Psychology*, 71, 785-793.
- Bregman, A.S. Is recognition memory all-or-none? (1966) *Journal of Verbal Learning* and Verbal Behavior, 5, 1-6.

Book Chapters, Forewords, and Published Conference Proceedings

- Bregman, A.S. (2006) Auditory scene analysis in the perception of music. In K. Gfeller, D. D. Coffman, C. X. Rordiguez, & D. J. Nelson (Eds.) *Multidimensional Perspectives on Musicality: Essays from the Seashore Symposium.* Iowa City, Iowa: University of Iowa School of Music.
- Bregman, A.S. (2006) Foreword to Wang, D. & Brown, G.J. (Eds.) *Computational Auditory Scene Analysis: Principles, Algorithms, and Applications*, IEEE Press / John Wiley & Sons.
- Bregman, A.S., &Woszczyk, W. (2005). Creating mixtures: The application of auditory scene analysis (ASA) to audio recording. In K. Greenebaum and R. Barzel (Eds.) *Audio Anecdotes III: Tools, tips and techniques for digital audio.* Natick, MA.: A. K. Peters.
- Bregman, A.S. (2005) Foreword to Divenyi, P. (Ed.). *Speech separation by humans and machines*. Norwell, MA: Kluwer Academic Publishers.
- Bregman, A.S., & Woszczyk, W. (2004) Controlling the perceptual organization of sound: Guidelines derived from principles of auditory scene analysis. In K. Greenebaum and R. Barzel (Eds.) *Audio Anecdotes: Tools, tips and techniques for digital audio. Vol.1.* Natick, MA.: A. K. Peters

- Bregman, A. S. (2002). The auditory scene. In Levitin, Daniel J. (Ed). *Foundations of cognitive psychology: Core readings*. Cambridge, MA, US: MIT Press. (pp. 213-248).
- Bregman, A.S. (1998). Psychological data and computational ASA. In David F. Rosenthal and Hiroshi G. Okuno (Eds.), *Computational Auditory Scene Analysis*. Mahwah, NJ: Erlbaum.
- Bregman, A.S. (1996) Perceptual interpretation and the neurobiology of perception. In R. Llinàs and P.S. Churchland (Eds.), *The mind-brain continuum: Sensory Processes*. Cambridge, Mass., The MIT Press, pp. 203-217.
- Bregman, A.S. (1994) Foreword. In G. Kramer (Ed.) *Proceedings of the First International Conference on Auditory Display.* 1994.
- Bregman, A.S. (1994). L'analyse de la scène auditive: l'audition dans des environnements complexes. dans *S.E. McAdams & E. Bigand, (Eds.) Penser les sons: Psychologie cognitive de l'audition.* Paris: Presses Universitaires de France.
- Bregman, A.S. (1993) Auditory scene analysis: Listening in complex environments. In S.E. McAdams, and E. Bigand (Eds.) *Thinking in sound*. London: Oxford University Press, pp. 10-36.
- Bregman, A.S. (1991). Using quick glimpses to decompose mixtures. In J. Sundberg, L. Nord, & R. Carlson (Eds.), *Music, language, speech and brain. Wenner-Gren International Symposium Series, with sound examples on a CD phonogram.* London: MacMillan.
- Bregman, A.S. (1991). Timbre, orchestration, dissonance, et l'organization auditive. In J.-B. Barrière (Ed.), *Le timbre, métaphores pour la composition*. Paris: Christian Bourgeois.
- Bregman, A.S. (1990). The compositional process in cognition with applications to speech perception. In I.G. Mattingly & M. Studdert-Kennedy (Eds.), *Modularity and the motor theory of speech perception*. Hillsdale, N.J.: Lawrence Erlbaum.
- Bregman, A.S. (1987). The meaning of duplex perception: sounds as transparent objects. In M.E.H. Schouten (Ed.), *The psychophysics of speech perception*. Martinus-Nijhoff NATO-ASI series.
- Bregman, A.S. (1984). Auditory scene analysis. *Proceedings of the Seventh International Conference on Pattern Recognition*. Silver Spring, MD: IEEE Computer Press. (Library of Congress No. 84-80909.
- Bregman, A.S. (1981) Asking the "what for" question in auditory perception. *In M. Kubovy and J.R. Pomerantz (Eds.), Perceptual Organization.* Hillsdale, New Jersey: Lawrence Erlbaum.
- Bregman, A.S. The formation of auditory streams. *In J. Réquin (Ed.), Attention and Performance VII.* Hillsdale, New Jersey: Lawrence Erlbaum, 1978.
- Miller, G.A., Bregman, A.S. & Norman, D.A. The computer as a general purpose device for the control of psychological experiments. *In R.W. Stacy and B. Waxman (Eds.), Computers in Biomedical Research.* New York: Academic Press, 1965.

Theses

Emotional responsiveness and non-attainment of expected winnings as factors influencing performance in a bidding game. M.A. Thesis, University of Toronto, 1959.

Distribution of practice in verbal learning. Doctoral Thesis. Yale University, 1963. University Microfilms #64-7151.

Workshops, Colloquia, Conference Presentations

(a) Presented before 1996

Regular papers at professional conventions:	19
Invited symposium addresses at professional conventions:	12
Invited colloquia at psychology and other departments:	53
Invited addresses at international workshops	
and specialized meetings:	16

(b) Presented from 1996 to the present

(i) Invited Participant in Workshops and Conferences Since 1996

- Invited speaker and consultant, Dolby Laboratories, San Francisco, California, May 1-8, 2011.
- Keynote speaker, IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, "Progress in the study of auditory scene analysis." [Cancelled for health reasons] Mohonk, New York: Oct. 21, 2007.
- Keynote speaker, Society for Music Perception and Cognition, "Contemporary Issues in Auditory Scene Analysis". Montreal, Canada, July 21, 2007
- Hebb Award Address, "Auditory Scene Analysis and the Role of Phenomenology in Experimental Psychology." *Meeting of the Canadian Psychological Association*, St. John's Newfoundland, June 11, 2004.
- Keynote speaker, Gordon Research Conference, "Sensory Coding and the Natural Environment: Probabilistic Models of Perception." *Mt. Holyoke College*, Massachusetts, June 30-July 5, 2002.
- Speaker at the "Brainfair" Conference, *Center of Neuroscience*, University of Zurich and ETH Zurich, Switzerland. March 24, 2000.

- Auditory scene analysis and basic psychoacoustic properties. Distinguished Speaker of the Public Evening Lecture. *German Acoustical Society*, *Oldenburg University*, Oldenburg Germany, March 21, 2000.
- Lecture on auditory scene analysis at the meeting of *The Kyushu branch of the Japanese Acoustical Association*, Kumamoto, Japan. November 22, 1999.
- Lecture at the Kitano Symbiotic Systems Project, Tokyo, Japan. November 1, 1999.
- Lecture at NTT laboratories, Tokyo, Japan, October 29, 1999.
- Series of four seminars on Auditory Scene Analysis, *ATR Laboratories*, Kyoto, Japan. October 22-November 10, 1999
- Keynote speaker and leading discussant at the *Japan Society for Artificial Intelligence*, *Special interest group on AI challenges*. Auditory Scene Analysis by humans and by computers. Aoyama Gakuin University, Tokyo Japan, November 2, 1999.
- Keynote speaker, The effects of acoustic changes on the perceptual organization of sounds. *Society for Music Perception and Cognition*, August 14-17, 1999.
- Keynote speaker, Perceptual organization and auditory displays. *International Conference on Auditory Display*, Glasgow, Scotland, November 1-4, 1998.
- Speaker and panelist, *Iowa Seashore Symposium*, October 17-18, 1997.
- The behaviour of the auditory scene analysis system in humans: constraints on connectionist modelling. *Workshop on connectionist modelling of auditory scene analysis. Neural Information Processing Systems meeting.* Snowmass, Colorado, December 6, 1996.

(ii) Papers Presented at Conventions, Colloquia, and Seminars Since 1996

- Tordini, F., Bregman, A.S., & Cooperstock, J.R. The loud bird doesn't (always) get the worm: Why computational salience also needs brightness and tempo. *The 21*st *International Conference on Auditory Display, Graz, Austria,* July 8-10, 2015.
- Seminar on Auditory Scene Analysis for hearing aid specialists and trainees (Audioprothèse). *le collège Rosemont: 6400, 16e Avenue, Montréal (Québec).* Mar 12, 2008.
- Seminar, Auditory Scene Analysis: How the human brain unravels mixtures of sounds. Neuroscience and Cognition Center, Université du Québec à Montréal, Mar 5, 2004.
- Bregman, A.S., & Tagami, Y. Effects of Perceptual Organization on Perceived Position, Movement, and Numerosity of Sounds. *Meeting of the Society for Music Perception and Cognition*, August 9, 2001.
- Colloquium, "Perception and behavior as composition of ideals" Dept of Psychology, Univ. of Virginia, April 27, 2001.

- Colloquium, "Auditory Scene Analysis," Dept. of Psychology, Univ. of Virginia, Nov 10, 2000.
- Series of four lectures on Auditory Scene Analysis, ATR Laboratories, Kyoto, Japan, November 1999.
- Colloquium, "Implications of research in human auditory scene analysis for AI models of the process of sound separation." *Technical Group for Artificial Intelligence of the Japanese Association for Information Processing (also sponsored by the Acoustical Society of Japan.* Tokyo, Japan, November 2, 1999.
- Bregman, A.S., Ahad, P., O'Reilly, J., & Crum, P. Components of cycle speed in auditory stream segregation: Tone length and intertone interval. *Annual meeting of the Canadian Society for Brain, Behaviour, and Cognitive Science*. Ottawa, Canada, June 19-20, 1998.
- Colloquium, "Deep Structure and Operational Definitions." *Dept. of Psychology Queen's University*, Feb 26, 1998.
- Turgeon, M., & Bregman, A.S. Rhythmic masking release: a paradigm to investigate auditory grouping resulting from the integration of time-varying intensity levels across frequency and across ears. *Acoustical Society of America*, San Diego, California, Dec. 4, 1997.
- Invited participant in study session, "Auditory scene analysis: Future directions for musicological research. *16th International Congress, International Musicological Society,* London, England. August 14-20, 1997.
- Invited speaker. When will we hear separate events in a mixture of sounds? 103rd Convention of Audio Engineering Society, New York, September 26-29, 1997.
- Two lectures and one seminar in Distinguished Speakers series, *Department of Psychology and Section of Neurobiology and Behavior. Cornell University*, Ithaca, NY. February 27-28, 1997.
- Parncutt, R., and Bregman, A.S. (1996) Tone profiles following short chord progressions: Cumulative pitch salience of best-fitting tone profile? *XXVIth International Congress of Psychology*, Montreal, Canada, August 16-21, 1996
- Invited seminar, Department of Psychology, Queens University, March 15, 1996.

Communication of ideas to the general public

- Seminar on Auditory Scene Analysis for hearing aid specialist and trainees (Audioprothèse). le collège Rosemont: 6400, 16^e Avenue, Montréal (Québec). Mar 12, 2008.
- PBS interview for the series, "The Infinite Mind", #257 "Hearing", Jan 31, 2003
- Participated in the making of a documentary film by the French film maker, François Caillat, of Gloria Films (Paris) about the auditory sense. Oct. 1997

August, 1997	or a documentary 7.	y radio broadc	ast on auditor	ry perception a	ana music