

A SSHRC Major Collaborative Research Initiative



**Advancing Interdisciplinary Research in Singing:
Development, Education & Well-being**

Midterm Report

April 2009-June 2012

Annabel J. Cohen and the AIRS Team

submitted July, 2012



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Midterm Report – Advancing Interdisciplinary Research in Singing

Prepared by Annabel J. Cohen (Project Director) and the AIRS Team
July 2012

Original Objectives

Singing is a natural form of human vocal communication relatively little explored yet significant throughout the entire lifespan. In 2008 a proposal entitled "Advancing Interdisciplinary Research in Singing (AIRS)" was directed to the Major Collaborative Research Initiative (MCRI) Program of the Social Sciences and Humanities Research Council. Its purpose was to bring together outstanding scholars from many disciplines to address three broad questions about singing: (1) how does singing develop in every human being? (2) how is singing learned, how should it be taught and used to teach? and (3) how can singing impact well-being? Focusing on these three themes of Development, Education and Well-being, the researchers shared a common inquiry into three broad influences on singing: what is unique to the individual (e.g., a special quality of the voice), what is specific to a culture (e.g., Canadian versus Chinese), and what is universal to all people (e.g., sensitivity to the similarity of tones an octave apart). Figure 1 below shows this overall AIRS Research Framework--three inter-related themes investigated from the perspectives of unique individual influences, cultural influences, and universals.

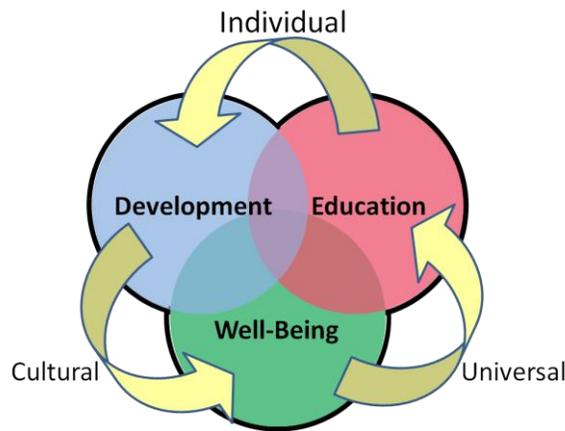


Figure 1 AIRS Research Framework

The goals were to obtain data to explain how singing develops across the lifespan and across cultures, to determine the best means of teaching singing and using singing to teach, and to understand how singing can improve cross-cultural understanding, intergenerational understanding, and physical and mental well-being. The acquisition of new data allows for the refinement of theory. With theory and data in hand, it becomes possible to justify to policy makers the importance of programs that exploit singing in education, broadcasting, culture, immigration, international affairs, veteran's affairs, and healthcare.

This Midterm Report reviews the extensive activity and progress during the first 3/4 years of the AIRS MCRI. It is submitted with 1/4 year remaining of the original Milestone Document. By the midterm (almost 3 months from now), the team is expected to meet all major milestones. Funded research and travel opportunities have been directed to 54 undergraduates, 24 masters, and 32 PhD students (many in multiple years) as they help to meet the AIRS milestones while engaging in data collection, analysis, and all other aspects of the collaboration.



Management

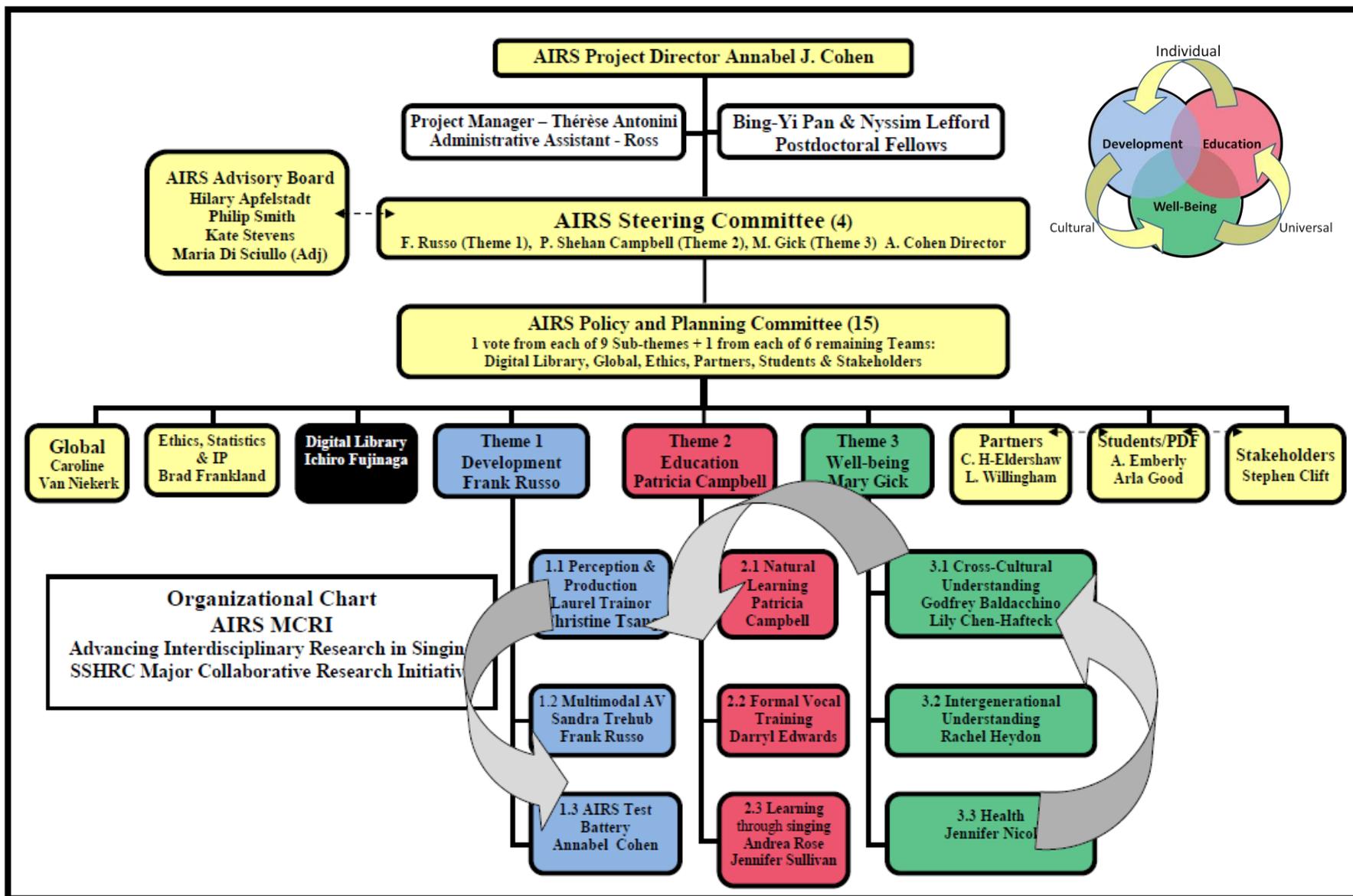
The large team spanning Canada and including 15 other countries requires the complex management structure originally outlined in the Milestone Document (see p. 3). Project Director Annabel Cohen is assisted by Project Manager Therese Antonini and Post-doctoral Fellow Bing-Yi Pan. At this time of peak activity, Ross Dwyer (Administrative Assistant) is providing additional support, and Nyssim Lefford, a postdoctoral fellow, is assisting primarily with the implementation of the digital library.

The Steering Committee includes the Theme Leaders from Development (Frank Russo), Education (Patricia Campbell), and Well-being (Mary Gick), chaired by the Project Director and attended by the Project Manager (ex Officio). It meets monthly by videoconference to discuss, monitor, and guide all aspects of the AIRS collaboration, providing stability for the vast project.

The Advisory Board (Philip Smith - Chair, Department of Psychology, UPEI; Kate Stevens, Director MARCS Auditory Perception Labs, University of Western Sydney, and Hilary Apfelstadt, head of choral training - University of Toronto)¹ meets at least twice a year with the Director, and attends the Policy and Planning Committee meeting at the Annual Meeting.

The Policy and Planning Committee. Each of the three research themes has three research sub-themes, making nine in all. The sub-theme team leader or co-leader sits on the Policy and Planning (P & P) Committee. The Committee also includes a representative from each of 5 other groups: The Student and Early Career Professionals, Partners, Stakeholders, Global Group (dedicated to exploiting the international opportunities and assuring cultural understanding across the project) and the Ethics, Statistics, and Intellectual Property Committee. A final group, Theme 4, is the Digital Library Team. Including the Theme Leaders and the AIRS Director, the P & P Committee constitutes a large percentage (~30%) of the researchers in the collaboration. It meets typically three times a year, twice by video conference and once prior to the opening day of the Annual Meeting. The members of the P & P Committee make presentations in the full plenary session at the Annual Meeting, reviewing the progress toward the research goals for the collaboration. In both years that the Annual Meeting was held as a satellite to a larger meeting (i.e., Seattle, 2010, International Conference on Music Perception and Cognition, or St. John's, 2011, Phenomenon of Singing Symposium), the P & P Committee organized a large public symposium or series of papers to disseminate the nature and progress of AIRS to the wider research community. P & P Committee meetings themselves foster synergies across themes. P& P Committee members receive and discuss information about major AIRS events such as the Annual Meeting, and they debate and approve policies recommended by the Steering Committee as follows:

¹ An adjunct member Dr. Anna Maria de Sciuillo has not yet been involved initially due to scheduling issues. Dr. Philip Smith became Chair of the Psychology Department after his appointment to the AIRS Advisory Board. Dr. Kate Stevens had originally been a collaborator of AIRS but found herself serving in an advisory rather than research capacity, and she agreed to serve officially on the Advisory Board when approached by the Steering Committee during the 2nd year of operation. Dr. Hilary Apfelstadt was originally at the Ohio State University and was recruited by the University of Toronto during the first year of serving on the AIRS Advisory Board.





Student Funding Policy. AIRS initially proposed to distribute more than 50% of all funding to students who were helping to achieve the AIRS milestones via theses, special projects or assistantships. To this end, two policies were developed, one for student research funding and another for travel. The Student Funding Policy outlines an annual competition to which each sub-theme must submit at least one proposal, matching student capacity and interest with the milestone goals of the sub-theme for the coming year. Applications are reviewed by a 6-member committee with two representatives from each Theme.

Travel Policy. Through a travel award program, as the first priority, funds support at least one student presenter to the Annual Meeting from each of the 9 sub-themes, with additional funding made possible for other applicants, and a smaller amount reserved for students in the vicinity of the meeting who may travel by inexpensive means.

Student Liaison Policy. To facilitate linking with partners and stakeholders, AIRS proposed a model whereby students would liaise with the partner (or stakeholder), at the same time adding value to their academic experience through this real-world involvement. AIRS developed its successful student liaison policy (commented on in the 2008 SSHRC MCRI Review-Committee Report) which defines the role of the liaison and the partner (or the stakeholder as the case may be), spelling out the obligations and responsibilities as well as benefits.

Other policies. Several other policies have been developed: Acknowledgement to SSHRC and AIRS; requests for operating expenses, and finally, categories of affiliation with AIRS. The latter also includes procedures for applying for membership in AIRS as a collaborator, and it also enables collaborators to review their commitments to the AIRS MCRI collaboration. To keep the size of the collaboration manageable, new collaborators may only be admitted when previous collaborators resign, retire or leave for whatever reason.

Progress with respect to the Milestone Document

The Milestone Document outlined the goals for the 9 sub-themes and Digital Library, and it identified expected synergies. The following section details the progress of each sub-theme; the issue of synergies is considered in more detail in a subsequent section along with related progress on the AIRS Digital Library. The Milestone Document had an endpoint of September 30, 2012; the current report covers the period to June 30, 2012. The earlier endpoint allows a midterm review in August when many AIRS collaborators will participate in the 4th Annual Meeting at the University of Prince Edward Island.

Theme 1 – Development of Singing

A primary goal of Theme 1 is to fill the gap in knowledge about singing acquisition. Compared to thousands of publications on language acquisition and accessible data on which publications are based, there have been but a few hundred publications on the acquisition of singing (Cohen, 2011). Three sub-theme research teams are respectively focusing on the impact of perception on the ability to sing (Sub-theme 1), the additional involvement of the visual and motor modalities (Sub-theme 2), and the interrelation of many singing skills from memory through to creativity (Sub-theme 3). All three teams are based in prominent Canadian laboratories and benefit from the international expertise offered by the collaboration as well as the opportunities for validation in cross-cultural contexts.



1.1 Perception and production. After laying groundwork in Year 1, Theme 1.1 has invested the last two years in development of the Vocal Auditory Motor Developmental Assessment (VAMDA), a behavioural assessment of singing perception and production for children aged 6 to 9 years of age. Under the leadership of Laurel Trainor (McMaster University) and Christine Tsang (Western University), the project examines the development of singing as an integration of three domains: basic perceptual processing, motor mechanisms and cognition. Within the entire AIRS collaboration, theirs is the only sub-theme with a dedicated focus on matched auditory perception and song production tasks.

The VAMDA project involves researchers in Canada (Tsang, Trainor), France/Poland (Dalla Bella) and the UK (Stewart) testing components of the Sensorimotor Loop model of singing (Dalla Bella & Berkowska; 2009; Tsang, Friendly, & Trainor, 2011). VAMDA data collection has taken place in classrooms of Grade 1 children in Hamilton, and London, Ontario as well as one site in the UK. Data analysis is ongoing, with pitch analyses from the first year of data collection just completed and merged with year 1 perception and cognition data. Data collection continues in order to increase sample sizes at all age groups to better describe differences in singing over time. Dalla Bella and Tsang are meeting in Munich this July to prepare for the overall analysis of interactions between perception, production and cognition. Early analyses of perception and cognition data indicate that pitch perception is highly correlated with memory load and some intelligence factors (e.g., vocabulary); the relations to pitch production are now awaited.

Sub-theme 1.1 also includes several smaller research projects examining perception and action in singing, such as infant perception of song (Falk & Tsang), song perception and language impairment (Fancourt), vocal training in overcoming tone deafness (Anderson & Stewart) and fMRI brain imaging analysis of song production (Lévêque & Schon). Honours student Moira Shaw at UPEI attempted to replicate a study by Kessen et al. (1977), showing infants' ability to match the pitch produced by a parent. Her results encourage further work. Yohana Lévêque, who presented at the AIRS annual meeting in 2010, is completing her doctorate at Aix-Marseille Université and will interact with Isabelle Peretz in Montreal this fall with the support of AIRS funding. Her supervisor, Daniel Schon, a major researcher in singing, was recently approved as a new AIRS collaborator.

The majority of the milestones of Sub-theme 1.1 have been met: a published literature review, collection of pilot data and test refinement. A workshop on pitch measurement in singing will take place at the 4th Annual Meeting. Brain imaging work has been conducted in the UK, Marseille and Ryerson laboratories. Comparative studies of human and songbird acquisition are ongoing, and the similarity between human folksong and avian song is highlighted in a recent paper co-authored by Frank Russo (Tierney et al., 2011) fostering the theory of motor origins of song structure. Leslie Phillmore, a songbird specialist at Dalhousie University, is receptive to receiving a student intern and is also arranging to visit Christine Tsang.

1.2 Multimodal analysis (visual, audio and motor). While Sub-theme 1.1 focuses on the auditory-vocal channel primarily, Sub-theme 1.2 adds the visual information arising from facial and body motion. This sub-theme has addressed two major goals. The first examines the coordination of movement between parents and infants in the context of infant-directed singing and speaking. Research has documented facial and body movement between parent and infant through audiovisual capture (Trehub), infants' eye-movements (Hauf) and psychophysiological response (Russo). To further address the dynamic parent-infant interchange, acoustic analysis of mother's songs and facial movement has been carried out. The



role of mimicry in perception of emotional song has been examined using electromyographic recordings of facial muscles with adults as a basis for future studies with children (Russo).

The second goal of this sub-theme is to explore age-related changes in children's coordination of body movement while singing. To date, audiovisual recordings have been obtained of song imitations from children between the ages of 6-12. Samples have been gathered of body activity while singing at different ages. Future research will examine a broader range of ages and will capture performances aimed at conveying specific emotions.

The majority of the 1.2 milestones have been accomplished. First, novel methodologies have been developed. The first study of gaze behaviour in singing was reported by Russo, Sandstrom and Maksimowki (2011). Adults rated the size of musical intervals produced by two singers. A study by Petra Hauf revealed striking parallels in eye gaze behaviour of infants. Hauf and her students at St. Francis Xavier studied 6 month olds measuring psychophysiological (eye-movements, heart rate and motor activity) on infant-directed singing and speaking of familiar and novel lyrics presented by a stranger. For singing, infants tended to gaze to both eyes and mouth, whereas for speech they gazed primarily at the mouth, suggesting singing may promote emotional engagement, while infant-directed speaking may facilitate information processing. In another new methodology examining audiovisual aspects of singing, AIRS Postdoctoral Fellow Steven Livingstone is developing a set of audiovisual recordings of emotional speech and song (Livingstone, Chan, & Russo, 2012). The collection (RAVDESS: Ryerson Audiovisual Database of Song and Speech) consists of 12 actors, speaking and singing short statements with 9 emotions at 2 intensities. It enables comparing responses to emotional speech and song, as well as testing theories of audiovisual integration underlying vocal perception and production.

In studies of singing and speaking to infants, Sandra Trehub's team reports that mothers sing and talk more expressively when their infant is fully rather than partially visible, that visual aspects of infant-directed singing are especially compelling for infants, and that silent videos of infant-directed singing engage infants more than infant-directed speech. For infants, hummed lullabies do not have the compelling qualities of lullabies sung in typical fashion. Adults and children remember melodies better when sung rather than played on a musical instrument.

Mayumi Adachi (Hokkaido) is leading a multi-site study of parents' categorization of babbling as speech or singing. In one study, a Japanese toddler's vocalizations were recorded in response to toddler directed singing and speech. Responses of the toddler were then categorized by adults on a scale of more song-like to more speech-like. Japanese mothers, fathers, and college students, Chinese college students, Icelandic students (with Guðmundsdóttir in Iceland), and German mothers (with Falk) showed consensus that the toddler's responses to singing were more song-like than responses to speech. However, detailed analyses of vocal cues used by Japanese and German mothers indicate cross-cultural differences, perhaps due to their native languages, in their use of vocal cues (Adachi & Falk, in press). As well Wladyslaw Cichocki (UNB) and Sid Selouani (U de Moncton) have compared speech prosody across French dialects.

A final milestone of 1.2 involves the role of meaningful body movement and facial gesture in the performance of art song. Performance practice for art song tends to limit performer motion to the eyes! Challenging this tradition, Rena Sharon (Music, UBC) has been carrying out research with Russo and her UBC colleague (Vatikiotis-Bateson, Linguistics) on performer animation and audience reception, and data capture of audience and performer motor activities have taken place during the VISI (Vancouver International Song Institute) which Sharon leads.



1.3 AIRS Test Battery. The AIRS Test Battery is a collection of tests that track singing skills across age and cultures. It aims to measure independent and interdependent aspects of singing ability (e.g., memory for pitch, structure, or harmony relations; the relation between verbal and melodic production and creativity). Data have been collected in several contexts in PEI and Nova Scotia, and other countries using language appropriate versions. A dozen undergraduate honours theses and two masters theses have been completed. Biannual videoconferences with the team and the Annual Meeting have led to improvements (e.g., the original vocal model, a piano sound, changed to a soprano voice, then to soprano, tenor, and child voices for which the pitch was adjusted for accurate tuning).

11-Item AIRS Test Battery of Singing Skills for Children and Young and Older Adults ©										
AIRS										
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
Sing <i>Brother John</i> (if known) [training & After #4]	Repeat native program & 4-tone Phrase (Chin-Nese)	Vocal Range	Minor third <i>Sol-mi sol-mi</i>	Sing favourite song	Sing elements: Triads scales	Make up ending	Make up song to choice of 4 pictures (2x)	Sing Unfamiliar song <i>We are one</i> (2x)	Make up story	Sing <i>Brother John</i> again

From the perspective of children’s early communication/conversational skills and musical development, Mike Forrester and his students collected audio video data in the UK and are reviewing longitudinal studies of the development of children’s musicality. A study of 104 children in the UK (4 to 9 years of age) established: a developmental trend with age of size of the full vocal range, more imaginative spontaneous singing by older children, with girls exhibiting more creativity than boys, and variability in singing skills of the youngest children (4-6). Current work on 20 pre-school children examines performance with respect to presence of parents, degree of interactivity of the tester, use of puppets, and informality of the setting. Adult non-musicians may be better at reproducing tempo (for familiar songs) than musicians.

Helga Guðmundsdóttir in Iceland compared children in daycares with and without music and revealed interesting, unexpected differences between children with and without special music programs in terms of starting pitch, singing repertoire and invented song. Jaan Ross (Estonia) with Stephanie Stadler Elmer (Switzerland) supervising graduate student Marju Raju tested 43 Estonian children (4-8 years). A test with 26 children (ages 4-12) validated the Estonian adaptation of the test (Raju & Ross, 2012). In Brazil, Beatriz Ilari recorded children (4-10 years) in Curitiba and Campinas. She and her students have analyzed children’s favourite sung renditions and found both local and global issues. Now they are analyzing children’s renditions of the other components. At UPEI, studies with Chinese native and Canadian university students showed cultural influences particularly on memory for an unfamiliar song with lyrics. Performance on the creativity tests correlated with personality variables. Cross-sectional studies (age 4 to 87 years to date) are ongoing.

Bing-Yi Pan, UPEI AIRS Post-doctoral Fellow, developed an [automated interactive version of the test battery](#) that offers standardization across testers and eliminates variability associated with vocal or interpersonal skills of individual testers. A major breakthrough for AIRS, it enables data collection anywhere in the world with access to a webcam and a computer with Internet connectivity.



Approximately 100 participants have used the automated system in settings including a research laboratory, a daycare, and a nursing home. A French version is being piloted at Université de Moncton and will be used in a graduate thesis at Laval next year. Lisa McClellan, following a summer undergraduate internship with AIRS in 2009, returned to Bates College to complete her thesis. She showed equal effectiveness of a videotaped versus live vocal model, validating use of a video model in the new automated version.

Theme 2 Singing and Education

The approach of Theme 1 to singing development across the lifespan might be regarded as reductionist. Theme 2 which is on Singing and Education has a more holistic approach. They are studying how singing is acquired naturally (sub-theme 2.1), what are the best formal practices in the studio and in the choral setting (2.2), and how can singing be employed for learning of other material (2.3).

2.1 Learning to sing informally. Patricia Campbell (University of Washington) directs Theme 2.1 whose goals include (1) reviewing the English-language literature on children's musical cultures, their songs, engagements, and the transmission-acquisition processes; (2) reviewing literature on pedagogical approaches globally; (3) compiling recordings of singers in various world contexts for use with children in schools; (4) developing content that feature children/youth and their heritage in songs. Activities pursuant with these goals meet Theme 2.1's milestones for producing literatures reviews, developing methodologies for collecting video examples of children singing at play, accruing corpuses of children's songs from several countries and with "Elders". These deliverables provide the basis for theories of development of song repertoire for a culture or individual, and of interpretation of natural singing as play or emotional communication.

Research activities include: (1) an analysis of 55 children's songs for musical and social structure, and the synthesis of curricular implications based on the results. (2) an ethnographic venture that collected and analyzed [children's songs of the Wagogo culture](#) of central Tanzania. (3) an examination of Internet-based resources of children's songs/singing styles that pay special attention to five principal sites including Smithsonian Folkways and The Archival Sound Recordings of the British Library. Results include transcriptions of songs from these sites and a musical and topical classification based on song features. (4) a study of the singing, musical systems and transmission methods among Mixtec-speaking migrant workers in a Pacific Northwest community that sheds light on the impact of diaspora on song traditions and songs that are preserved, adapted, abandoned, or invented anew (connected to 3.1's resilience and song change). (5) a review and analysis of Icelandic song focused on children's repertoire and rimur, an historic elders' genre. Helga Rut Guðmundsdóttir also collected examples of children's singing in Iceland in a natural setting. Beatriz Ilari has been working with students to document and analyze previously undocumented traditional Brazilian children's singing practices such as maracatus and folia songs. June Countryman and Martha Gabriel have been collecting songs and examples of singing and playground behaviours in Prince Edward Island and Grenadine Islands.

2.2 Formal training of singing. Darryl Edwards (University of Toronto) leads a program of research on formal training of solo and choral singers in different settings and cultures. This work is contributing to (1) a review of voice and choral pedagogy with audio-visual resources (Edwards, Carol Beynon and student Jason Noble) (2) an overview of live and recorded performances in which performers require



formal vocal training. (3) creation of a database of audio-visual recordings of instructional situations (voice lessons and choral rehearsals). Recordings are being accumulated in London, Ontario, Toronto, and PEI as well as through a summer Opera workshop in Italy (4) Empirical studies that investigate best practices for teaching sequences; electronic technology and concrete materials associated with best practices); interpersonal markers between instructor and singer(s); development in formally trained singers over time; and universal, culture-specific, or idiosyncratic singing and teaching styles. Jane Ginsborg of Royal Northern College of Music (Manchester) has been investigating preparation and spontaneity in performance, intelligibility of sung text, and singer's long term recall of words and music of songs. Liliya Nafikova, from the Ukraine, the year 4 AIRS Postdoctoral fellow working with Carol Beynon, will be collecting data on choral pedagogy, particularly with a focus on the the solfège approach. A literature review on vocalization by instrumentalists in learning instrumental repertoire focused on singing as a technique utilized by instrumentalists in pedagogical practice (Chessin).

2.3 Teaching through singing. Andrea Rose (Memorial University) and Jennifer Sullivan (now Western University) lead a program of research focusing on teaching and learning through singing and song in varied formal, informal and online contexts of education. Research areas include (1) a review of literature on the use of singing and song in the teaching and learning of both music and non-music concepts, skills, perceptions and attitudes; (2) an examination of e-contexts of K-12 music education and singing as a medium for teaching and learning – specifically a case study of current and evolving e-music programmes in Newfoundland and Labrador through the Centre for Distance Learning and Innovation (Rose); (3) an examination of male singing practices and developmental trends in the choral/educational context – a case study with the Amabile Choir, London, Ontario (Beynon); (4) a study of elementary student attitudes toward singing, the role of repertoire choice and teachers' perceptions of issues surrounding classroom singing – a case study at UPEI of music education students and local music teachers (Countryman) (5) a study of teaching vocabulary in school-aged children and language development through singing (Sullivan); (6) an examination of the use of singing to learn second or other foreign language perception and production of pronunciation, vocabulary, and grammar (Lempert, Henrich); and (7) a study that will test effects of singing skill acquisition on broader academic skill learning (Gardner).

In addressing specific milestones, June Countryman (Music, UPEI) and Martha Gabriel (Education, UPEI) reviewed the literature on use of singing to teach curricula, basic skills, and behaviour. Andrea Rose has commenced empirical studies of e-contexts for teaching music in the K-12 curriculum, and this work also overlaps with that of sub-theme 2.2 with specific reference to the use of computer and electronic means to teach voice. Postdoctoral studies by Utpola Borah have examined the teaching of Indian vocal music by use of Skype. Countryman and Gabriel have engaged in studying elementary student attitudes toward singing and teacher's perception of issues surrounding classroom singing .

In applying singing to teaching aspects of language and literacy Jennifer Sullivan found that in teaching vocabulary to pre-school children, singing resulted in more words learned than listening to storybooks. Sullivan and Russo, supervising Arla Good, found that Ecuadorian children learned more English words when practicing singing than speaking (Good, Russo & Sullivan, 2011). Henrietta Lempert (University of Toronto) has been testing whether singing could improve second language acquisition in adults. Preliminary findings suggest hearing the language in songs rather than prose significantly aided learning novel words and grammar when phrases are marked by articles. Data collection in this study is



ongoing. However, preliminary results have been presented at meetings of the Society for Research in Child Development, 2011 and Canadian Society for Brain, Behavior, and Cognitive Science, 2012. Natalie Henrich - (CNRS - Grenoble) is testing the applicability of singing exercises for improving second-language acquisition, and investigating the differences between speech and singing in vowel perception. Martin Gardiner (Brown University) has studied the effect of Kodaly training on math and language arts, and compared regional differences in standardized academic testing where singing education is or is not delivered. His work now extends to pre-schools.

Theme 3. Singing and Well-being

An overwhelming amount of anecdotal evidence suggests that singing improves lives, but there is scant empirical evidence to support the claim that singing contributes to well-being. Theme 3 investigates singing as an intervention.

3.1 Singing and multicultural understanding Under the leadership of Godfrey Baldacchino (UPEI) and Lily Chen-Hafteck (Kean University), Sub-theme 3.1 examined singing in the promotion of cross-cultural understanding. Four projects have been undertaken in accordance with the Milestone document:

(1) Félix Neto successfully replicated and extended an earlier study (Sousa, Neto, & Mullet, 2005) that had investigated the benefits of a 3-month classroom singing intervention in Portugal showing improved attitudes of children toward the Cape Verde minority.

(2) In the QuadCultural Songbook project, related to the work of Neto, 5th grade children in Canada, Kenya, China and Brazil are provided with four two-to-three-week music-cultural modules from each of the four countries. An educational package has been developed for teachers. It includes a songbook with songs and cultural information developed for teachers, along with video recordings of the native children demonstrating how the songs are sung and power point educational materials. Control and experimental groups have been tested in each country (Total = 439: 239 experimental; 200 control). The program has been completed in two different schools in all four countries. The data consist of questionnaires about attitudes to children from the different countries and to the songs; video recordings of the children learning the songs; and interviews with teachers and children. The preliminary analysis will be discussed in a workshop at the Annual Meeting.



Workshop of Quadcultural Songbook Project,
AIRS 3rd Annual Meeting, St. John's, 2011

(3) A collaborative study on song resilience and song change was recently launched by Steven Brown (McMaster) and Godfrey Baldacchino. Brown has developed new measures of song change called the Cantecore system, and Baldacchino is an expert (CRC) in Island Studies. Islands provide valuable case studies because of their isolated conditions. A videoconference workshop on Song Resilience incorporated additional colleagues. The working group plans to move forward with theory development



over the remainder of the grant. Baldacchino edited the book *Island Songs* (2011), and is planning a follow-up volume on song resilience.

(4) UPEI has established a multicultural university choir. Building on pedagogical research the protocol uses a song-circle approach without a formal leader. Participants bring songs from their culture. The choir has performed on three occasions. Next year, research will gather attitudes to participation, and the protocol will be shared with other universities. Related to this, Ben Bolden and Larry O'Farrell (UNESCO Chair in Arts & Learning, Queen's) are studying the impact of a culture-bearer (non-native choir director) on the intercultural understanding of members of an adult community choir in a case study.

3.2 Intergenerational understanding Led by Rachel Heydon (Western University) with Carol Beynon (Western), and Susan O'Neill (Simon Fraser) the multi-phase project entails interrelated program development and research components and trains students in and through all activities. Program goals include development of intergenerational (IG) singing curricula that can facilitate wellbeing through the production of expansive communication and identity options and relationship building between skipped generations. The team is producing a handbook for instituting programs in IG contexts entitled *Hands, hearts, and voices together: Multimodal curricula to promote intergenerational singing*. It will contain chapters that review IG Learning Programs; Relationships, Generativity and Wellness in the Program; Setting up the Program; and The Curriculum.

The program has now been piloted in one co-located school and retirement home. A new site will include digital technology to enhance IG contact and multimodal learning, and promises to bring new partners (e.g., a separate school board) and Jennifer Rowsell, CRC in multiliteracies as collaborator.

Phase one of this investigation involved two studies. Results from the first study show the need to further develop IG curricula, disseminate findings and enlist new organizations into IG programming. The survey and interview protocol developed for this study may be applied in other geographic locales (e.g., Heydon, Beynon, O'Neill, Crocker, Zhang, submitted). An interview protocol was designed to document the extent to which IG singing programs promote a sense of generativity in adults. Findings highlight the potentials of the curriculum to create learning opportunities for multimodal expressions through dialogic interchanges and the influence of multimodal learning in the ways children and elders negotiate different communicative decisions. (e.g., O'Neill, & Heydon, 2011)

In phase two, IG singing curricula were implemented and the effects evaluated. Findings concern how an emphasis on multimodality helped to support singing. Selection of song repertoire built on participants' interests and knowledge. The curriculum facilitated meaningful communication among participants and created opportunities for learning and practice (e.g., Beynon, Heydon, O'Neill, Crocker, & Loerts, 2011). The same curriculum was implemented with school-aged children at an Ontario site that had no previous IG programming (e.g., Beynon, Hutchison, Heydon, & O'Neill, 2012).

3.3 Singing and Health Focusing on mental and physical health, Jennifer Nicol (University of Saskatchewan) leads Theme 3.3 in examining (1) the relative advantage of active versus passive singing in homes for seniors; (2) a grounded theory explaining choir members' understanding of singing as a health promoting activity; (3) the role that singing can play in enjoyable breathing exercises for chronic and/or terminal lung disease; (4) the role of singing in high school retention, where education has direct health benefits; (5) the benefits of singing for language rehabilitation of stroke victims; (6) the role of singing in Alzheimer's disease and normal aging; and (7) the role of singing lessons in later life.



In meeting the sub-theme's milestones, the team published two reviews (Gick, 2011; Clift, Nicol et al., 2010). Jean Emmerson is conducting her dissertation on a singing program to assist high school retention. She published a literature review on music, youth identity formation and value of music education in schools. Elisabetta Corvo, supervised by Stephen Clift in the UK will be hosted by Jennifer Nicol in Saskatchewan to extend the Sing for Your Life Singing Clubs to Canada. Different singing programs for persons with lung disease are being developed by pulmonary physician Dr. Janice Richman-Eisenstat in Alberta (formerly Winnipeg) and Steven Clift (UK), and a practicum is taking place in Ottawa for COPD and singing. Sally Busch and Mary Gick (2012) published an article on choral singing and well-being. Theses in progress include: Marya Stonehouse at University of Saskatchewan on integrative choirs—singing and youth with disabilities; Carina Daugherty at Carleton on Asthma and Singing, and Marieke Blom (Saskatchewan) on Community Parent-Infant Singing Programs. An on-line survey conducted in the US and Canada with respondents who began private singing lessons after the age of 40 years shows clear benefits of such mid- and later-life opportunities (Cohen & Kleinerman, 2010).

Cross-fertilization among themes

The scope of the AIRS MCRI provides a rare opportunity to understand and exploit data on singing from many perspectives. Each sub-theme and theme meets through UPEI's videoconference hub. In Year 3, in addition, three "synergy meetings" took place to discuss overlapping interests among themes, developing closer ties among themes and providing a working document (minutes) on which to build research plans. Funding has been allocated to student-assisted projects that build on synergistic activities. For example, noted in the Theme 3 meeting, body movement is an indicator of well-being. These movements are evident in videos associated with Theme 3 (singing in residential care facilities) but may likewise be found in videos of natural singing, vocal pedagogy, or using singing to teach, (such as associated with Sub-themes 2.1, 2.2, & 2.3) and singing development (particularly 1.2 with a focus on multimodal aspects of singing). Movement analysis of audiovisual data collected across the three themes may help define universal motion – emotion connections possibly overlooked in the research on singing.

The new tests of singing developed by Theme 1 (i.e., VAMDA, RAVDESS, AIRS Test Battery) provide data of interest to other themes. For example, the AIRS Test Battery has informed Jenny Sullivan's Theme 2.3 longitudinal study of effects of singing on vocabulary acquisition. Across Theme 3, common challenges face 3.1 in forming the cross-cultural choir, 3.2 in encouraging intergenerational singing activities, and 3.3 in forming choirs for seniors or persons with particular disabilities. Shared solutions to such challenges may facilitate progress across the sub-themes. The entire AIRS team collaborates on some projects together, for example, a book series. Abstracts and biographies are being collected now for the prospectus. New collaborations across themes have formed over the three years. Student cross-theme opportunities are documented in the section on students.

AIRS Digital Library and Website. The digital library and website (www.airsplace.ca) foster synergies across disciplines and among researchers. As the 4th theme, the AIRS Digital Library project addresses head-on the challenges of sharing research materials, results, expertise and data among AIRS collaborators, primarily through the development of the web-accessible AIRS Digital Library (DL). AIRS contributes to a comprehensive understanding of the singing voice by employing interdisciplinary



approaches to research. By gathering resources across fields of study, the DL assists researchers in acquiring relevant materials and data, providing a foundation for analysis and developing new studies.

Devising protocols for collecting sharable data is one contribution of the DL. One example of a sharable data set is the AIRS Test Battery Data (Theme 1.3). With the AIRS Test Battery, AIRS has amassed hundreds of examples of singers of different ages from different countries, and the number of samples is expected to rise exponentially over the coming year. The automated version indexes 19 separate segments for each participant saved on a remote server for quick downloading according to test component, gender, age, culture, or study. Over 1500 records now exist, and this number will grow exponentially. AIRS will produce other valuable data sets shareable at least for research purposes (e.g., singing naturally, studio lessons and practice, choral rehearsals and performance, multicultural teaching examples, etc.).

Regarding specific milestones, a survey of digital libraries for music and singing was conducted. Nyssim Lefford analyzed examples for functionality and interface design, and Polina Proutskova (2012) wrote a literature review. Lefford conducted a formal survey of needs and use assessments of researchers, following up less formal surveys in prior years. Findings led to the development of two prototypes: the Drupal Based version 1.0, and version 2.0 with advanced search functionality. Simultaneously, an application was developed by Bing-Yi Pan for archiving and searching corpuses. Digital Library team members meet via teleconference to discuss features, workflow, documentation and policy. Team members include Ichiro Fujinaga, George Tzanataakis, and Theresa Leonard. The Annual meetings provide workshops on the DL for purposes of demonstration and feedback.

The AIRS Digital library benefits from partnership with the UPEI Robertson Library, a leader in digital services. Donald Moses, Digital Initiatives and Systems Librarian with Robertson Library, has served as the primary liaison collaborator. Student Jonathan Lane, currently completing a degree in computer science, has been coordinating development efforts.

Dissemination

The plan for dissemination is unfolding well in both academic and non-academic directions. The following lists shows first the expectation by 42 months, then the actual total at 39 months (bold): Review articles (15:~~4~~ others in progress); Workshops (14:**15**); Recordings (4:**6**); Presentations (41:**107**); Symposia Organized (11:**11**); Proceedings Papers (15; **11**); Articles (31; **43**); Book Chapters (19; **13**); Books (2:**1** + 1 in press) Edited Volumes (6:**2**); Choirs (2:**1**); Festivals (2:**3** public concerts); Games (3:**1**). There are at least 2 Ph.D., and 6 MA theses completed or in progress, and 18 undergraduate theses completed. Highlights include [Island Songs](#), a book edited by CRC Island Studies Godfrey Baldacchino (2011), a special issue "[Perspectives on Singing](#)" edited by Larry O'Farrell (2010) of the UNESCO Observatory e-Journal *Multi-Disciplinary Research in the Arts*, and a special 270 page double issue, edited by Annabel Cohen and Sandra Trehub, on [Singing and Psychomusicology](#) for *Psychomusicology: Music, Mind & Brain*, with 18 AIRS researchers contributing. Published by the American Psychological Association, the articles are widely available electronically, as well as in print.

Annual meetings have brought together 50 to 60 AIRS researchers (~50% students) in an intensive, exciting research overview, with singing performance and participation woven into the programme. A UNESCO sponsored symposium organized by Annabel Cohen and Andrea Rose opened the biennial Phenomenon of Singing Symposium at Memorial University in 2009, and an AIRS



symposium took place the final afternoon, 2011. Symposia have been presented at many international meetings such as ISME 2010, 2012; ISIS, 2011 (assisted by Darryl Edwards); and CPA 2012. The Director has organized such sessions, and also encouraged collaborators Chen-Hafteck, Heydon, O’Farrell, Rose, Russo, and Sullivan. Community partnerships provide non-academic opportunities for dissemination, described in the section on Partners.

AIRS Student training

Training opportunities for students are a priority for AIRS, with more than half the budget dedicated to them. While over 100 students have received funding from AIRS, other students have benefitted from the project without direct funding. Undergraduates, for example, conduct honours theses unpaid. Students from Switzerland, Maine, and Michigan have held summer internships in Canada enabling them to receive course credit from their home institution, some returning home to complete their honours theses using data acquired in the summer. By means of the student funding competition, compensation in general ranges between \$1000 - \$5000 for research work focusing on the goals of AIRS. Specific competitions may arise for work on special topics, or visiting internships to facilities that offer special opportunities (e.g., birdsong, fMRI laboratories, and pan-provincial or cross-cultural exchanges).

Dr. Steven Livingston received the AIRS Year 3 Postdoctoral Fellowship to work with Frank Russo (1.2); Dr. Liliya Nafikova received the award in Year 4 to work with Carol Beynon (2.2). This position is distinct from the ongoing postdoctoral position at the AIRS UPEI hub. To this end, Dr. Anick Lamarche in the summer of 2010, managed a group of visiting student interns and advanced work on the AIRS Test Battery, and since 2011, Dr. Bing-Yi Pan, has contributed to all themes: automating the AIRS Test Battery and serving in an active role for 1.3 activities internationally and at home, analysing voice-lesson effects on voice quality for Theme 2, and contributing to the Chinese portion of the Quadcultural Songbook (3.1). For the AIRS International choir he is assisting in the development of the handbook. Dr. Nyssim Lefford at UPEI prior to her Faculty appointment in Sweden has assisted greatly with the AIRS Digital library and has also been integrating two diverse fields of evolutionary biology and developmental psychology within the arena of production of vocal recordings. Other postdoctoral students have been engaged with AIRS, and belong to the AIRS Student and Early Career Researcher Group.

Theme	Proposed				Actual			
	U	M	PHD	total	U	M	PHD	total
1.1	6	9	4	19	2	1	11	14
1.2	3	6	3	12	21	6	12	39
1.3	12	6	2	20	18	4	3	25
2.1	8	9	6	26	3	3	7	13
2.2	2	7	2	11	0	3	6	9
2.3	9	2	2	13	18	0	0	18
3.1	10	6	3	19	7	10	4	21
3.2	2	4	2	8	0	4	11	15
3.3	2	9	6	17	3	15	4	22
4.0	4	3	1	8	2	1	2	5
Total	58	61	31	150	74	47	60	181

Student Support from AIRS

On the left is the proposed number of students at each level to receive financial support from AIRS for each sub-theme, and on the right is the actual to date. This includes salary as well as travel. Postdoctoral fellows who receive funds are not shown, nor are those students supported directly by UPEI or solely by other Universities.

Travel awards from the separate student travel budget enabled students to present their work at the annual AIRS meeting. Students have been encouraged to publish or co-publish their work. Student presentation awards aim both to maintain high standards of presentation and to expose student work to the broad range of AIRS expert faculty researchers. Students have opportunities for exchanges across the AIRS network, enhancing exposure to experts, techniques, technology, issues, and cultures.



Students have been involved in all levels and stages of this research project, from pilot testing individuals, to data analysis and dissemination of research results in scholarly papers and conference presentations. A few examples must suffice. Students in 1.1 have developed skills working with children in a school setting and one-on-one in a laboratory setting using a range of music, language and cognitive assessments. Students in Hauf's laboratory (1.2) are instructed and trained to prepare video stimuli suitable for presentation with an eyetracker. They also learn how to create and run a new study and how to analyze the gaze data with specialized software (Tobii Studio eyetracker, Biopac for the heart rate, and Interact for the motor activity). Further training experiences incorporate writing ethics applications, designing posters for conferences, and conference presentations. Working with the Test Battery (1.3) gives students an opportunity to learn to contribute to empirical research in different levels, starting with development of methodology, planning and executing the test procedures, analyzing data, and finalizing the results in the form of articles and presentations. AIRS is quite unique in this sense, as students have a chance to not only develop research skills, access new technologies, and present and publish their work, but also benefit from interactions and networking with some of the most important scholars in the field. In 3.2 students engage with a multi-phase program and curriculum development and research, field work, data analysis, IG learning and singing phenomena, interdisciplinary research (including singing performance, psychology of music, curriculum studies), preparation of manuscripts for publication and presentation, involvement in AIRS network. Theme 3 Leader Mary Gick writes "Students at Carleton University and the University of Saskatchewan have benefitted significantly from the AIRS project. Master's student Sally Busch would likely not be an MA student at Carleton University in Ottawa without AIRS. When Sally discovered my AIRS affiliation on my Carleton faculty website... she changed her graduate study plans to come to Carleton to study singing with me." Katie McCaw, Marya Stonehouse, and Jean Emmerson (Saskatchewan) have benefitted from opportunities to interact with international colleagues, attend stimulating annual meetings, participate in teleconferences, pursue research in a topic of personal interest, meet students with shared interests, and acquire experiences that advance scholarship in terms of presenting conference posters/oral presentations. Katie and Marya were featured in a College newsletter article (p. 2) "[Singing Research takes Graduate Students to Newfoundland](#)".

Partnerships

Partnerships identified in the original proposal fall into three clusters--the music and culture industries, well-being and aging, and finally, technologies.

Arts and Culture Partners

The **Confederation Centre for the Arts** provided space, facilities and in-house resources, for past AIRS workshop events, (e.g., master class with Jeffrey Huard, and an AIRS "Through Voices we Unite" Concert). Anne Allen, Director of the Charlottetown Festival, participated in the AIRS Research Workshop itself, at UPEI. The Centre connects AIRS with giants in vocal performance and enables educating the public about the AIRS research findings in singing. **The East Coast Music Association (ECMA)** has provided AIRS with exhibitor space and access to conference delegates for an original AIRS game entitled 'Melody on the Spot' arising out of the AIRS Test Battery. Judges from the music industry also co-operate.. **Music PEI** extended its initial two year commitment. Executive Director Rob Oakie has provided AIRS with access to its mailing list and advertising opportunities, the opportunity of



interviewing songwriters at weekly performances, and access to its lists of performers in the province enabling AIRS to separate the role, appeal and value of singing from music in general. Mike Speelman, the AIRS student liaison has space in their Charlottetown office as needed. **Culture PEI – formerly PEI Cultural Human Resources Sector Council** is currently working with Yuling Chen (student liaison) to co-author, publicize and disseminate a joint report on the role of singing in the lives of newcomers to PEI. In addition, AIRS has access to this partner’s distribution list.. Henk van Leeuwen, the CEO, has attended meetings with AIRS Management, and spoken at the AIRS Annual Meeting.

Well-being and development Partners

The **Alzheimer Society of PEI** has provided training and access to research participants, leading to an honours thesis, and continuing research in 2012. Corrine Hendricken-Eldershaw attends AIRS meetings, and the AIRS Director and Project Manager have spoken at Alzheimer events. Joint grant application has been discussed. The **Grand Avenue Children’s Centre** in London, ON and its associated co-located facility for seniors has provided the facility and coordinators for the initial implementation of the intergenerational singing curriculum, thus enabling the IG research project, under the leadership of Rachel Heydon. The **Laurier Centre for Music in the Community** remains a partner with the AIRS Project in shared research on value of singing to communities, and in communication, and dissemination of study results. Director Lee Willingham attends AIRS Policy and Planning meetings and connected with AIRS at the 3rd Annual meeting in Newfoundland and more recently at the Music Care Conference in Fredericton, last month. **Soloway Jewish Community Centre** in Ottawa reconfirmed its partnership for the intergenerational singing study, and AIRS is seeking a student liaison to work with them in Year 4, when the IG singing handbook is available. **Young at Heart Musical Theatre for Seniors (YAH)** and AIRS realized a plan through two honours theses on the impact of the YAH company’s live shows in the senior residences. Highlighted on CBC National, the study focused on the value of the performers inviting the audience members to sing. Results on memory, well-being and video evidence of singing was of value to both AIRS and YAH. The YAH Executive Director, Catherine O’Brien, looks forward to continuing the partnership with future research students. **Denise Beaton, student liaison with Veterans Affairs Canada (VAC)** is creating a compilation of references to music, song and singing from the Heroes Remembers collection of 2,500 hours of video and audio conversations with Veterans from the wars of the 20th century. Plans are also to meet with long term care residence managers and activity coordinators where veterans live with the idea of researching how to tailor music and singing activities for the Veterans. Dr. David Pedlar, VAC Director of Research, has regularly participated in the Annual AIRS Regional Workshop. He has introduced to Denise and AIRS, Darragh Mogan (former VAC director general of policy and research and current director of the *VAC Canada Remembers Chorus*).

Technology Partners

AIRS Management Team is working with **Apple Canada** to determine the best timing and optimal use of committed funds (\$10,000) during the second half of the project, looking for additional opportunities to grow the partnership, given the link between the iPod and singing, and recent use of the iPod in therapy for dementia. **Extemporal**, a small language software company, has attended AIRS regional meetings and also presented seminars on its technology for pronunciation training.



Stakeholders

AIRS has less formal relations with most of its many stakeholders, however, the Society for Music Perception and Cognition sanctioned the position of an AIRS – SMPC student liaison (Rena Friendly) at its 2011 meeting, in time to prepare joint activity for the Toronto biennial meeting, Aug. 2013, chaired by Frank Russo (Leader Theme 1). Sally Busch of Carleton University served as student liaison with the Canadian Psychological Association, and reported the AIRS Annual meeting in [Mindpad](#), the CPA student section peer-review newsletter.

Institutional Support

UPEI has provided generous support for AIRS, and we expect continued commitment as outlined in the original proposal. The Dean of Arts, Dr. Don Desserud, has expressed his commitment in principle to enabling the Director to see the project through to its 7-year completion. President Alaa Abd-El-Aziz strongly supports the University's research mandate. We are confident that Dr. Robert Gilmour Jr., the incoming Vice President of Research, will appreciate the scope of the AIRS project and the importance of continuing support. The following cash and in-kind support has been provided.

Cash support:

The office of the Vice-President of Research committed \$10,000 per annum for project years 2 through 6, for a total of \$50,000. To date, \$30,000 has been received as promised. These funds support AIRS on-campus and local activities, AIRS equipment at UPEI, student funding opportunities for UPEI students or for PEI initiatives beyond that provided in the SSHRC budget.

In-kind support:

AIRS Work Space. UPEI provides the primary AIRS Project workspace in the 1800 square foot CMTC multi-media research laboratory with dedicated on-site videoconferencing capabilities. An additional technical workspace is set up in Dalton Hall and is currently used for AIRS Test Battery development testing or training.

AIRS Online Presence and Technical Support. Robertson Library currently provides the IT infrastructure for the AIRS project and hosts the AIRS Virtual Research Environment (VRE). Beyond these services, however, Robertson remains engaged in the design and implementation of the AIRS DL, contributes library science expertise to our design process, makes available additional IT support and VRE functionality, and provides dedicated server space for application development. Since the AIRS project's inception, the library has invested heavily in a digital asset management called Islandora, and Robertson Library continues to investigate Islandora solutions for the AIRS DL. Support for the AIRS technical infrastructure is provided through IT Services and includes maintenance, backup and trouble-shooting services. IT also assists with the order and purchase of computer equipment.

Administrative and Managerial Support. To support the administrative and management efforts of the AIRS staff, the following departments have committed to and provided in-kind support throughout the first three years of the AIRS Project. The **Accounting Department** supports the AIRS staff with the timely processing of all invoices throughout the project year. They provide guidance on account management and coding, and through their accounting system, provide reports for budget management.



Research Services (previously Office of Research and Development) provided significant resource support in the initial phases of the project. They provide contract administration each year and are available for consultation on all research-related project issues, including matters of research ethics. The **Psychology Department** provides technical and secretarial support to assist the Project Director and Project Manager with the daily management of the project.

Conferences and promotion. The University has committed space and equipment to the AIRS Project. Use of facilities in the past has included space for regional workshops and the AIRS Inaugural Meeting. This commitment will include contribution to the 4th Annual AIRS Meeting in August of 2012. UPEI has committed to support advertising and promotion. The UPEI web site, newsletters and campus email are used, and will continue to be used regularly to promote activities and events of the AIRS Project.

Unforeseen Circumstances

A large network of researchers and their students creates a great management challenge. For 10 months of the 39 months of operation, the project was without a project manager--for its first 6 months, and then months 30 to 33, when the Project Manager moved on. The Director assumed managerial duties during these hiring periods, with some student assistance. The matter is happily resolved with an excellent staffing plan in place, including backup in the event of sudden departure.

Funding to sub-theme 2.2 was delayed for complex reasons, however this is now on track, and the sub-theme is poised to move forward, especially with the added strength of Liliya Nafikova, the new full-time AIRS postdoctoral fellow. Toronto School Board Ethics prevented carrying out a procedure (provision of certain questionnaire items). The project went ahead, knowing that some data will be missing from the multinational study. In another province, for the same study, the school board banned any use of classes for this purpose for the year, due to restructuring. A private school participated instead, leading to an adequate though smaller sample than desired. It is believed that the previous ban is indeed temporary.

Future Directions

Creation of the next milestone document is the priority, for discussion at the Annual Meeting. Most new milestones will extend previous ones, with new synergistic and consolidating initiatives. Drawing on the entire collaboration is a book series, a volume for each theme (development, education, and well-being), with sections edited by sub-theme leaders. This series will include theoretical integrative articles on singing acquisition; comparisons of singing and language with a focus on gesture and audiovisual integration, and a theory of song change. Abstracts and biographies are now arriving, and the Annual Meeting provides opportunity for discussion the prospectus and securing a prestigious publisher.

Continuing dissemination through special journal issues is expected, e.g., Lola Cuddy (Editor, *Music Perception*) has recently invited the Project Director to propose a special issue, and participants in the symposium on new singing test instruments are interested in following up; Rachel Heydon (Editor, *Language and Literacy*) and her co-editors are welcoming a special issue on language, literacy and singing with guest editor Zheng Zhang, a new faculty member of the Canadian University of Hong Kong, and previous assistant for AIRS Research at Western University). Handbooks for Intergenerational Singing Programs, Multicultural Choirs, and Cross-cultural Singing School Curricula are in progress and



expect to have a wide practical impact when used in seniors' homes, universities, and public schools respectively. A textbook to support advanced new specialty courses in the Psychology of Singing is planned. The public face of the AIRS web-site will be the go-to site for information about singing research, while the Digital Library is expected to revolutionize research in singing. Game development is also underway connecting well with Sub-theme 2.3.

The new test instruments, VAMDA, RAVDASS, and the AIRS Test Battery, will be further developed. In the case of the AIRS Test Battery, in addition to standardizing the delivery, procedures will be standardized for analysis where possible, leading to an immediate score, and enabling inter-relations among components and clusters of skills to emerge.

With research findings and theory in hand, efforts will be made to engage policy makers in the fields of culture, education, healthcare, international relations, and veterans affairs regarding the implementation of programs involving singing. We expect some exciting developments in the common goal of managing digital assets with the help and consultation of the UPEI Library, and the AIRS scholars. With partners such as Music PEI, Culture PEI, and ECMA, we expect to jointly conduct a study on the economic impact of singing as opposed to music in general in PEI, as a model for other provincial endeavours. In YEAR 7, the 7th AIRS international conference on singing research and a vocal festival will take place.

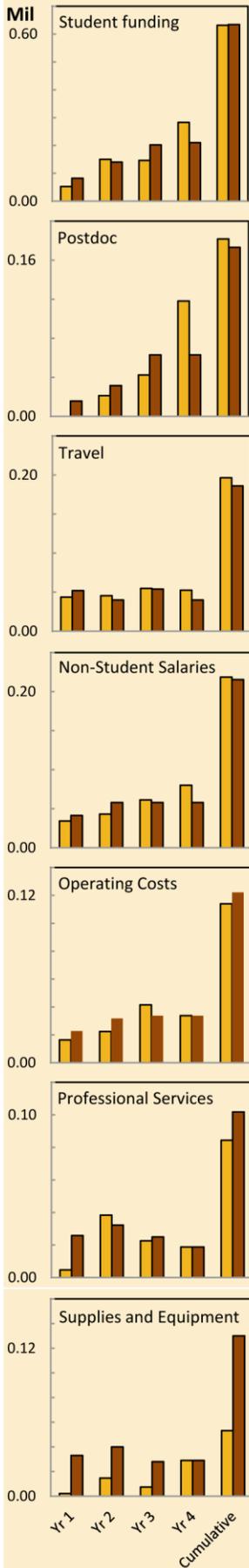
Financial information

Each year AIRS apportions student funding at least to the amount specified in the original budget through the student funding competition. To date, the overall project budget has been underspent by approximately \$94K primarily due to a surplus in allocation for equipment and supplies. Year 4 spending for equipment and supplies is expected to increase and reduce the project surplus to an estimated \$80,000 by end of Year 4. The revised budget distributes Year 4 surplus across students and staff in the successive years. There is a declining budget with Years 5, 6, and winding down to Year 7, however, the possibility of seeking additional funding to support certain initiatives is a goal. The current proposed budget will support the proposed activities for the completion of the grant.

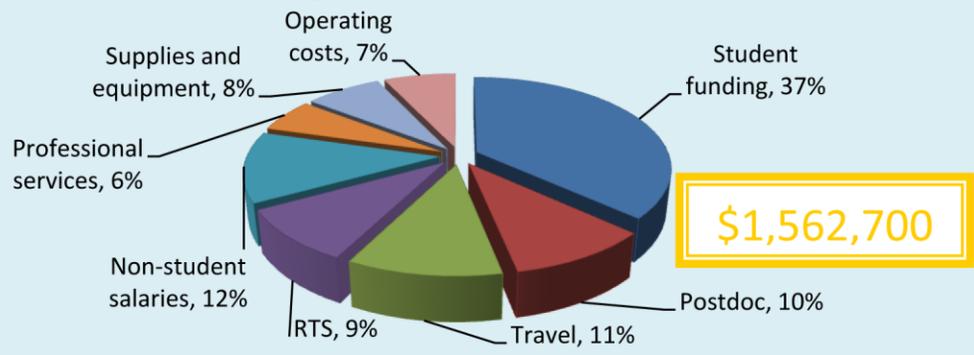
Page 20 shows in the left column, the proposed and spent budget for Years 1 to 4 for all categories of spending, except RTS. The pie charts show the total proposed and spent budget for all 4 years combined (Year 4 projected). The bottom panels also include the remaining Years 5 to 7. Note: The AIRS budget has been reconciled to actual values up to and including June 30, 2012, and has been provided to UPEI's Research Services Department to validate the accuracy of SSHRC Form 300 submitted for project years 1 and 2.

Final remarks

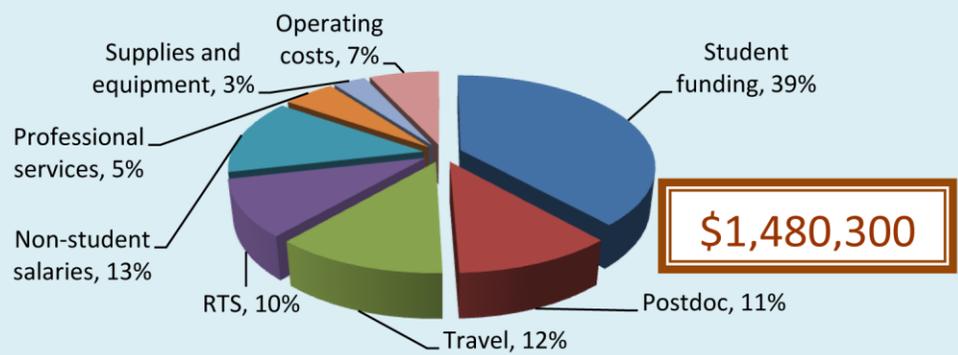
The outstanding AIRS MCRI interdisciplinary team has laid the foundations for addressing how singing develops, how we should teach singing and use singing to teach, and how singing impacts well-being. The research has advanced understanding of cultural, universal, and idiosyncratic influences on singing, and has increased awareness of the power and complexity of singing. In the remaining years, AIRS will add to our new knowledge, consolidate, and disseminate findings, and confirm their value for society.



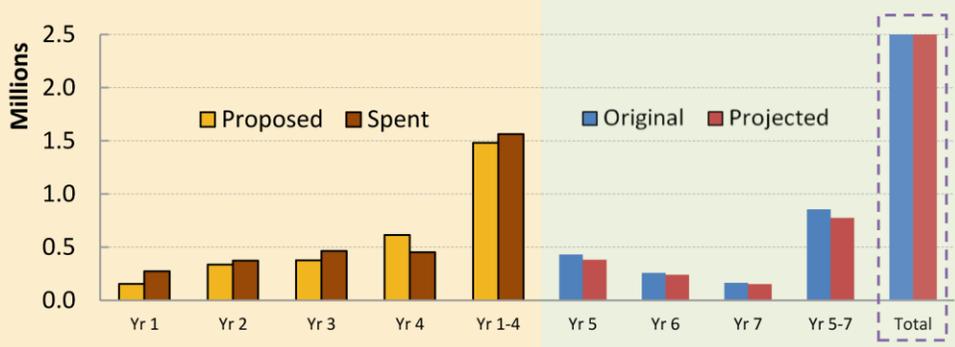
AIRS Proposed Budget, Year 1-4



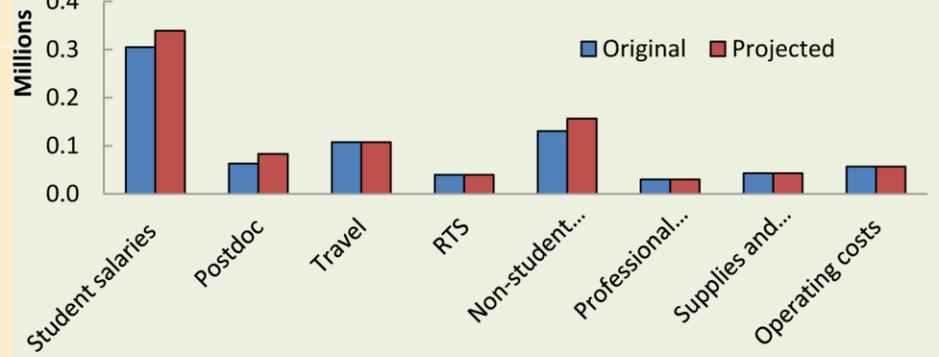
AIRS Spent Budget, Year 1-4



AIRS Budget, Year 1-4



AIRS Budget, Year 5-7



Appendix A – AIRS Midterm Bibliography - July 9, 2012

Note: AIRS Collaborators in Bold; AIRS Students and Postdocs highlighted in yellow	AIRS Sub- theme
Books	
Baldacchino, G. (Ed.). (2011). <i>Island Songs: A Global Repertoire</i> . Lanham, MD: Scarecrow Press.	3.1
Heydon, R. (2013). <i>Learning at the ends of life</i> . Manuscript submitted for publication. Toronto: University of Toronto Press. {Includes reference to AIRS Intergenerational Singing Research}	3.2
Edited Special Journals and Volumes	
Cohen, A. J. & Trehub, S. E. (Eds.), (2011). Singing and Psychomusicology [Special Issue]. <i>Psychomusicology: Music, Mind & Brain</i> , 21. {contributions from 18 AIRS team members}	All
O'Farrell, L. (Ed). (2010). <i>Perspectives on singing</i> [Special issue]. UNESCO Observatory, 2(1). http://www.education.unimelb.edu.au/eldi/elc/unesco/ejournal/ejournal6.html	All
Book Chapters	
Adachi, M. (2011). Happy versus sad: How do children express through their songs? In K. Chiba (Ed.), <i>Power of smile</i> (pp. 91-120). Sapporo, Japan: Hokkaido University Press. [Japanese]	1.2
Adachi, M. (in press). Musically rich but creatively poor: A cautionary tale of music nurturing in Japanese preschools. In P. S. Campbell & T. Wiggins (Eds.), <i>The Oxford handbook of children's musical cultures</i> . New York, NY: Oxford University Press.	1.2
Adachi, M., & Trehub, S. E. (in press). Musical lives of infants. In G. McPherson & G. Welch (Eds.), <i>Oxford Handbook of Music Education</i> . Oxford: Oxford University Press.	1.2
Beynon, C. A. (2012). Choral music education in Canada: One perspective. In C.A. Beynon & K.K. Veblen (Eds.), <i>Critical Perspectives in Music Education in Canada</i> (pp. 89-101). Waterloo, ON: Wilfrid Laurier Press.	2.2
Beynon, C. A., & Alfano, C. (in press). Getting to know you: Fostering learning, fun and friendship between two generations. In D. Elliott & K. Veblen (Eds.), <i>Community Music Today</i> . Lanham, MD: Rowman & Littlefield.	3.2
Cichocki, W. (2012). An overview of the phonetics and phonology of Acadian French spoken in northeastern New Brunswick (Can). In R. Gess, C. Lyche & T. Meisenburg (Eds.), <i>Phonological Variation in French: Illustrations from Three Continents</i> (in press). Amsterdam: Benjamins.	1.2
Cohen, A. J. (2011) Creativity in Singing: Universality and the question of critical periods. In D. Hargreaves, D. Miell, & R.A.R. MacDonald (Eds.), <i>Musical Imaginations: Multidisciplinary perspectives on creativity, performance, and perception</i> (pp.173-189). Oxford, UK: OUP	1.3
Cohen, A. J. (2011). Forward. In G. Baldacchino (Ed.), <i>Island Songs: A Global Repertoire</i> (pp. v –ix). Lanham, MD: Scarecrow Press.	3.1
Heydon, R. (in press). Intergenerational learning programming from a curriculum studies perspective: New directions, new possibilities. In N. Howe & L. Prochner (Eds.), <i>New Directions in Early Childhood Education and Care in Canada</i> . Toronto: Univ. Toronto Press.	3.2
Ilari, B. (in press). 'This river is my street': Musical cultures of girls in the Brazilian Amazon. In P.S. Campbell & T. Wiggins (Eds.), <i>Oxford Handbook of Children's Musical Cultures</i> . OUP	2.3
Trehub, S. E. (in press). Communication, music, and language in infancy. In M. Arbib (Ed.), <i>Language, music, and the brain: A mysterious relationship</i> . Massachusetts: MIT Press.	1.2
Trehub, S. E. (in press). Musical universals: Perspectives from infancy. In J.-L. Leroy (Ed.), <i>Topics in musical universals/Actualités des Universaux Musicaux</i> . Paris: Editions des Archives Contemporaines.	1.2



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Articles

Adachi, M., & Trehub, S. E. (2011). Expression of emotion in song by Canadian and Japanese preschoolers. *Psychomusicology: Music, mind and brain*, (21), 69-82. 1.2

Anderson, S. (2010). Poor-pitch singing: Perception or Production. *Singing* (59), 29-32. 1.1

Bailly, L., Henrich, N., & Pelorson, X. (2010). Vocal fold and ventricular fold vibration in period-doubling phonation: Physiological description and aerodynamic modeling. *Journal of the Acoustical Society of America*, 127(5), 3212-3222. 2.3

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Beynon, C.A., Beynon-Martinec, J.C., & Martinec, J. (2010). Choral memory: Developing and sustaining tonal excellence in choirs. *International Choral Bulletin* 30(2), 27-30. 3.2

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Chan, L., Russo, F. A., & Livingstone, S. (in press). Automatic facial mimicry of emotion during perception of song. *Music Perception*. 1.2

Clift, S., & Hancox, G. (2010). The significance of choral singing for sustaining psychological wellbeing: findings from a survey of choristers in England, Australia and Germany [Special Issue]. *Music Performance Research*, 3(1), 79-96. 3.2

Clift, S. (2012). Creative arts as a public health resource: moving from practice-based research to evidence-based practice. *Perspectives In Public Health*, 132(3), 120. doi:10.1177/1757913912442269 3.3

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Clift, S., Nicol, J.J., Raisbeck, M., Whitmore, C., & Morrison, I. (2010). Group singing, wellbeing and health: A systematic mapping of research evidence. [UNESCO Observatory Refereed E-Journal. 2\(1\), 1-25](#). 3.3

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Cohen, A. J. (2011). Introduction to the special volume on the psychology of singing. In *Psychomusicology: Music, Mind & Brain*, 20, 1-5. 1.3

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Ginsborg, J. and Chaffin, R. (2012). Preparation and spontaneity in performance: A singer's thoughts while singing Schoenberg. *Psychomusicology*, 21(1&2): 137-158. 2.2

Henrich N., Savariaux C. (2012) Singing voice research at the Speech and Cognition Department, GIPSA -lab, Grenoble, France, *Psychomusicology*, 21 (1-2), 238-244. 2.3

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Hutchins, S. & **Peretz, I.** Perception and Action in Singing. (2011). In A. Green, E. Chapman, J. F. Kalaska, & F. Lepore (Eds.), *Progress in Brain Research, Vol. 191, Enhancing Performance for Action and Perception: Multisensory Integration, Neuroplasticity, and Neuroprosthetics, Part I* (pp. 103-118). New York: Elsevier. 1.1

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Hutchins, S., Roquet, C., & **Peretz, I.** (in press). What counts as "in tune"? A comparison of voice and instruments. *Music Perception*. 1.1

Loui, P., Wan, C., & **Schlaug, G.** (2010). Neurological bases of musical disorders and their implications for stroke recovery. *Acoustics Today*, 6, 28-36. 1.3

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Nakata, T., & **Trehub, S. E.** (2011). Expressive timing and dynamics in infant-directed singing. *Psychomusicology: Music, Mind & Brain* 21, 45-53. 1.2

Nakata, T., **Trehub, S. E.**, & Kanda, Y. (2012). Effect of cochlear implants on children's perception and production of speech prosody. *Journal of the Acoustical Society of America*, 131, 1307-1314. 1.2

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Raju, M. and **Ross, J.** (2012). Adaption to Estonian children of the protocol for cross-cultural research in singing. *Trames: Journal of the Humanities and Social Sciences*, 16, 125-144. 1.3

Roubeau B., **Henrich N.,** Castellengo M. (2009). Laryngeal vibratory mechanisms: the notion of vocal register revisited. *Journal of Voice*, 23(4): 425-438. 2.3

Russo, F. A., Sandstrom, G. M., & Maksimowski, M. (2011). Mouth versus eyes: Gaze fixation during perception of sung interval size. *Psychomusicology: Music, Mind & Brain*, 21, 98-107. 1.2

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Tierney, A., **Russo, F. A.,** & Patel, A. D. (2011). The motor origins of human and avian song structure. *Proceedings of the National Academy of Sciences (PNAS) of the United States of America* 108, 15510-15515 1.2

Trehub, S. E. (2010). In the beginning: A brief history of infant music perception. *Musicae Scientiae*, [Special Issue], 71-87. 1.2

Trehub, S. E., & Prince, R. (2010). Lullabies and other women's songs in the Turkish village of Akçaeniş. *UNESCO Observatory E-journal*, 2(2). Recovered from <http://www.education.unimelb.edu.au/eldi/elc/unesco/pdfs/ejournals/trehub-paper.pdf>. 1.2

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Volkova, A., **Trehub, S. E.**, Schellenberg, E. G., Papsin, B. C., & Gordon, K. A. (in press). Children with bilateral cochlear implants identify emotion in speech and music. *Cochlear Implants International*. 1.2

Weiss, M. W., **Trehub, S. E.**, & Schellenberg, E. G. (in press). Something in the way she sings: Enhanced memory for vocal melodies. *Psychological Science*. 1.2

Proceedings Papers

Adachi, M., & **Ando, T.** (2010). A Japanese infant’s vocal features in daily contexts of infant-directed speech and song: A case study. *Proceedings of the 2010 Spring Meeting of the Japanese Society for Music Perception and Cognition* (pp. 1-4). [Japanese] 1.2

Adachi, M., & **Falk, S.** (in press). Does native language influence the mother’s interpretation of an infant’s musical and linguistic babblings? *Proceedings of the 12th International Conference on Music Perception and Cognition* [CD-ROM]. 1.2

Cohen, A. J. (2011). Advancing interdisciplinary research in singing: A performance perspective. In A. Williamon, **D. Edwards**, & L. Bartel (Eds.) *International Symposium on Performance Science* (pp. 105- 110). Association Européenne des Conservatoires, Academies de Musique et Musikhochschulen (AEC). Utrecht, The Netherlands. 1.3

Cornaz, S., Vallée N., **Henrich N.**, & Romano A. (2009, March). Peut-on utiliser le travail en voix chantée pour améliorer la correction phonétique segmentale en langue étrangère? Le cas de locuteurs italiens apprenants de Français Langue Étrangère, in Actes des Rencontres Jeunes Chercheurs en Parole - Rencontres Jeunes Chercheurs en Parole, Paris, France. 2.3

Devaney, J., & **Fujinaga, I.** (2011). Intonation in solo vocal performance: A study of semitone and whole tone tuning in undergraduate and professional sopranos. In A. Williamon, **D. Edwards** & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*, 219-224. Utrecht, The Netherlands: Association Européenne des Conservatoires. 2.2

Droua-Hamdani, G., **Selouani, S.-A.**, Boudraa, M., & **Cichocki, W.** (2010). Algerian Arabic rhythm classification. In A. Botinis (Ed.), *Proceedings of the Third International Speech Communication Association Tutorial and Research Workshops on Experimental Linguistics: ExLing2010* (pp 37-40). Athens, Greece: University of Athens. 1.2

Fine, P., **Ginsborg, J.**, and Barlow, C. (2009). The influence of listeners’ singing experience and the number of singers on the understanding of sung text. In A. Williamon, S. Pretty, & R. Buck (Eds.), *Proceedings of the International Symposium on Performance Science*. Utrecht: The Netherlands: European Association of Conservatoires (AEC). 2.2

Ginsborg, J., Fine, P. and Barlow, C. (2011). Have we made ourselves clear? Singers’ and non-singers’ perceptions of the intelligibility of sung text. In A. Williamon, **D. Edwards**, & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*, (111-116). Utrecht: The Netherlands: European Association of Conservatoires (AEC). 2.2

Knight, S. (2011). Adults identifying as “non-singers” in childhood: Culture, social, and pedagogical implications. In A. Williamon, **D. Edwards** & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*, 117-122. Utrecht, The Netherlands: Association Européenne des Conservatoires. 2.2

Lidji, P., **Palmer, C.**, **Peretz, I.**, & Morningstar, M. (2011). Entertainment to speech and song. In A. Williamon, **D. Edwards** & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*, 123-128. Utrecht, The Netherlands: Association Européenne des Conservatoires. 2.2

Young, L., & **Nicol, J.J.** (2011). Perspectives on singing and performance in music therapy. In A. Williamon, **D. Edwards** & L. Bartel (Eds.), *Proceedings of the International Symposium on Performance Science 2011*, 129-134. Utrecht, The Netherlands: Association Européenne des Conservatoires. Archived at <http://www.legacyweb.rcm.ac.uk/cache/fl0026688.pdf> 3.3

Symposia Organized

Beynon, C. A. (2010). *Men aloud: Male choral symposium*. London, ON. 3.2

Chen-Hafteck, L. (2010, August). *Interdisciplinary Research in Singing: International Advances through AIRS*. Symposium conducted at the ISME World Conference, Beijing, China. 3.1

Cohen, A. J. (2009, June). *Singing and psychology: Interdisciplinary perspectives and implications*. Symposium organized for the Canadian Psychological Association. Montreal, QC. 1.3

Cohen, A.J. (2009, October). *Research on Singing (an AIRS Symposium)*. Symposium Canadian Acoustical Association. Niagara on the Lake, ON 1.3

Cohen, A.J. (2009). Advancing Interdisciplinary Research on Singing. In A.J. Cohen (Chair), *Canadian Symposium on Arts and Learning*. Symposium at the Royal Conservatory of Music, Toronto, ON. 1.1

Cohen, A.J. (2010, April). *Overview of AIRS: Community connections and research in singing*. Symposium for the UPEI Education Workshop, Charlottetown, PE. 1.3

Cohen, A. J., Edwards, D., Russo, F. A., & O’Farrell, L. (2009, December). *Advancing Interdisciplinary Research in Singing: A major collaborative research initiative in the arts and learning in Canada*. Presented at the Canadian Symposium on the Arts and Learning, Toronto, ON. 1.3

Cohen, A.J., & Rose, A. (2009, July). *Fostering cross-cultural understanding through the power of singing - UNESCO/AIRS collaboration*. Symposium organized for the Phenomena of Singing Conference. Memorial University, St. John's, NF. 1.3

Cohen, A. J. & Russo, F. A. (2012, June). *New test instruments to study singing: Perception, production, and emotion*. Symposium organized for the Annual Meeting of the Society for Brain, Behaviour & Cognitive Science, Kingston, ON. 1.1
1.2
1.3

Russo, F. (2011, August). A major collaborative research initiative on singing: Focus on performance. International symposium on Performance Science. **Toronto..** 2.2

Sullivan, J. & Cohen, A. J. (2012, June). *Singing across the lifespan: Active and passive behaviors*. Symposium organized for the Canadian Psychological Association Annual Meeting. Halifax, NS. 1.3

Oral Presentations and Posters

Adachi, M., & Ando, T. (2009, June). *A Japanese infant’s vocal features in daily contexts of infant-directed speech and song: A case study*. Paper presented at the 1st Annual Conference AIRS Advanced Interdisciplinary Research in Singing, UPEI, Charlottetown, Canada. 1.2

Adachi, M. (2009). How do Japanese mothers differentiate between a toddler’s musical and linguistic babblings? In **A.J. Cohen, & L. O’Farrell** (Chairs), *Preconference event on AIRS themes*. Symposium conducted at the Phenomenon of Singing Conference, St. John’s, NL. 1.2

Adachi, M., & Ando, T. (2010, May). *A Japanese infant’s vocal features in daily contexts of infant-directed speech and song: A case study*. Paper presented at the 2010 Spring Meeting of the Japanese Society for Music Perception and Cognition, Hakodate, Japan. [Japanese] 1.2

Adachi, M. (2010, August). *Can prospective parents differentiate between an infant’s musical and linguistic babblings?* Paper presented at the 11th International Conference on Music Perception and Cognition, Seattle, WA, USA. 1.2

Adachi, M. (2010, August). *How do mothers differentiate between a toddler’s musical and linguistic babblings?* Paper presented at the 29th ISME World Conference 2010, Beijing, China. 1.2

Adachi, M., & Ding, X. (2011, March). *How do Japanese mothers and fathers differentiate between a toddler’s musical and linguistic babblings?* Poster presented at the Biennial Meeting of the Society for Research in Child Development, Montreal, Canada. 1.2

Adachi, M. (2011, August). *Effects of interactions with young children on Japanese women’s interpretation of musical babblings*. Meeting of the Society for Music Perception and Cognition, New York, USA. 1.2

Adachi, M., & Falk, S. (2012, August). Does native language influence the mother’s interpretation of an infant’s musical and linguistic babblings? Poster to be presented at the 12th International Conference on Music Perception and Cognition, Thessaloniki, Greece. 1.2



Anderson, S. (2010). *Poor-pitch singing: Perception or Production?* Presented at the Annual Summer Conference of the Association of Teachers of Singing: University of Sussex, Brighton: Voice, Mind & Body. 1.1

Anderson, S. & **Stewart, L.** (2011, June). *A study of the effects of singing intervention on pitch perception and production in those with congenital amusia.* Poster presentation at Neuroscience and Music IV, Edinburgh, Ireland. 1.1

Anderson, S. (2011). *A study of the effects of singing intervention on pitch perception and production in those with congenital amusia.* Paper presentation at the Neuroscience and Music IV meeting, Edinburgh, Scotland. 1.1

Baldacchino, G., & **Weatherill, A.** (2010, March). *Work in progress.* Paper presentation at the UPEI Centre for Educational Research showcase afternoon, Charlottetown, PE. 3.1

Baldvinsdottir, B. (2010, November). *Singing development and the effect of lyrics or no lyrics in learning a new song.* Presentation at the Conference on Democracy in Music Education from a Nordic Perspective: NNME Project Conference, Copenhagen, Denmark. 1.3

Beaton, D., Henderson, R., O'Brien, C., & Cohen, A.J. (2012, June). The effects of active singing versus passive listening on psychological health of senior citizens presented with a live musical theatre performance. In **A.J. Cohen & J. Sullivan** (Chairs), *Singing across the lifespan: Active and passive behaviors.* Symposium conducted at the 73rd Annual Convention of the Canadian Psychological Association, Halifax, NS. 3.3

Beynon, C., Heydon, R., O'Neill, S., Crocker, W., & Loerts, T. (2011). *Mixed voices: Attending to the multiple voices of young children in an intergenerational singing program. Oral paper presentation delivered as part of the symposium Intergenerational voices: Curricula to foster the learning, communication, and well-being of young children and elders.* Symposium conducted at the meeting of the Canadian Society for the Study of Education, Fredericton, NB. 3.2

Beynon, C., Hutchison, J., Heydon, R., & O'Neill, S. (2012). *I ain't no damn singer! Exploring the musical perceptions of older adults involved in an intergenerational singing program.* Paper presentation at the meeting of the Canadian Society for Studies in Education, Waterloo, ON. 3.2

Beynon, C.A., Hutchison, J., Heydon, R., & O'Neill, S. (2012). *I ain't no damn singer! Exploring the musical perceptions of older adults involved in an intergenerational singing program.* Poster presentation at the Western University Faculty Research Day, London, ON. 3.2

Brosha, T., Hauf, P., & Sullivan, J. (2011, June). *Sing to me please, put me at ease: Comparing infants' attentional responses to infant-directed singing and speaking.* Poster presentation at the 72nd Annual Convention of the Canadian Psychological Association (CPA), Toronto, ON. 1.2

Brosha, T., Hauf, P., & Sullivan, J. (2011, July). *Sing to me please, put me at ease: Infants' responses to infant-directed singing and speaking.* Poster presentation at the AIRS 3rd Annual Meeting, St. John's, NF. 1.2

Brown, S. (2012, June). How songs change. Position paper. In **G. Baldacchino** (Chair) & **N. Lefford** (Organizer) Expert workshop on Song resilience and change. University of Prince Edward Island. 3.1

Brown, S. (2012, June). Neuroimaging of pitch production. Keynote presentation. AIRS 4th Regional Workshop. Charlottetown. 1.1

Busch, S., Daugherty, C., & Gick, M. (2011, July). *Caregiver measures for singing-related behavior change in a dementia population: A pilot study.* Poster presentation at the AIRS 3rd Annual Meeting, St. John's, NL. 3.3

Busch, S., & Gick, M. (2011, July). *Choral singing and well-being.* Paper presentation at the eighth annual international symposium on the Phenomenon of Singing, St. John's, NL. 3.2

Campbell, P. S., Chessin, E., & Perdue, M. (2009). Singing, Learning, and Transmission. In L. Chen-Hafteck (Organizer & Chair). Symposium: Interdisciplinary Research in Singing: International Advances through AIRS the ISME World Conference, Beijing, China. 3.1

Chen-Hafteck, L. (2009, July). *Toward cross-cultural understanding through singing.* Symposium presented at the Phenomenon of Singing International Symposium, St. John's, NL. 3.1



Chen-Hafteck, L. (2009). Singing and Cross-Cultural Understanding. In **A. Cohen, & A. Rose** (Organizers), *Preconference event on AIRS themes*. Symposium conducted at the Phenomenon of Singing Conference, St. John's, NL. 3.1

Chen-Hafteck, L. (2010, July). *Bridging the musical and cultural experiences of young children of diverse learning needs*. Poster presentation at the ISME Early Childhood Music Education Conference, Beijing, China. 3.1

Chen-Hafteck, L. (2010, August). Singing and Cross-Cultural Understanding. *Interdisciplinary Research in Singing: International Advances through AIRS*. Symposium conducted at the ISME World Conference, Beijing, China. 3.1

Chen-Hafteck, L. (2012, July). *Advancing Interdisciplinary Research in Singing (AIRS): International project on cultural understanding*. Paper accepted for presentation at the International Society for Music Education (ISME) World Conference, Thessaloniki, Greece. 3.1

Chen-Hafteck, L., Cohen, A.J. & Rose, A. (2010, March). *Advancing Interdisciplinary Research in Singing (AIRS): a model for international leadership, networking and collaboration in music education research*. Paper presentation at the ISME (International Society for Music Education) North American Regional Seminar, Anaheim, CA. 3.1

Clift, S., Nicol, J.J., Raisbeck, M., Whitmore, C., & Morrison, I. (2010, August). *Group singing, wellbeing and health: A systematic mapping of research evidence*. Paper presentation at the AIRS Second Annual Meeting, Seattle, WA. 3.3

Cohen, A. J. (2009, June). *Advancing Interdisciplinary Research in Singing (AIRS): Development, Education, Well-being and a Digital Library*. Presented at the Canadian Psychological Association, Montreal, QC. 1.3

Cohen, A. J. (2009, August). *Would you like to sing an aria? Inspiring research*. Presented at the American Psychological Association, Toronto, ON. 1.3

Cohen, A. J. (2010, March). *The Trajectory of Creativity in Singing: Universality and critical developmental periods Educating the Creative Mind*. Presented at Kean University, Union, NJ. 1.3

Cohen, A. J. (2010, August). *How singing relies on memory*. In **A.J. Cohen** (Organizer & Chair), Symposium conducted for Music and Memory: Development, expertise, mental status, and neural activation. Annual Meeting of the Canadian Psychological Association, Winnipeg, MB. 1.3

Cohen, A. J. (2010, August). *AIRS Overview*. Presented at the AIRS 2nd Annual Workshop. Seattle, WA. 1.3

Cohen, A. J. (2010, September). *Advancing interdisciplinary research on singing: Development, education and well-being*. Presented at Ear Club, Department of Psychology, University of California, Berkeley. CA. 1.3

Cohen, A.J. (2011, April). *Devising, funding and managing collaborative interdisciplinary research projects in the arts and humanities: The AIRS Project example*. Invited presentation at the Dalhousie University Faculty of Social Sciences Annual Research Retreat, Halifax, NS. All

Cohen, A.J. (2011, June). AIRS test battery: relevant data. In **G. Baldacchino, & N. Lefford** (Organizers), *Pre-Meeting Expert Workshop: The Resilience of Song*. Symposium presented at the AIRS 4th Annual Regional Workshop, Charlottetown, PE. 1.3

Cohen, A. J. (2012, August). *Advancing Interdisciplinary Research in Singing (AIRS): The role of psychology in a major collaborative research initiative in the arts - Mid-term update*. American Psychological Association Annual Meeting, Orlando, FL. 1.3

Cohen, A. J., Coady, J., Lannan, M., Gallant, E., & Armstrong, V., (2009). *A Test Battery for Singing Suited for Lifespan and Longitudinal Studies*. Symposium presented at the Canadian Acoustical Association, Annual Meeting, Niagara-on-the-lake, ON. 1.3

Cohen, A. & Chen-Hafteck, L. (2010, March). *Advancing Interdisciplinary Research in Singing (AIRS): a model for comprehensive studies of the significance of the arts in children's lives and education*. Poster presentation at the Educating the Creative Mind Conference, Union, NJ. 3.1

Cohen, A.J., Gick, M., & Sullivan, J. (2010, May). *Advancing interdisciplinary research in singing (AIRS): Developmental perspectives*. Poster presentation at Development 2010: A Canadian Conference on Developmental Psychology, Ottawa, ON. 3.3



Cohen, A.J. & Kleinerman, K. (2010, August). *Transformative Experience Through Voice Lessons in Later Life*. Poster presentation at the 11th International Conference on Music Perception and Cognition, Seattle, WA. 3.1

Cohen, A.J., Russo F., Trehub, S., Tsang, C. (2011). *Advancing Interdisciplinary Research in Singing (AIRS) Part 1 Development*. Presentation at the International Conference on Music Perception and Cognition, Seattle, WA. 1.3

Countryman, J. (2012, May). *Informal musicking on Canadian school playgrounds*. Paper presentation at the Tunes and Their Transmissions: Making and Sharing Music in the Maritimes Symposium, Mount Allison University, Sackville NB. 2.1

Emmerson, J., & Nicol, J.J. (2010, August). *Mama Music: Promoting Health and harmony in the Lives of Adolescent Mothers and Their Infants with Singing*. Paper presentation at the AIRS 2nd Annual Meeting, Seattle, WA. 3.3

Forrester, M.A. (2011, November). *Studying emerging musicality: Methodological challenges*. Paper presentation to the Department of Psychology, University of Aberystwyth, Wales, UK. 1.3

Forrester, M. A., Borthwick-Hunter, E., & Baker, J. (2011, July). *Mapping out young children's singing: Preliminary English Data*. Poster presentation at the AIRS 3rd Annual Meeting, St. John's, NL. 1.3

Forrester, M.A. & Borthwick-Hunter, E. (2012, March). *Studying emerging musicality in adults and children: Methodological conundrums*. Paper presentation to the Department of Psychology, Canterbury Christchurch University, Canterbury, UK. 1.3

Friendly, R. & Trainor, L. J. (2009, June). *A Review of Production and Perception of Singing Research*. Paper presentation at the Annual Meeting of SSHRC MCRI Advancing Interdisciplinary Research in Singing, Charlottetown, PEI. 1.1

Friendly, R., Walsh, J., Tsang, C. D., & Trainor, L. J. (2011, July) *Vocal Sensorimotor Development and Singing in First Graders: Examining the relationship between vocal production and perception using the Vocal Auditory Motor Developmental Assessment (VAMDA)*. Paper presentation at the Annual Meeting of SSHRC MCRI Advancing Interdisciplinary Research in Singing, St. John's, NL. 1.1

Gabriel, M. (2009, June). *Singing our way into understanding*. Poster presentation at the AIRS 1st Annual Meeting, University of Prince Edward Island, Charlottetown, PE 2.3

Gabriel, M. (2010, August). *Singing: Exploring roots and literacies*. Paper presentation at A Vocal Mosaic of AIRS: 2nd Regional Workshop, University of Prince Edward Island, Charlottetown, PE. 2.3

Gabriel, M., & Countryman, J. (2011, July). *Informal music from a Caribbean Island: Sharing the songs*. Paper presentation for the AIRS 3rd Regional Workshop, Charlottetown, PE. 2.1

Gabriel, M. & Countryman, J. (2011, July). *Singing and children's music making in St. Vincent and the Grenadines*. Paper presentation at the Phenomenon of Singing International Symposium VIII, St. John's, NL. 2.1

Gick, M. (2009, June). Singing and well-being: A health psychology perspective. In A. Cohen (Chair), *Singing and psychology: Interdisciplinary perspectives*. Symposium presented at the Canadian Psychological Association's 70th Annual Convention, Montreal, QC. 3.2

Ginsborg, J., Fine, P., Barlow, C., Long, P., & Brownrigg, J. (2010, July). *Are we making ourselves clear? Singers' and non-singers' perceptions of the intelligibility of sung text*. Poster presentation at the Tenth Conference on Interdisciplinary Musicology (CIM10): Nature versus Culture, University of Sheffield, Sheffield, UK. 2.2

Guðmundsdóttir, H. R. & Baldvinsdóttir, B. (2012, February). *The singing ability of 5-6-year-old children in preschools with and without special music programs*. Paper presentation at the Nordic Network for Research in Music Education, 17th conference, University of Iceland, Reykjavik, Iceland. 2.1

Hauf, P., Brosha, P., & Sullivan, J. (2012, June). Six month old infants actively shift their attention while watching and listening to infant-directed singing and speaking of familiar and novel lyrics. In A.J. Cohen & J. Sullivan (Chairs), *Singing across the lifespan: Active and passive behaviors*. Symposium conducted at the 73rd Annual Convention of the Canadian Psychological Association, Halifax, NS. 1.2

Henrich N., Baily, L., Pelorson, X., & Lortat-Jacob, B. (2009, June). *Physiological and physical understanding of singing voice practices: the Sardinian Bassu case*. Presented at AIRS Start-up meeting, Charlottetown, PE. 2.2

Henrich N., Cornaz, S., & Vallée, N. (2009, June). *Singing voice as a tool for improving the teaching/learning of a foreign language. The case of Italian speakers learning French*. Presentation at AIRS Start-up meeting, Charlottetown, PE. 2.3

Henrich N., Roubreau B., & Castellengo, M. (2009, June). *How to identify the laryngeal mechanism of a singing voice production?* Presentation at AIRS Start-up meeting, Charlottetown, PE. 2.2

Heydon, R. (2010, March). *Intergenerational learning programming from a curriculum studies' perspective: New directions, new possibilities*. Paper presentation at the meeting of the Early Childhood Education and Care group, Concordia University, Montreal, QC. 3.2

Heydon, R. (2011). *Intergenerational curricula, multimodal communication, and identity options: Findings from a study of an intergenerational art program as a basis for a study of intergenerational singing curricula*. Poster presentation at the annual meeting of the Western University Research Day, London, ON. 3.2

Heydon, R. (2012, March). *Learning at the ends of life: Multimodality and identity in an intergenerational arts program*. Paper presentation to the Lancaster Literacy Centre, Lancaster University, Lancaster, UK. 3.2

Heydon, R., Beynon, C., O'Neill, S., Crocker, W., Loerts, T., & Zhang, Z. (2011). *A case study of the development and implementation of an intergenerational singing program*. Poster presentation at the annual meeting of the Western University Research Day, London, ON. 3.2

Heydon, R., Beynon, C., O'Neill, S., Crocker, W., Loerts, T., & Zhang, Z. (2011). *A literature review and study of the initiating and sustaining factors, prevalence, curricula, and opportunities of intergenerational singing programs*. Poster presentation at the annual meeting of the Western University Research Day, London, ON. 3.2

Hutchison, J.M., & Beynon, C.A. (2012, March). *Exploring levels of confidence and engagement in older adults singing*. Paper presentation at the Don Wright Faculty of Music Graduate Research Colloquium, Western University, London, ON. 3.2

Lalonde, G., & Nicol, J.J. (2011, May). *Three Francophone Adolescent Girls' Stories of Singing: Singing for Identity, Relationship, Wellbeing and Strength*. Poster presentation at the AIRS first annual meeting, Charlottetown, PE. 3.3

Lannan, M., Coady, J. D., Gallant, E., & Cohen, A. J. (2009, August). *Advancing Interdisciplinary Research in Singing via a Short Test Battery: Progress Report*. Poster presented at the Society for Music Perception and Cognition. Indianapolis, IN. 1.3

Lempert, H., Ferrante, A., Moorehouse, E., & Kwok, N. (2012, June). *The effect of singing vs. speaking on learning a novel language*. Poster presentation at the Canadian Society of Brain, Behavior, and Cognitive Science Conference, Kingston, ON. 3.3

Lévêque, Y., Giovanni, A., Schön, D. (2010, August). *Preference for natural singing voice in pitch-matching and sound categorisation*. Poster presentation at the AIRS 2nd Annual Meeting, Seattle, WA. 2.3

Livingston, R., Peck, K., & Russo, F. (2012). Database of emotional speech and song. In A. Cohen (Chair), *New test instruments to study singing: perception, production, and emotion*. Symposium conducted at the Annual Meeting for the Canadian Society for Brain, Behaviour and Cognitive Sciences, Kingston, Ontario 1.2

Loui, P. (2010). *Singing: Neurological Bases and Implications for Stroke Recovery*. Paper Presented at A Vocal Mosaic of AIRS Workshops, Charlottetown, PE. 1.1
3.3

McIver, L., & Cohen, A.J. (2011, June). *Development and validation of pitch components of the AIRS Short Battery of Tests of Singing Skill: Role of vocal training and cultural background.* . Poster presented at the 71st Annual Conference of the Canadian Psychological Association, Winnipeg, MB. 1.3

McIver, L., Lamarche, A., & Cohen, A.J. (2011). *Non-native acquisition of lyrics and melody of an unfamiliar song.* Paper presentation at the Canadian Society for Brain, Behaviour and Cognitive Science, Halifax, NS. 1.3

Nicol, J.J. (2010, May). *Music Therapy and the AIRS Project.* Poster presentation at the Annual Conference of the Canadian Association for Music Therapy, Halifax, NS. 3.3

Nicol, J.J. (2010, August). *Exploring alternative ways to represent and disseminate findings.* Poster presentation at the AIRS first annual meeting, Charlottetown, PE. 1.3

O’Farrell, L. (2009, June). *Networking and publication outlets for AIRS.* In AIRS First Annual Conference Program (pp.24). Charlottetown, PE: University of Prince Edward Island. 3.3

O’Farrell, L. (2009). *Fostering Cross-Cultural Understanding Through Singing.* Paper presentation at the Phenomenon of Singing Conference, St. Johns, NL 3.3

O’Farrell, L. (2010, March). *Partnering Across Borders: Nurturing Social Justice and Peace through Music Education.* Paper presentation for the International Society for Music Education, Anaheim, CA. 3.1

O’Neill, S. A. (2012). *Creating learning opportunities in an intergenerational arts program.* Paper presentation to the Arts Education Colloquium, Graduate School of Education, University of Melbourne, Melbourne, Australia. 3.3

O’Neill, S., Heydon, R., Beynon, C., Boissonnault, P., Lipsett, K. (2011). *A case study of an existing intergenerational singing program in Vancouver, BC.* Poster presentation at the annual meeting of the Western University Research Day, London, ON. 3.2

O’Neill, S. & Heydon, R., (2011). Exploring singing engagement, generativity, and well-being in an intergenerational music program. *Intergenerational voices: Curricula to foster the learning, communication, and well-being of young children and elders.* Symposium conducted at the meeting of the Canadian Society for the Study of Education, Fredericton, NB. 3.2

Pan, B.Y. (2012, May). *AIRS online Test Battery of Singing Skills.* Presented at the Music Cognitive Neuroscience Laboratory, Beijing Normal University, Beijing, China. (in Chinese) 1.3

Pan, B. Y., Liu, D., & Cohen, A. J. (June, 2012). The AIRS On-line Test Battery of Singing Skills. In **A. J. Cohen & F. A. Russo** (Chairs), *New test instruments to study singing: Perception, production, and emotion.* Symposium conducted at the Annual Meeting of the Society for Brain, Behaviour & Cognitive Science, Kingston, ON. 1.3

Pan, S., Pan, B.-Y., Lane, J., Cohen, A.J. (2012, June). *The influence of native language (Chinese versus English) and personality on performance tests of singing.* Poster presented at the 73rd annual convention of the Canadian Psychological Association, Halifax, NS. 1.3

Raju, M. (2010, June). *The AIRS test battery in Estonia.* Paper presentation at AIRS 2nd Annual Conference, Seattle, WA. 3.2

Raju, M. and Ross, J. (2011). *Improvisations of Estonian children.* Paper presentation at AIRS 3rd Annual Conference, St. John’s, NL. 1.3

Raju, M. and Ross, J. (2012, July). *Vocal improvisations of Estonian children.* Poster presentation at ICMPC-ESCOM 2012, Thessaloniki, Greece. 1.3

Rose, A. (2009). Singing in online music education contexts: A case study in Newfoundland and Labrador, Canada. Phenomenon of Singing Conference, St. John’s, NL. 2.3

Rose, A. (2009). Singing in online music education contexts: A case study in Newfoundland and Labrador, Canada. In L. Chen-Hafteck (Organizer & Chair). Symposium: Interdisciplinary Research in Singing: International Advances through AIRS the ISME World Conference, Beijing, China. 2.3



- Ross, E., Leblanc, M., Pan, B.Y., Cohen, A.J. (2012, June). An age cross-sectional study of singing skills: Preliminary results. In A.J. Cohen & J. Sullivan (Chairs), *Singing across the lifespan: Active and passive behaviors*. Symposium conducted at the 73rd Annual Convention of the Canadian Psychological Association, Halifax, NS. 1.3
- Ross, J. (2010, September). 'Kuidas lasped hualavad?' ("How do the children sing?"). Presentation to the Estonian Academy of Sciences, Tallinn, Estonia. 1.3
- Campbell, P. S., Chessin, E., & Perdue, M. (2009). Singing, Learning, and Transmission. In L. Chen-Hafteck (Organizer & Chair). Symposium: Interdisciplinary Research in Singing: International Advances through AIRS the ISME World Conference, Beijing, China. 3.1
- Stewart, L. (2011). *Congenital Amusia: is there potential for learning?* Paper presentation at the Neuroscience and Music IV meeting, Edinburgh, Scotland. 1.3
- Stewart, L. (2011, June). *Congenital Amusia: is there potential for learning?* Paper presentation at Neuroscience and Music IV, Edinburgh, Scotland. 1.3
- Stevenson, L., Pan, B-Y, Lane, J., & Cohen, A.J. (2011, Aug). *Singing a new song: Effects of native language (Chinese versus English) on learning an unfamiliar tonal melody with lyrics (Chinese versus English)*. Poster presented at the Meeting of the Society of Music Perception and Cognition. Rochester, NY. 1.3
- Stonehouse, M., McCaw, K., & Nicol, J.J. (2011, July). *Qualitative Research Interviews on Singing: First Experiences*. Poster presentation at the AIRS 3rd annual meeting, St. John's, NL. 1.1
- Sullivan, J., & Coombs, L. (2012, June). A longitudinal investigation of young children's singing: singing a favourite song versus creative song production. In A.J. Cohen & J. Sullivan (Chairs), *Singing across the lifespan: Active and passive behaviors*. Symposium conducted at the 73rd Annual Convention of the Canadian Psychological Association, Halifax, NS. 3.2
- Tsang, C. D. (2011, October). Multiple Levels of Listening: Sensitivity to the Components of Song During Infancy. Paper presentation at the National Centre for Audiology, Western University, Hearing Science Seminar. 1.1
- Tsang, C. D. (2011, November). Multiple levels of Listening: Infants Sensitivity to Song. Paper presentation at the Department of Psychology, Western University, Developmental Brown Bag Seminar, London, ON. 3.3
- Van Niekerk, C. (2009). Singing in the Global Context, with special reference to Africa In L. Chen-Hafteck (Organizer & Chair). Symposium: Interdisciplinary Research in Singing: International Advances through AIRS the ISME World Conference, Beijing, China. 2.1
- Vincent, C., Lane, J., Cohen, A.J. (2011, September). Research on the Acquisition of Singing : the AIRS Test Battery and Digital Library. Paper presentation at the 9th Pan European Voice Conference (PEVOC9), Marseille, France. 1.1
- Xin, W., Chwalek, M., & Lempert, H. (2011, August). Does singing facilitate learning new syntactic rules? Poster presentation at the AIRS 3rd Annual Meeting, St. John's, NL. 1.3
- Young, L., & Nicol, J.J. (2011, August). Perspectives on Singing and Performance in Music Therapy. In Russo, F. (Chair), *A Major Collaborative Research Initiative on Singing: Focus on Performance*. Symposium conducted at the International Symposium on Performance Science 2011, Toronto, ON. 3.3

Workshops

Baldachino, G., & Lefford, N. (2012, June). *Expert workshop: The Resilience of Song*. Workshop presented in conjunction with the AIRS 4th Regional Meeting, Charlottetown, PE. 3.1

Beynon, C. (2010). *Why Boys (Don't) Sing*. Workshop presented to the Ontario Music Educators Association, London, ON. 3.2

Chen-Hafteck, L. (2011, July). *International Research Project on Singing and Cultural Understanding*. Workshop presented at the AIRS 3rd Annual Meeting, St. John's, NL. 3.2

Chen-Hafteck, L. (2012, February). *Enhancing Cultural Understanding through Singing Multicultural Songs*. Workshop presented at the New Jersey Music Educators Association State Conference, East Brunswick, NJ. 3.1

Chen-Hafteck, L., Andang'o, E. & Broock, A. (2012, July). *Bringing multicultural songs to children: the process of discovering and understanding musical cultures*. Workshop accepted for presentation at the ISME Early Childhood Music Education Conference, Corfu, Greece. 3.1

Chen-Hafteck, L., Andang'o, E., Bastião, Z. A., Broock, A., Gillis, K., Good, A., Pan, B. & Xiao, Y. (2011, July). *Understanding Cultures, Singing Songs: Let's learn about Brazil, Canada, China and Kenya!* Workshop presented at the Phenomenon of Singing International Symposium, St. John's, NL. 3.1

Chen-Hafteck, L., Oliviera, A., Andang'o, E., Broock, A., Bastiao, Z. A. & Xiao, Y. (2012, July). *Understanding cultures through singing: songs from Brazil, Canada, China and Kenya*. Workshop accepted for presentation at the International Society for Music Education (ISME) World Conference, Thessaloniki, Greece. 3.1

Cohen, A. J. (2010). *Workshop on the AIRS Test Battery*. AIRS 2nd Annual Meeting. Seattle. 1.3

Cohen, A. J. (2010). *Workshop on the AIRS Test Battery*. AIRS 3rd Annual Meeting. St. John's. 1.3

Cohen, A. J., & Lamarche, A. (2010, August). *A Vocal Mosaic of AIRS- AIRS Regional Workshop*. AIRS 2nd Regional Workshop, Charlottetown, PE. 1.3

Cohen, A.J., & Cheverie, C. (2011). *With voices we unite*. AIRS 3rd Annual Regional Workshop. Charlottetown, PE. 1.3

Cohen, A.J., Antonini, T., & Dwyer, R. (2012). AIRS 4th Annual Regional Workshop. Charlottetown, PE. 1.3

Heydon, R. (2010). *Critical reflections on learning at the ends of life: Children, elders, curriculum, and intergenerational learning*. Workshop presentation at Apres Vous: A Symposium on the Occasion of the Retirement of Roger Simon, Toronto, ON. 3.2

Heydon, R. & Crocker, W. (2011). *The promise of young and old learning together: What intergenerational programs can teach*. Workshop presentation to the Canadian Association for Young Children, Halifax, NS. 3.1

Lane, J. & Cohen, A. J. (2011). *Workshop on the AIRS Digital Library*. AIRS 3rd Annual Meeting, St. Johns. 4.0

PhD Theses

Emmerson, J. (in progress). *Adolescent Mothers, Their Infants and a Culturally Responsive School-Based Parent-Child Music Program*. (Doctoral Thesis). University of Saskatchewan, Saskatoon. 3.3

Folland, N. (2012). *Untitled thesis*. (Doctoral Thesis). McMaster University. 1.1

Masters' Theses

Blom, M. (in progress). *Parent-Infant Music Programs, Parenting Sensitivity and Self-Efficacy*. (Masters' Thesis). University of Saskatchewan, Saskatoon, SK. 3.3

Busch, S. (2013). *Untitled Thesis*. (Masters' Thesis). Carleton University. Ottawa, ON. 3.3

Daugherty, C. (2013). *Untitled Thesis*. (Masters' Thesis). Carleton University. Ottawa, ON. 3.3

- Joy, K.** (2010). *Perceptions of students, teachers, administrators and policy makers of distance learning in rural Newfoundland and Labrador: a critical constructivist perspective.* (Masters' Thesis). Memorial University of Newfoundland, St. John's, NL. 2.3
- Nakashima, J.** (2009). *Experiencing Music 2200 online: a critical case study of the curriculum transfer process.* (Masters' Thesis). Memorial University of Newfoundland, St. John's, NL: Memorial University of Newfoundland Press. 2.3
- Stonehouse, M.** (in progress). *Integrative Choirs: Singing and Youth with Disabilities.* University of Saskatchewan, Saskatoon. 3.3

Undergraduate Theses

- Baker, J.** (2011). *Investigating Young Children's Language and Music Development.* (Undergraduate Thesis). University of Kent, Kent, UK. 3.3
- Beaton, D.** (2012). *The effects of singing versus listening on the well-being of senior citizens presented with a live musical theatre performance* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 3.3
- Borthwick-Hunter, E.** (2011). *An Exploratory Insight into the Musicality and Singability of Primary to Junior School Children.* (Undergraduate Thesis). University of Kent, Kent, UK. 1.3
- Broscha, T.** (2011). *Sing to Me Please, Put Me at Ease: Infants' Responses to Infant-Directed Singing and Speaking* (Undergraduate Thesis). St. Francis Xavier University, Antigonish, NS. 1.3
- Coady, J.** (2009). *A Developmental Longitudinal Study of Singing Using a New Test Battery* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.2
- Daugherty, C.** (2011). *Choral singing among senior residents of Extendicare New Orchard Lodge* (Undergraduate Thesis). Carleton University. Ottawa, ON. 1.3
- Ding, X.** (2010). *Adult interpretation of infant babbling as speech or singing* (Undergraduate Thesis). Hokkaido University, Hokkaido, Japan. 3.3
- Gallant, E.** (2009). *Singing in Elderly Persons: Those who are Healthy and Those with Alzheimer's Disease* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 3.3
- Henderson, R.** (2012). *The effects of singing vs. listening on memory recall in senior citizens presented with musical theatre* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 3.3
- Iqbal, F.** (2012). *The VAMDA Protocols With a Sample of Canadian Grade 1 Children* (Undergraduate Thesis). Huron University College, Western University, London, ON. 1.3
- Lannan, M.** (2009). *A New Test Battery of Singing Abilities: The Feasibility of a Longitudinal Study of Children and Young Adults,* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3
- LaRosa, K.** (2010). *Examining tonal stability in children's production of conventional songs.* Undergraduate Thesis). Kalamazoo College, Kalamazoo, MI. 1.3
- McIver, A.** (2010). *Effects of Cultural Background on Performance on the AIRS Short Battery of Tests on Singing* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3
- McClellan, L.** (2009). *A Children's Sing-Along: Exploring Familiar Songs, Vocal Model Choice and Pitch Accuracy.* (Undergraduate Thesis). Bates College, Lewiston, ME. 1.3
- Pan, S.** (2012). *The influence of native language (Chinese versus English) and personality on performance tests of singing.* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3
- Shaw, M.** (2012). *Pitch Imitation in Infants.* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3
- Stevenson, L.** (2011). *Effects of Cultural Background and Music Training on Performance on the AIRS Short Battery of Tests and Singing and Language* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3
- Ross, E.** (2012). *Singing across the lifespan: AIRS Test Battery of singing skills. An exploratory investigation of creativity through improvisation.* (Undergraduate Thesis). University of PEI, Charlottetown, PE. 1.3

Encyclopedia Entries



Cohen, A. J. (2009). Audiovisual recording. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research*. New York, NY: Sage. All

Cohen, A. J. (2009). Creativity. In A. J. Mills, G. Durepos, & E. Wiebe (Eds.), *Encyclopedia of Case Study Research*. New York, NY: Sage. 1.3

Cohen, A. J. (in press). Senior citizens and music. In J. Edmundson (Ed.), *The Encyclopedia of American Music and Culture*, Santa Barbara, CA: ABC-CLIO. 3.3

Recordings

Cohen, A. J. & Sorensen, D. (2010). AIRS Test Battery Components and Examples. [DVD]. 1.3

Chen-Hafteck, L. (2012). Demonstration audio recording of 24 songs from Brazil, Canada, China, & Kenya. [CD]. 3.1

AIRS. (**Chen-Hafteck, L.**) (2012). Demonstration video of 24 songs from Brazil, Canada, China & Kenya [DVD]. 3.1

Pan, B. Y. & **Cohen, A. J.** (2011, December 23). [AIRS Seasonal Greeting](#). [Video File]. All

AIRS. Pollard, B. (Producer). (2011). Compilation from the AIRS Annual Meeting 2011 [DVD]. All

Shin-Bouey, S. & **Countryman, J.** (Directors). (2009). Celebration of Singing. Performances from the AIRS Start-up Meeting. B. Woods (Producer). Charlottetown, PE. All

Other

Busch, S. (2012). [Singing in St. John's](#): A report on the third annual meeting of Advancing Interdisciplinary Research in Singing. *MindPad (Spring 2012)*, 15-16.[Newsletter] All

Chen-Hafteck, L., **Gleason, N.** & **Anderson, R.** (2012). The AIRS Quadcultural Songbook: Brazil, Canada, China, and Kenya. Manuscript in preparation. (50 pp). {for research purposes} 3.2

Clift, S., Skingley, A., Coulton, S., Rodriguez, J. (2012). *A controlled evaluation of the health benefits of a participative community singing programme for older people (Silver Song Clubs)*. Sidney De Haan Research Centre for Arts and Health. (Research Report). 3.3

Cohen, A. J. & **Trehub, S. E.** (2011). Acknowledgements. *Psychomusicology: Music, Mind & Brain*, 20, 6-7. All

Lefford, N. (2012). AIRS DL Use Case Report: A Digital Library for Research on the Singing Voice 4

Lefford, N. (in progress). The Recorded Voice. Working Paper. 4

Proutskova, P. (2012). Digital libraries for music and voice. Review (23 pp). 4

Viau, D. (2009, April 21). AIRS. [CTV News (Maritime broadcast), Live at Five]. All

3rd Annual Meeting

Advancing Interdisciplinary Research in Singing

Development, Education & Well-being

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St. John's, Newfoundland & Labrador

July 9-11, 2011

in conjunction with
Festival 500 Sharing the Voices &
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Welcome



What a pleasure it is to welcome the AIRS Research Team to the 3rd Annual Meeting held this year in St. John’s Newfoundland, in conjunction with Festival 500 Sharing the Voices and The Phenomenon of Singing Symposium VIII, coinciding also with the International Council of Traditional Music. There is much progress to celebrate and much to accomplish in our intensive program of activities spanning July 9 to 13.

This gathering of experts uniquely addresses our three research themes: how singing develops in every individual, how to teach singing and how singing can be used to teach, and finally, how singing can enhance well-being of individuals, groups, and societies.

This extraordinary meeting represents the co-operation and hard work of many individuals beginning over three years ago with the collaborators who helped to create a winning proposal to the Social Sciences and Humanities Research Council (SSHRC) Major Collaborative Research Initiatives (MCRI) Program in 2008. SSHRC’s MCRI program provides the outstanding opportunity of planning for the long term and encourages working across disciplines. We remain grateful to the SSHRC Committee members and international external reviewers who saw merit in our proposal.

A strong home base at UPEI was necessary for success in such a competition and the support of Dean of Arts Richard Kurial, Vice President of Research and Development Katherine Schultz, and President Wade MacLauchlan is acknowledged. The home team of collaborators at UPEI, from the disciplines of Music, Education, Island Studies, Sociology and Anthropology and the Library provided a foundation, which continues to grow. Gratitude must also be expressed to the partners who have offered to share responsibility in the support of this project. Each developed a formal letter of support for the AIRS project by the Labour Day weekend of 2008. Since 2009, I have appreciated the support of Deborah Annear as Project Manager-Finance, assisted by student Kristin MacDonald, and of Jonathan Lane, Technical Co-ordinator; Dale Sorensen, communications officer; Denise Beaton, assisting with conference co-ordination. We also welcome back our videographer Brian Pollard. New to our team at UPEI is Dr. Bing-Yi Pan who arrived in February for post-doctoral work in all three themes.

Almost three years ago we dreamed of together advancing interdisciplinary research in singing. This dream became reality. The annual reports of each Research Team in this Program Booklet reveal that AIRS is breaking new ground in understanding how we learn to sing, how we can teach singing and teach through singing, and how we can improve lives of individuals and societies. Highlights include:

- *The new VAMDA assessment tool for visual, auditory, and motor perception/production aspects of development of singing examines benefits of music training in children (Theme 1.1)*
- *New studies of vocal and facial mimicry, and parent-infant singing interactions (Theme 1.2)*
- *New AIRS Test Battery data from several countries, age groups, and cultures illustrating developmental trends and cultural influences (Theme 1.3)*
- *A new annotated collection of children songs available on the Internet (Theme 2.1)*
- *Initiation of collection of examples of formal voice training and reviews of the pedagogical literature (Theme 2.2)*
- *Examination of the role of singing on vocabulary acquisition in preschoolers (Theme 2.3)*
- *A new edited book in press: Island Songs (28 articles) and creation of a Grade V Curriculum and associated Songbook for investigating singing and cultural understanding Theme 3.1*
- *A new Intergenerational singing program and curriculum with pilot video (Theme 3.2)*
- *Literature reviews of singing and well-being published and in press (Theme 3.3)*
- *Our first AIRS-wide postdoctoral competition*

These are but a few of the many accomplishments in just over two years of activity. The AIRS researchers are sharing their knowledge with and are appreciating the knowledge of each member of our network. It is our strength and challenge to work across disciplines and cultures. In St. John's we will reflect on our goals as we work hard and play hard together, not only at our Annual Meeting but in the opportunities that arise through the the week at Festival 500, and the Phenomenon of Singing Symposium. We look forward also to participating in the program of July 13 which includes the International Council of Traditional Music.

The AIRS collaborators have come to St. John's from far and wide including 8 Canadian provinces, Brazil, China, Estonia, Great Britain, Kenya, and United States with representation also from Ethiopia, India and Tanzania. The new AIRS travel policy provided support for students from all 9 research sub-themes. As well the AIRS student support program has funded research of students in each of the themes. While the majority of those supported are from Canada, students including recent post-doctorates, from other countries add their perspectives. Acknowledgement is due to Andrea Emberly and Rayna Friendly for organizing the Student and Young Professional Group and the first student Newsletter.

Special recognition is directed to the AIRS Steering Committee: Frank Russo representing Theme 1 Development, Patricia Campbell representing Theme 2 – Education, and Jennifer Nicol representing Theme 3 – Well-being (with Mary Gick kindly taking on the position for Year 3) for their tireless efforts in monthly or bimonthly meetings. This Committee has developed policy and steered the course of AIRS to enable the progress of all. The remaining team leaders and co-leaders of the research sub-themes also deserve much praise for the advances each has made with their group, including involving student researchers in accomplishing the milestones one-by-one laid out to September, 2012, now just over 1 year away. AIRS benefits greatly from participation of the Research Team leaders and co-leaders in the Policy and Planning Committee which represents all facets of the project. A full meeting of this Committee precedes the AIRS Annual Meeting and will help to set the course for the year ahead. We are grateful for the participation and assistance of the AIRS Advisory Board: Dr. Philip Smith, Dr. Hilary Apfelstadt, and Dr. Kate Stevens and appreciate the presence of Dr. Smith and Apfelstadt at the St. John's meeting.

The first morning of our Annual Meeting is devoted to an overview of the work of all the Themes and Sub-themes with an opportunity for all members in a Theme to meet together. The Technical Program on the second day of the conference is replete with exciting new work representing all 9 subthemes plus the digital library group. The evening concert entails the participation of collaborators and students who will share songs in many styles and from many cultures. Throughout the entire meeting, opportunities to sing will remind us of the wonders of the activity that brings us all together from both an academic and phenomenal standpoint.

To each of the many players in the AIRS project: welcome, thank you, and I wish you a most stimulating and fruitful time at this third AIRS International Conference. Our work is bearing fruits of the gifts we have been given.

Annabel J. Cohen
Director and Principal Investigator
AIRS SSHRC MCRI

AIRS 3rd Annual Meeting and Technical Program Schedule

**Saturday, July 9
(Pre-Conference)**

9:00 am – 5:00 pm

AIRS 3.1 Workshop: Education Building – Room 5004/5

International Research Project on Singing and Cultural Understanding: Focus on Children in Brazil, Canada, China, & Kenya

Organized by Lily Chen-Hafteck, assisted by Nancy Gleason, with participation by AIRS awardees from each country. Other students, AIRS co-investigators, Phenomenon of Singing delegates or other interested parties are welcome to sit in. There will be one break for lunch. Please contact Dr. Chen-Hafteck lhafteck@kean.edu for further information regarding content, or Deborah Annear dannear@upei.ca for practical information.

Workshop Schedule

8.30 am	Breakfast (University Residence)
9:45 am	Introductions – Team Overview of AIRS & Subtheme 3.1 Cultural Understanding – Dr. Lily Chen-Hafteck <ul style="list-style-type: none"> • Research Plan & Schedule • Data collection and analysis processes
10:30 am	Research Methodology Seminar – Dr. Patricia Campbell <ul style="list-style-type: none"> • Issues on teaching and learning multicultural songs • Interview technique
11:00 am	Teaching of Songs & Presentation of Cultural Information: <ul style="list-style-type: none"> • China – Bing-Yi & Yue • Canada – Arla & Kelly
12:15 pm	Lunch Break
1:15 pm	Teaching of Songs & Presentation of Cultural Information: <ul style="list-style-type: none"> • Brazil – Angelita & Zuraida • Kenya - Elizabeth
2.45 pm	Take Additional Demonstration Video <ul style="list-style-type: none"> • Each researcher will demonstrate their songs phrase by phrase (words & melody)
3.30 pm	Review and Edit Songbook, Powerpoint, Demonstration Video & Questionnaire – Team
4.30 pm	Introduction to AIRS test battery – Dr. Annabel Cohen
4.40 pm	Prepare for Presentation at the Phenomenon of Singing Symposium <ul style="list-style-type: none"> • Each presenter must choose one easy song with interesting cultural background from their country
5:00 pm	Wrap-up and Next Steps (Group continues to meet throughout the week).

6:00 pm – 9:00 pm Saturday, July 9, 2011

AIRS Policy and Planning Committee Meeting

Location: Education Building – Room 5004/5

Attendees: Theme leaders, sub-theme leaders, committee chairs, advisory board and director and senior executive

*Hilary Apfelstadt, AIRS Advisory Board
*Philip Smith, AIRS Advisory Board
Kate Stevens, AIRS Advisory Board
Anna Maria di Sciullo, AIRS Advisory Board (adjunct)

AIRS Policy and Planning Committee

*Christine Tsang, Co-leader 1.1

Laurel Trainor, Co-leader 1.1

***Frank Russo, Co-leader 1.2 and Theme 1 Leader (Steering Committee)**

*Sandra.Trehub@utoronto.ca

***Annabel Cohen, leader 1.3 and Director (Steering Committee)**

***Patricia Campbell, Leader 2.1 and Theme 2 Leader (Steering Committee)**

*Carol Beynon for Darryl Edwards, Leader 2.2

*Jenny Sullivan Co-leader 2.3

*Andrea Rose, Co-leader 2.3

***Mary Gick, Theme 3 Leader (Steering Committee)**

*Lily Chen-Hafteck Co-leader 3.1

Godfrey Baldacchino, Co-leader 3.1

Rachel Heydon, Leader 3.2 (represented by Carol Beynon)

Jennifer Nicol, Leader 3.3

*Jonathan Lane, facilitator Digital Library

Ichiro Fujinaga, Co-leader Digital Library

George Tzanetakis, Co-leader Digital Library

*Rayna Friendly, Student Young Professional Group

*Jaan Ross, Global Group

*Lee Willingham, Partner

*Deborah Annear, Administrative Project Manager (Finance) ex officio

*Bing-Yi Pan, AIRS Postdoctoral Fellow ex officio

*Attending Annual Meeting and Policy and Planning Committee Meeting

Agenda: focus on milestones, mid-term review, and effective annual meeting

Dessert, snacks and coffee/juice will be served

AIRS 3rd Annual Meeting

Sunday July 10, 2011

All AIRS events Sunday take place in the Education Building, Room 5004/5
Memorial University

8:30 – 9:00 **Registration/ Coffee** pick up materials and name tags
Posters can be placed

9:00 – 9:15 **Welcome, introductions, group singing, and goals of the meeting**
Annabel Cohen – AIRS Director (3 min)
Andrea Rose – Co-Convenor Festival 500/ Phenomenon of Singing (3 min)
Sing together (3 min)
Hilary Apfelstadt - AIRS Advisory Board Member (3 min)
Philip Smith – AIRS Advisory Board Member (3 min)

9:16 – 11:00 **AIRS overview –
Orientation Annabel Cohen (4 minutes)**

9:20 **Development: Leader Theme 1 Frank Russo** – (4 minutes)
1.1, 1.2, 1.3 (presented by sub-theme leaders 4 minutes each, total 12 min)
1.1 Christine Tsang
1.2 Frank Russo and Sandra Trehub
1.3 Annabel Cohen
Discussion – (6 min)

9:42 **Education: Leader Theme 2 Patricia Campbell** – (4 minutes)
2.1, 2.2, 2.3 (sub-theme leaders – 4 minutes each total 12 minutes)
2.1 Patricia Campbell
2.2 Carol Beynon for Darryl Edwards
2.3 Jennifer Sullivan and Andrea Rose
Discussion – (6 min)

10:04 **Wellbeing: Theme 3 Leader Mary Gick** (4 minutes)
3.1, 3.2, 3.3 (sub-theme leaders – 4 minutes each total 12 minutes)
3.1 Lily Chen-Hafteck
3.2 Carol Beynon for Rachel Heydon
3.3 Marya Stonehouse and Katie McCaw for Jennifer Nicol
Discussion – (6 min)

10:26 Digital Library – brief update/demo – Jonathan Lane/Theresa Leonard (14 min)
10:40 Student-Young Professional Group – Rayna Friendly (5 min)
10:50 AIRS Partners - Lee Willingham (~3 min)
10:54 Global Group – Jaan Ross (~ 3 min)
10:57 Ethics, Statistics and Intellectual Property (~ 3 min)

- 11:00 – 11:20 **Coffee break and posters**
- 11:20 – 12:00 **Themes breakout** (separate discussion for Development, Education and Well-being focusing on fundamental questions presented to each theme in advance)
- 12:00 – 1:15 **Lunch and viewing posters**
- 1:15 – 1:45 a) Summary of Theme Breakout Group Discussions from the themes leaders
Frank Russo -Theme 1 (3 min)
Patricia Campbell Theme 2 (3 min) } **(9 min)**
Mary Gick Theme 3 (3 min)
 b) Open discussion on links across themes and sub-themes (20 min)
- 1:45 – 2:00 walk to Music Building and pick up registrations for the Phenomenon of Singing Symposium

- 2:00 – 4:00 **D. F. Cook Recital Hall (MU-1045) School of Music**
 Opening Session- Phenomenon of Singing International Symposium VIII (PSIS)
- Plenary I** - Welcome & Introductions: Andrea Rose and Ki Adams
- Cameo Performance: Shallaway Jubilate Choir (Kellie Walsh, conductor)
- Bob Chilcott (UK)** Text and Cultural Memory: How these relate to our perception of song
- 4:00-5:00 **Opening Wine and Cheese Reception for Phenomenon of Singing International Symposium VIII** - MUN School of Music Lobby
- 5:00 – 6:00 **AIRS Test Battery Workshop MU-1032 School of Music**
 AIRS Test Battery – Reviewing each of the 11 components and finalizing the protocol: Jennifer Sullivan (Nova Scotia), Jaan Ross and Marju Raju (Estonia), Mike Forrester, Jessica Baker, Emma Borthwick-Hunter (UK), Beatriz Illari (Brazil/USA) and Annabel Cohen (chair) assisted by Bing-Yi Pan & Jonathan Lane (PEI)– All welcome
- 3.1 students from the 3.1 Cultural Understanding project are also encouraged to attend (extend discussion over dinner for those who wish).**
- 6:00 -8:00 Dinner on your own opportunity to” synergize” with AIRS members who you do not know. Sign-up sheet will be available for those who wish to join a cross-theme group.
- 8:00- Optional Concert at the Arts and Culture Centre
- Rajataon – Indonesian Children and Youth Choir (tickets must be purchased)

Monday, July 11
AIRS Technical Program of the AIRS Annual Meeting

Overview/Summary for July 11
(all events in ED2030B.but Plenary II, AIRS Concert and Banquet)

- 8:30 – 9:15 Plenary II PSIS - Kate Munger (USA) Recital Hall
 9:30 – 10:40 Talks: Theme 1 presentations on sub-themes 1.1 1.2, 1.3 Junior Common Room
 10:40 – 11:00 Nutrition break and posters
 11:00 – 12:25 Talks: Theme 2 - subthemes 2.1, 2.2, 2.3
 12:30 – 1:45 Lunch – Posters –Synergies: Theme 1 and 2
 2:00 – 3:15 Talks: Theme 3 (3.1, 3.2, 3.3)
 3:15 – 3:30 Nutrition break
 3:30 – 4:30 Discussion – Synergies with Theme 3
 4 :30 – 4:45 Closing remarks
 5:00 – 6:00 AIRS Vocal Concert of wide variety, PC Hall – Music Building
 6:30 – 8:30 AIRS “banquet” at India Gate. more song and final resolutions
 9:00 – 10:00 Amabile Choir (of Carol Beynon) at Gower Street United Church

Technical Program with titles of presentations and authors
(Titles and Authors – detailed abstracts and bios follow)
 Monday, July 11 Location: ED2030B

- 8:30 – 9:15 Plenary II (Music Building, D.F. Cook Recital Hall)
 Kate Munger (USA), Threshold Choir: Kindness made audible

9:30 - 10:40 AIRS THEME 1: SINGING AND DEVELOPMENT ED2030B

NOTE: ORAL PRESENTATION ARE LIGHTNING TALKS AND OF NO MORE THAN 12-15 MINUTES
POSTERS ARE LISTED WITH THEIR SUB-THEME BUT WILL BE VIEWED AT LUNCH OR BREAKS

1.1 PERCEPTION AND PRODUCTION – INTER-RELATIONS

- 9:30 – 9:45**
Rayna Friendly (McMaster University), **Jennifer Walsh** (McMaster University), **Christine D. Tsang** (Huron University College), **Laurel J. Trainor** (McMaster University, Rotman Research Institute) friendr@mcmaster.ca

Vocal Sensorimotor Development and Singing in First Graders: Examining the relationship between vocal production and perception using the Vocal Auditory Motor Developmental Assessment (VAMDA).

Posters

- **Amy Fancourt** (Goldsmiths, London) a.fancourt@gold.ac.uk
Memory for melody in children with Specific Language Impairment

1.2 MULTIMODAL (AUDIO, VISUAL, AND MOTOR)

9:45-10:00

Frank A. Russo (Ryerson University) russo@ryerson.ca
Movement, Mimicry and Emotion in Song

Poster

Niusha Ghazban (Ryerson University), **Sandra Truhub** (University of Toronto at Mississauga), **Frank Russo** (Ryerson University) nghazban@psych.ryerson.ca
Efficacy of Speech vs. Song to Regulate Stress in 10-Month-Olds

Poster

Patricia A. Brosna (St. Francis Xavier University), **Petra Hauf** (St. Francis Xavier University) x2008kdg@stfx.ca
Sing to Me Please, Put Me at Ease: Infants' Responses to Infant-Directed

1.3 AIRS TEST BATTERY

10:00 – 10:15

Marju Raju (Estonian Academy of Music and Theatre), **Jaan Ross** (Estonian Academy of Music and Theatre) marju.raju@gmail.com
Improvisations of Estonian children

10:15 – 10:30

Bing-Yi Pan (University of Prince Edward Island), **Annabel J. Cohen** (University of Prince Edward Island), **Leah Stevenson** (University of Prince Edward Island) bpnan@upei.ca
Does accuracy of singing the major triad predict accuracy of contour production in an unfamiliar song?

Poster

Mike Forrester (University of Kent), **Jessica Baker** (University of Kent), **Emma Borthwick-Hunter** (University of Kent) m.a.forrester@kent.ac.uk
Mapping out young children's singing: Preliminary English Data

10:30 – 10:40

General Discussion Theme 1

COFFEE BREAK 10:40 – 11:00

11:00 - 12:25 THEME 2: SINGING AND EDUCATION – TEACHING SINGING & USING SINGING TO TEACH

2.1 LEARNING TO SING NATURALLY

11:00 – 11:15

Kedmon Mapana (Seattle Pacific University) mapank@spu.edu
Traditional Children's Songs of the Wagogo of Central Tanzania

11:15 – 11:30

John Christopher Roberts (University of Washington) cr777@uw.edu
Children Singing Online: An Examination of Internet-Based Resources

2.2 TEACHING SINGING IN FORMAL SETTINGS INCLUDING FOCUS ON LIFESPAN

11:30 - 11:45

Jason Noble (The University of Western Ontario), **Carol Beynon** (The University of Western Ontario) beynon@uwo.ca
Crisis and Curriculum: A Philosophical Examination of Recent Literature on Male Choral Singing

11:45-12:00

Jaan Ross (Estonian Academy of Music and Theatre), **Vaike Kiik-Salupere** (Estonian Academy of Music and Theatre) jaan.ross@ut.ee
What do students expect from a singing lesson?

Poster

- **Hans Utter** (Ohio State University) and **Utpola Borah** utpola@gmail.com
Teaching and Learning Vocal Music in Contemporary India

2.3 TEACHING THROUGH SINGING

12:00 – 12:15

Robyn Wells (St. Francis Xavier University), **Sarah Drake** (St. Francis Xavier University), **Jennifer Sullivan** (St. Francis Xavier University) jsulliv@stfx.ca
Sing a Song or Read Along

Posters

- **Henrietta Lempert** (University of Toronto), **Wendy Xin** (University of Toronto) lempert@psych.utoronto.ca wendy.xin@utoronto.ca
The Effects of Singing on the Acquisition of a Novel Language Presentation format: Poster
- **Arla Good** (Ryerson University) agood@psych.ryerson.ca
The benefits of singing on second language learning

12:15 – 12:25 DISCUSSION OF THEME 2

12:30 - 1:45 LUNCH

POSTERS AND TABLE DISCUSSION – SYNERGIES BETWEEN THEME 1 AND 2

2:00 – 3:15 **THEME 3: SINGING AND WELL-BEING**

3.1 SINGING AND WELL-BEING: CROSS-CULTURAL UNDERSTANDING

2:00 – 2:15

Leila Qashu (Memorial University of Newfoundland) lqashu@mun.ca
Fostering Understanding in Society: Ateete, an Arsi Oromo Women's Musical Ritual in Ethiopia

2:15 – 2:30

Lily Chen-Hafteck (Kean University) and **3.1.1 4-country songsters** – teach a song from Brazil, China, Canada or Kenya, from the singing and cross-cultural understanding project

2:30 – 2:45

Jim Sparks (Simon Fraser University) jaz24@shaw.ca
Kenya Case Study: National Boys Choir, School Singing, Laipikia

3.2 SINGING AND WELL-BEING: INTERGENERATIONAL UNDERSTANDING

Posters

- **Zheng Zhang & Rachel Heydon** (University of Western Ontario, London, Ontario)
Intergenerational curricula, multimodal communication, and identity options: Findings from a study of an IG art program as a basis for a study of IG singing curricula
- **Rachel Heydon & Carol Beynon** (The University of Western Ontario) and **Dr. S. O'Neill** (Simon Fraser University)
The Development of an Intergenerational Singing Program

3.3 SINGING AND WELL-BEING: HEALTH

2:45 – 3:00

Merrill Tanner (Glenrose Rehabilitation Hospital/ University of Alberta), **Lili Liu** (University of Alberta), **Leonard Ratzlaff** (University of Alberta), **Melanie Campbell** (University of Alberta), **Linda Rammage** (University of British Columbia) merrillt@ualberta.ca
Singing Improves Self Assessed Intelligibility in People with PD

Posters

- **Sally Busch** (Carleton University) **Carina Daugherty** (Carleton University), **Mary Gick** (Carleton University) ssimpso6@connect.carleton.ca
Caregiver Measures for Singing-Related Behaviour Change in a Dementia Population: A Pilot Study
- **Marya Stonehouse** (University of Saskatchewan), **Katie McCaw** (University of Saskatchewan), **Jennifer Nicol** (University of Saskatchewan) mrj.stonehouse@gmail.com
Qualitative Research Interviews about Singing: First Experiences
- **Hans Utter** (Ohio State University)
Healing and Mantra

3:00 – 3:15 DISCUSSION OF THEME 3

3:15 – 3:35 Nutrition break

3:35 - 4:30 Discussion: SYNERGIES BETWEEN THEME 3 AND THEMES 1 AND 2

4:30 - 4:45 Closure: resolutions, summary comments and final remarks from the AIRS steering committee (Frank Russo- Theme 1, Patricia Campbell Theme 2, & Mary Gick - Theme and Annabel Cohen, AIRS Director)

5:00 - 6:00 AIRS CONCERT (MUN Music Building - Petro-Canada Hall)
Hosted by - Patricia Campbell

See p. 46 for details of programme and performers

AIRS Vocal Variety Concert including

Kedmon Mapana

Jennifer Sullivan

Merrill Tanner

Jim Sparks

Christopher Roberts

eXtras

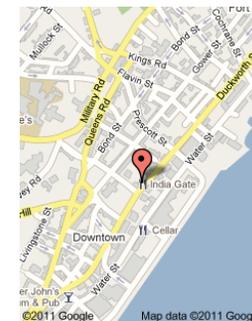
Utpola Borah and Hans Utter

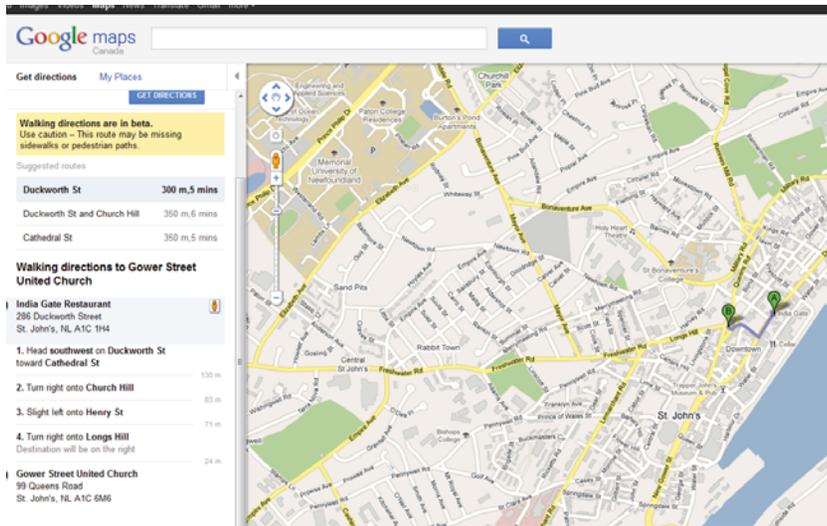
The AIRS Quad-Country Songsters

Sally Busch

and more

6:20 – 8:30 AIRS “BANQUET”
INDIA GATE RESTAURANT
286 Duckworth St.





India Gate (A) to Gower Street United Church (B)

9:00 Concert – including Amabile Choir (director Carol Beynon)

Gower Street United Church

Tuesday, July 12 with Phenomenon of Singing Symposium

8:30 – 9:15 **PLENARY IV Phenomenon of Singing Symposium**
SCOTT MCCOY (USA) – Teaching men to sing: Challenges in the Studio and Rehearsal

AIRS Workshop

9:30 – 10:30 **AIRS Digital Library**
 -location TBA

11:00 – 12:00 **Phenomenon of Singing Symposium**
 (MU1032 -Hilary Apfelstadt, Susan Knight)
 (Petro-Canada Hall - Sally Busch & Mary Gick/ Sheri Cook-Cunningham)

12:00 – 1:30 **AIRS Test Battery/Digital Library working lunch - location TBA**

Or

Lunch on your own

1:30 - 2:15 **Plenary V Phenomenon of Singing**
Mark Anthony Carpio (Philippines) Making a better world: A singing nation's journey

2:30 – 3:30 **Phenomenon of singing symposium**

4:00 – 5:30 **D. F. Cook Recital Hall**
 5:00 Lily Chen-Hafteck, Elizabeth Andango, Bing-Yi Pan, Yue Xiao, and Angelita Broock
Understanding cultures, singing songs: Let's learn about Brazil, Canada, China & Kenya

7:00 **Student pizza dinner -location TBA**

**Wednesday, July 13 shared day with
the Phenomenon of Singing International Symposium and
the International Council of Traditional Music**

Morning - Phenomenon of Singing International Symposium

9:30 – 10:15 Plenary VI (Arts & Culture Centre, main auditorium)
Lady Cove Choir (Canada) Our voice: past, present and future

10:45 – 12:15
MU2025 Singing cultures: Traditions and contexts
Christopher Roberts
Martha Gabriel
Sheila MacKenzie Brown

Lunch - on your own

Afternoon

Petro-Canada Hall
1:30 – 3:00 pm AIRS Quad-Plenary
Advancing Interdisciplinary Research in Singing (AIRS)

Annabel Cohen (University of Prince Edward Island), Frank Russo (Ryerson University) Patricia S. Campbell (University of Washington), Michael Forrester (University of Kent, UK), Bing-Yi Pan (University of Prince Edward Island), Carol Beynon (University of Western Ontario), Andrea Rose (Memorial University of Newfoundland), Jenny Sullivan (St. Francis Xavier University), Mary Gick (Carleton University), Lily Chen-Hafteck (Kean University), Jonathan Lane (University of Prince Edward Island)

3:00 – 3:15 Break

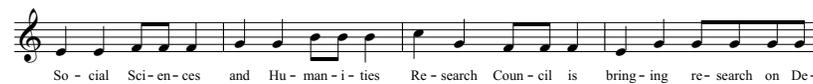
3:15 – 4:15 Music-Making and Social Change
1) Lee Willingham & Debbie Lou Ludolph
Sing fires of justice: A model for a choral event that creates a community for a cause

4:30 – 5:30 Closing Plenary (PC Hall)
6:00 – 7:30 Closing Hot Buffet Reception (Delta Hotel)
8:00 pm: Grande Finale Concert (Mile One Stadium)
After –Party (Delta Hotel)

AIRS Round

Annabel Cohen

*In this round, each new voice enters when the previous voice reaches the * (bar 4, beat 4).





Advancing Interdisciplinary Research in Singing

The AIRS Quadcultural Songbook:

Brazil, Canada, China, and Kenya

Edited by

Lily Chen-Hafteck, Nancy Gleason & Robert Anderson

Kean University, NJ, USA



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550 University Avenue, Charlottetown, PE, CIA 4P3, Canada

Advancing Interdisciplinary Research in Singing (AIRS) Subtheme 3.1 International Project on Cultural Understanding

Research Team Members

USA

- Lily Chen-Hafteck, Kean University – Project Leader
- Patricia Shehan Campbell, University of Washington – Honorary Advisor
- Nancy Gleason, Kean University – Administrative Assistant
- Robert Anderson, Kean University – Administrative Assistant

Brazil

- Zuraida Abud Bastião, Federal University of Bahia
- Angelita Broock, Federal University of Bahia
- Beatriz Ilari, University of Southern California
- Alda de Jesus Oliveira, Federal University of Bahia

Canada

- Carol Beynon, University of Western Ontario, London
- Jennifer Beynon-Martinec, University of Western Ontario, London
- Annabel Cohen, University of Prince Edward Island
- Kelly Gillis, University of Prince Edward Island
- Arla Good, Ryerson University, Toronto
- Frank Russo, Ryerson University, Toronto

China

- Bing-Yi Pan, University of Prince Edward Island
- Yue Xiao, China Conservatory of Music
- Jiaxing Xie, China Conservatory of Music

Kenya

- Elizabeth Andang'o, Kenyatta University

Acknowledgements

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- The AIRS International Project on Cultural Understanding would not have been realized without the vision and support of the AIRS Project Director, Dr. Annabel Cohen.
- The travel awards provided by AIRS to deserving student representatives from each of the four countries to meet in person for a workshop led by Lily Chen-Hafteck in Newfoundland during the AIRS 3rd Annual Meeting are also greatly appreciated.
- Special thanks are due to Drs. Ki Adams, Carol Beynon, Mary Kennedy, Joan Russell and Katherine Smithrim for their advice and assistance in the Canadian song materials. Special thanks are also due to Angelita Broock and Yue Xiao for translation of the songbook materials to Portuguese and Chinese.
- We gratefully acknowledge the teachers and their students who participated in making the demonstration videos: Alda de Jesus Oliveira, Ana Luiza Tomich, Angelita Maria Vander Broock Schultz, Kamile Santos Levek, Roseane Ramos Mota, Zuraida Abud Bastião and the students at Extension Course of UFBA (Brazil); Rosemary Bannerman and students, Wilfrid Jury Public School, London, Ontario, and Syndi MacAulay and the St. Pius X Children's Choir and Parish for use of their facilities & equipment (Canada); Zhitong Han and Jun Xu, Yucai School, and Yongfeng Deng, Taoxinzhuan Primary School and students (China); Mrs. Alice Gichiri and students, from Kenyatta University Primary School (Kenya).

AIRS Website: <http://www.airsplace.ca/>

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PREFACE



The *AIRS Quadcultural Songbook: Brazil, Canada, China and Kenya* offers the unique educational opportunity of sharing songs of four different cultures with children of those same four cultures. Compiled by Dr. Lily Chen-Hafteck, the book goes far beyond learning the songs. It arose as one ambitious part of an even larger research initiative called Advancing Interdisciplinary Research in Singing, known as AIRS. As the Director of AIRS, it makes sense then for me to briefly place the *Songbook* in the context of the AIRS objectives.

AIRS is a seven-year major collaborative research initiative that aims to Advance Interdisciplinary Research in Singing through cooperation of over 70 researchers representing every province in Canada and more than a dozen other countries on six continents. Researchers are sharing their knowledge and expertise from numerous disciplinary perspectives, including sociology, ethnomusicology, psychology, musicology, music therapy, education, anthropology, folklore, medicine, and audio and computer engineering. Aiming to understand individual, cultural, and universal influences on singing and the influences of singing on individuals and societies, the AIRS researchers are focusing on three themes: (1) development of singing ability (2) singing and learning, and (3) enhancement of well-being and health through singing. The *AIRS Quadcultural Songbook* project relates primarily to themes 2 and 3 as it focuses on both learning about other cultures through song, and about the societal benefits arising through learning of foreign songs.

The research results of the entire AIRS project are being disseminated through traditional academic means (scholarly journals, books, and conferences) and through activities, settings and tools (school curricula, homes for seniors, medical interventions, performances, and textbooks). Such dissemination aims to provide a foundation for decision making in education, health, culture, immigration, and foreign policy. This new volume, *the AIRS Quadcultural Songbook*, reflects a success of the dissemination plan, and just three years into the project.

A project of the scope of AIRS requires substantial and long-term funding. The opportunity for both arose several years ago through the Social Sciences and Humanities Research Council of Canada's (SSHRC) Major Collaborative Initiative Program (MCRI). Previous large-scale projects at the University of Prince Edward Island had provided the facilities and experience needed to embark on a study of singing in all its dimensions. As mentioned above, one important focus of the project was that of enhancement of well-being through singing. Well-being, broadly defined, includes having a place in one's community and having friends. The AIRS project looks for ways in which the simple act of singing might improve such opportunities, bringing about well-being early in life that may have long lasting impact.

Attitudes are often formed during childhood. What is learned in childhood provides the foundation for all future learning. Negative attitudes formed early on may be very hard to change later in life. It has been documented that learning the songs and music of a foreign culture can help children feel more favorably toward people from that culture (Sousa, Neto, & Mullet, 2005; Chen-Hafteck, 2007). Learning songs is enjoyable for children, and if songs can foster human understanding and friendships, then educators, governments, and families should know about it. This is the rationale for the present AIRS project on singing and cross-cultural understanding.

I am thrilled to have a special person, Dr. Lily-Chen Hafteck, as the leader of this challenging study. She is an extraordinary educator and also a highly regarded researcher specializing in music education, and she is comfortable in international settings. Of Chinese origin herself, she has lived in China, South Africa, Mozambique, England, and now in the USA. She has been active in the executive of the International Society for Music Education and has conducted preliminary work on promoting cultural understanding through singing in New York schools.

What an honor it is then to provide prefatory remarks for this outstanding compilation. Much is unknown about how songs and singing styles are absorbed into a culture, and how new songs can be acquired. Even less is known about how songs of cultures other than one's own can have a positive influence on creating feelings of warm understanding toward that new culture. This unique collection of songs from *the AIRS Quadcultural Songbook* provides a foundation for much discovery about this process. Individually, each song opens a window on the world of a particular culture. Through these windows of song, children from one culture can share their lives, customs, and feelings with children of other cultures. I look forward to valuable information that comes from this ambitious original project that Dr. Chen-Hafteck is leading.

I heartily thank all contributors to the volume and encourage them in their continuing research that links singing to cross-cultural understanding. I am also appreciative of the support of the University of Prince Edward Island, the Office of Research Development, the Faculty of Arts, my own Department of Psychology for efforts on behalf of the AIRS project, and all researchers, faculty, students and staff alike involved in the AIRS project. The AIRS project is deeply indebted to the Social Sciences and Humanities Research Council for its support. The last words of acknowledgement and praise, however, go to Dr. Chen-Hafteck for her focused efforts to bring this songbook to fruition, for seeing the promise of this volume, and the potential of the AIRS project and its associated students and collaborators.

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Advancing Interdisciplinary Research in Singing
June, 2011, University of Prince Edward Island*

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INTRODUCTION



The *AIRS Quadcultural Songbook: Brazil, Canada, China, and Kenya* was compiled for the AIRS International Project on Cultural Understanding. It includes the song materials and cultural information that children will learn in connection with the project. Twenty-four songs from four countries—all of which carefully selected for their value in teaching children about the four cultures—are included. It is a joint effort of Dr. Elizabeth Andang'o, Ms. Jennifer Beynon-Martinec, Ms. Kelly Gillis, Ms. Arla Good, Dr. Beatriz Ilari, Dr. Alda de Jesus Oliviera and Dr. Bingyi Pan, members of the research team coming from these cultures. We greatly appreciate their generosity and their sharing of knowledge and expertise for the benefit of the children and the project.

Advancing Interdisciplinary Research in Singing (AIRS) is a major collaborative research initiative funded by the Social Science and Humanities Research Council of Canada (SSHRC) under the direction of Dr. Annabel Cohen, Professor at the University of Prince Edward Island, Charlottetown, Canada. As one of the AIRS co-investigators and team leaders, I have initiated this International Project on Cultural Understanding under AIRS Subtheme 3.1 to examine how singing can promote cultural understanding.

Children from the aforementioned countries, namely Brazil, Canada, China and Kenya, will participate in the research project. Over the span of 12 weeks, they will learn six traditional songs from each country, a total of 24 songs, together with background information about the songs and cultures. Teaching materials including the songbook, PowerPoint slides and demonstration videos will be provided to the teachers. Two schools in each country and two classes of children from each, ages 10 and 11, will participate. One class will learn both the cultural information and songs while the other class will only learn the cultural information. Children will respond to a questionnaire before and after the study to assess their attitude towards the people from the four countries. Teachers will be asked to write a report on their observations on the lessons and the children's responses. Some lessons will be observed and video-recorded by the student-researchers. Finally, there will be an interview for the children to express their opinion on the project.

This project is a collaboration of many international researchers. I am grateful to have the assistance of Dr. Alda de Jesus Oliviera and her students Angelita Broock and Zuraida Abud Bastião at the Federal University of Bahia (Brazil); Dr. Annabel Cohen and her student Kelly Gillis at the University of Prince Edward Island and Dr. Frank Russo and his student Arla Good at Ryerson University (Canada); Dr. Jiaxing Xie and his student Yue Xiao at the China Conservatory of Music (China); and Dr. Elizabeth Andang'o at Kenyatta University (Kenya) in coordinating the field work in the four countries. This study, which crosses geographic borders encompassing countries from four continents, would not be possible without the dedication and hard work of each of these individuals.

Last but not least, all the children, teachers, principals and administrators who will participate in the project also must be commended. There is much that we, as educational researchers, need to learn from them about teaching and learning. On behalf of our research team, I thank them for their support of research and educational advancement.

*Lily Chen-Hafteck, Ph.D.
Project Leader, AIRS International Project on Cultural Understanding
January 2012, Kean University, NJ, USA*



Lyrics by Kan Bao (1916~)



Music by He-Yan Guan (1921~2005)

Fig. 53 Kan Bao and He-Yan Guan

Chinese Song 5: MO LI HUA (Jasmine flower)
Song Type: Folk Song

好 一 朵 美 丽 的 茉 莉 花，
Hao Yi Duo Mei Li De Mo Li Hua,
好 一 朵 美 丽 的 茉 莉 花，
Hao Yi Duo Mei Li De Mo Li Hua,
芬 芳 美 丽 满 枝 桠，
Fen Fang Mei Li Man Zhi Ya,
又 香 又 白 人 人 夸，
You Xiang You Bai Ren Ren Kua.
让 我 来 将 你 摘 下，
Rang Wo Lai Jiang Ni Zhai Xia
送 给 别 人 家， 茉 莉
Song Gei Bie Ren Jia, Mo Li
花 茉 莉 花。
Hua Mo Li Hua.

茉莉花

好一朵美丽的茉莉花
好一朵美丽的茉莉花
芬芳美丽满枝桠
又香又白人人夸
让我来将你摘下
送给别人家
茉莉花呀茉莉花

Jasmine Flower

What a beautiful jasmine flower
What a beautiful jasmine flower
Sweet-smelling, beautiful, stems full of buds
Fragrant and white, everyone praises
Let me pluck you down
Give to someone
Jasmine flower, oh jasmine flower

This song is about Jasmine Flowers which are beautiful and have good smell. Yet they are very strong and can stand against the wind and rain. The underlying message is to encourage people to face their difficulties and be strong like Jasmine Flowers.



Fig. 54 Jasmine flower

The original of the song "Jasmine flower" is the xiao diao (小调, a style of Chinese lyric folk song) 'flower song' which has been spreading for hundreds of years. There are many different versions of "jasmine flower" in different location, like Hebei, Zhejiang, Jiangsu, etc. These versions of "Jasmine flower" often share more similar lyrics and less similar melodies.

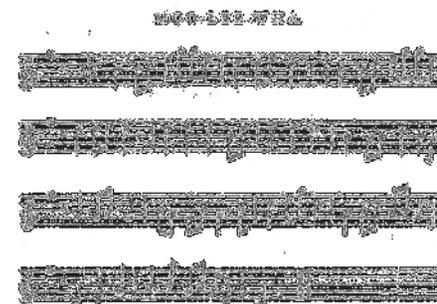


Fig. 55 Music sheet copied from *Travels in China*, John Barrow, 1804

The Jiangsu version "Jasmine flower" is the most well-known one for western people, which was firstly introduced in 1804 by an English scholar John Barrow in his book *Travel in China*. He names this song "Moo-Lee-Wha", which is the "Mo-Li-Hua" in Jiangsu dialect.

The melody has become well known among Western listeners as it was included by Giacomo Puccini in his opera *Turandot*, where it is associated with 'Turandot's splendor'. In 2008, Mo Li Hua was chosen to be one of the music themes for the Olympics in Beijing.

This song, composed by Kenyan musician Teddy Kalanda Harrison, was first recorded in Feb. 1980. Ever since, it has spawned many imitations & adaptations throughout the world, including that of Boney M. The song is popular not only in Kenya, but the world over. As seen in the words, it reflects the friendliness and hospitality of the Kenyan people.



Even though, like any country, Kenya experiences various challenges, the song focuses on the beauty of the country as seen in its abundant wildlife, beautiful lakes and mountains, and the diverse topographical features. 'Hakuna matata' (there are no problems) reflects what we do when we receive visitors in our homes: we usually show them our best and give them the best services we can afford to provide.

Figure 60 A Warm Handshake

Links to Videos: <http://youtu.be/fK0wPpLryc4>
<http://youtu.be/kBwp9k0i-3I>

Kenyan Song 2: Chant : Nyambaga Kondo Gakwa (I am Weaving My Basket)

Type: Children's Chant

Nyambaga Kondo Gakwa
Nyambaga Kondo Gakwa

Text	Translation	Action
Nyambaga kondo gakwa	I am weaving my basket	The children stand in a line. The leader starts the chant and the whole group coils around the leader, imitating the firm weave of a basket. The leader then sings out, and the group moves in the opposite direction, till they form a straight line once more.
Wonengiamba ii	Can you see that I am weaving my basket?	
Wonengia bura ii.	I am undoing my basket. Can you see, I am undoing my basket?	