Collapsing Distinctions — Performer-Composer as Metaphor for Transcultural and Transmodern Music Education¹

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Abstract

Performance practices and composing methods are increasingly being integrated into holistic musical practices today. Furthermore, the sources of musical inspiration accessible to new generations of music students are global in origin and stylistically egalitarian. These young music artists are globally connected, collaborative and social, inquisitive and creative, customizers and experimenters, and are determined with a sense of urgency. At the same time, the landscape of professional music careers that these young music artists will enter has been changing radically and **rapidly**. The era of the pre-determined, narrowly specialized music careers is ending. This raises key questions for the design of music curricula today, including: What is the content of an appropriate core curriculum in music now? How can we create flexible learning pathways that enable students to acquire individually designed skillsets to support unique and often unpredictable, career goals? How can we best prepare these students to be global artistic citizens? How can we maintain high standards of quality in an environment of great musical and cultural diversity? This presentation will explore such topics and describe a new approach to the design of music curricula underway now in The Herb Alpert School of Music at California Institute of the Arts.

¹ Notes from a speech delivered to the Global Forum Among Leaders of Higher Music Institutions, organized by the China Conservatory of Music, Beijing, September 10–12, 2017.

Introduction to California Institute of the Arts (CalArts)

CalArts is a multi-arts, private college near Los Angeles, California, USA, comprising six schools or areas of study:



- A sanctuary for cross-disciplinary training, the School of Art actively promotes both the creative environment and the intellectual context for artistic experimentation.
- The **Sharon Disney Lund School of Dance's** mission is in educating the complete dance artist—agile, intelligent and in command of an expanded skill set to meet the fast-evolving demands of professional dance.
- The School of Film/Video is one of the world's foremost places for the study and practice of the art of the moving image as a personal, evolving and innovative art form.
- The School of Theater is dedicated to the development of new voices and new forms, CalArts is one of the preeminent theater training grounds in the country, designed to educate the whole person and to prepare fully equipped theater artists to transform the field.
- The School of Critical Studies brings together internationally recognized writers, poets, scholars and thinkers working in both new and traditional forms across a wide variety of disciplines, extending from narrative fiction, performance and multimedia to cultural criticism and political theory.

The Herb Alpert School of Music at Calarts offers rigorous training in an unrivaled variety of musical styles and cultures on three degree levels: Bachelor of Fine Arts (BFA), Master of Fine Arts (MFA), and Doctor of Musical Arts (DMA) Performer-Composer.

Herb Alpert School of Music at CalArts programs

The **BFA Program in Music** is uniquely designed to promote the evolution of "Music Artists" who seek to be distinctive and expressive makers of original work, as well as masters of appropriate existing musical forms from around the globe. The program seeks to enable students to develop powerful, effective and singular, musical voices. The program assists students in gaining the tools, technical skills, and creative ideas they need to contextualize and refine their work on the highest levels of artistic realization. Unlike many traditional conservatory approaches, this is done in an atmosphere of curriculum flexibility and adaptation, to help nurture emerging artists to become powerfully distinctive professionals.

When BFA students enter the program, they are regarded as holistic "Music Artists." As each student gains experience with the spectrum of curriculum offerings available, always in regular consultation with a mentor, they naturally develop particular concentrations of study that best suit their artistic and professional goals. Students have the option of declaring their intention to concentrate their work in a particular curriculum Specialization immediately upon arrival, or they may allow their Specialization to emerge.

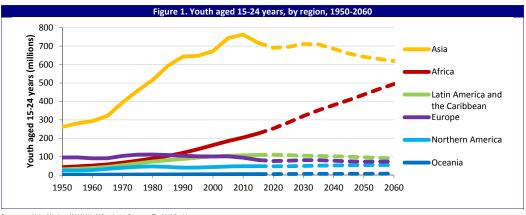
The **MFA Program in Music** is designed to enable students to acquire the multiple skillsets that will empower them to stake out their own, unique, career pathways to success. The program of study is designed to be a stimulating and challenging, collaborative learning environment, in which music and sound artists can refine and perfect their already distinctive voices to reach the highest levels of professional practice, while simultaneously exploring new and inspiring, creative territories. Upon entering the program, MFA students declare a curriculum Specialization, which will become their area of most intense concentration and focus. The course requirements of each Specialization are constructed so as to provide strong, advanced instruction, while also enabling students to draw from the significant range of expertise available among the faculty in other Specializations and across CalArts. The MFA Program in Music requires two years of residency. Most Specializations have professional-level portfolio and/or recital requirements, except Music Technology, which requires a final project and a thesis. When students complete the requirements of their Specialization, appropriate notations are placed on their official transcripts.

CalArts' **Performer-Composer DMA** is a program dedicated to the visionary and experimental artists of tomorrow. Students in the program arrive from diverse stylistic origins, yet all are driven by creative visions that can be realized only by significantly expanding the language of music beyond its current boundaries. This intensive program is for artists whose work exhibits an integration of their personal

compositional and performance practices. The program is not a double major, but instead seeks to foster musical artists who holistically combine innovative performance practices with new compositional models. In this process, students who are already accomplished composers and skilled executants thoroughly integrate these practices in their original work. The program requires three years of residency and includes required coursework augmented by flexible electives, yearly performance projects, individualized research and writing followed by a qualifying paper with oral defense, pedagogical experiences, teaching and often collaborative interdisciplinary initiatives. The program culminates with a final doctoral project and professional portfolio. DMA students draw from all the areas of expertise and resources available in the Herb Alpert School of Music at CalArts.

Global Challenges and opportunities for higher music education today—who are we teaching?

This is a time during which venture thinking in higher music education is critical. We may first ask ourselves, "Who are we teaching?" According to United Nations population surveys, more than 40% of the world's population today is under the age of 25.2 That represents a huge wave of new, young energy that will be shaping our musical environments with powerful creative forces.



Data source: United Nations (2013) World Population Prospects: The 2012 Revision.

We can easily observe some of the characteristics exhibited by this youthful population.³ They are:

- globally connected,
- predominantly poor,
- > collaborative and social,
- hungry with high expectations,

² Source: United Nations (2013) World Population Prospects: The 2012 Revision. http://esa.un.org/unpd/wpp/

³ Salkowitz, R. (2010). Young world rising. (Hoboken, NJ: John Wiley & Sons, Inc.).

Version date: 25 October 2017

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- feedback driven.
- > inquisitive and creative,
- customizers and experimenters,
- blending the personal and the professional,
- determined with a sense of urgency, and
- concerned about the cost of education and making a living.

Their inspirations are:

- > pan-stylistic—drawing inspiration from all types of music around the world—,
- genre deviant—not differentiating genres as hierarchically valued—,
- collectively emergent—valuing collaborative groups—, and
- socially relevant—they want to make a difference for a better world.

Key issues in music higher education today

What are some of the primary developments we must attend to in higher music education today? They include the following:

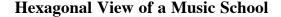
- > The professional field is characterized by a multiplicity of career directions.
- Young professionals face a multiplicity of needs to be able to establish unique and successful career pathways.
- ➤ The pre-college educational environment for music is and has been changing radically.
- ➤ The skillsets students bring with them to higher music education are also evolving rapidly.
- Many students are arriving from non-traditional backgrounds, including highly diverse cultural backgrounds with varied musical traditions.

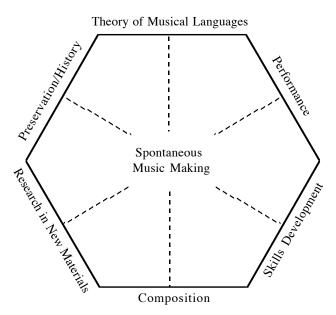
More and more young musicians today want to have a creative role in the music they play. They are *performer-composers*, blending performance practice (broadly conceived) in a thoroughgoing integration with composing practice (broadly conceived). This trend signals the end of an historical bubble in Western classical music that artificially separated composition, performance, and improvisation from each other over the past two- to three-hundred years. Going forward today, performance, composition, improvisation, arranging, media production, and much more are becoming nearly undifferentiated essential characteristics among the practices of emerging musicians.

Where do we go from here?

In our new, global, cultural environment, a school of music must thoroughly integrate at least six essential areas of study, centered around a core foundation of what I will call spontaneous music making: theories of musical languages in practice, performance,

composition, skills development, research in new materials and methods, and preservation with global historical studies.⁴





Spontaneous music making is the vehicle that transports the full spectrum of musical realization—from the realm of abstraction to that of actualization—with the full engagement of intellect, intuition, imagination, proprioception, and physical and psychological being. The *total human becomes the total musician*. That's how we learn. Spontaneous music making requires a virtuosic fluidity of movement among forms and traditions, honoring and mastering them, but not being bound by them; to experience life between categories, to experience the deviant sounds between the notes, wherein lies, to paraphrase the great composer Morton Feldman, "the wild beast."

It is striking to note that even in 1991, the American organization, Music Educators National Conference (MENC), which primarily serves music instructors on the secondary school level, saw the need to establish an inclusive educational agenda for music that stressed, among other things, agency in performance, improvisation, composition, vocabulary and notation, and being "acquainted with a wide variety of music, including diverse musical styles and genres, representing cultures from throughout the world…".⁵ The trends leading to what we are now seeing in the landscape of global music making have deep and long roots.

⁴ Rosenboom, D. (1996). Improvisation and composition—synthesis and integration into the music curriculum. In *Proceedings, The 71st Annual Meeting, 1995*. (Reston, VA: National Association of Schools of Music), 19-31.

⁵ Statement of beliefs. In: *Issues in music education, an advisory from Music Educators National Conference*, May 1991, (MENC), 1.

The idea of programs as curricular pathways may be outmoded

A conceptual difficulty that can exacerbate developing effective responses in our music curricula lies with our traditionally rigid notion of *programs* as curricular pathways. The concept of a curricular *program* often reflects old models of what it means to be a musician. There are alternative views to the nature of programs. The boundaries typically separating programs from each other in our schools can be made much more open and permeable. I will discuss a detailed example in the following section and preface it with these introductory thoughts.

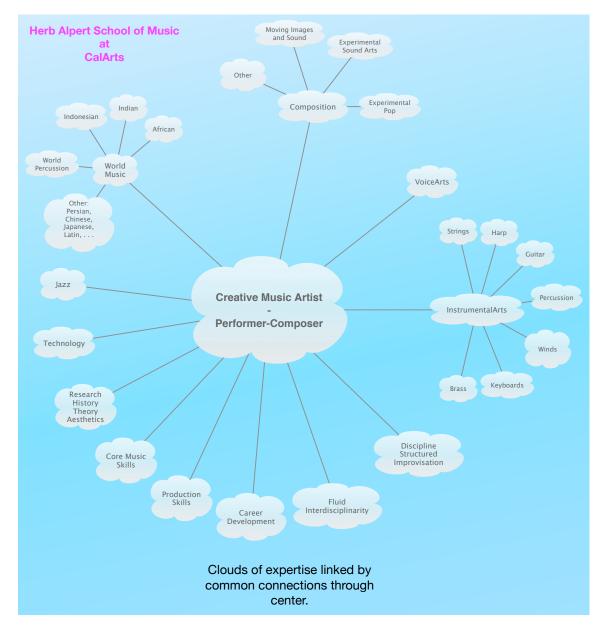
Developing ways to capitalize on project-based learning opportunities, for example, and employing portfolio assessments as means to assign credit may be more useful than traditional metrics, like seat-time in classes, year-levels, standardized tests, unified performance jury requirements, etc. It is also critical to remember that as curriculum flexibility increases, close faculty mentoring is key. To be effective in guiding new creative voices, faculty must also be those who live artistic synthesis in their own lives—art not being different from life.

An innovative approach to curriculum

The Herb Alpert School of Music at CalArts is moving toward establishing an array of integrated *specializations* in its curriculum—rather than an over-granularized collection of programs—in which formerly identified, major programs are regarded more like *clouds of expertise* than entities with rigid requirements. (See illustration below.) In this model, individual curriculum pathways emerge for each student that enable them to gather the professional skills, toolsets and knowledge that best prepare them to construct their own, unique career pathways for their futures.

We are mindful that the former era of the pre-defined, professional career pathway has come to an end. Today, young creative musicians must build on individual strengths, talents, skills, and entrepreneurship to succeed. Already, we are gratified by observing many of our graduates achieving sustainable careers in just this way, more so that by relying on narrowly defined, formulaic recipes for success.

The following image shows a visualization of the *clouds of expertise* concept. All clouds are linked through the holistic identification of the *Creative Music Artist* or *Performer-Composer*.



Developing a music curriculum based on these principles raises many interesting questions. One of them is, "What is core?" What are the core competencies we will choose in our particular school of music to expect of all our students, particularly the undergraduates?

An ideal answer is to let the core be defined by emerging practice and to stay flexible, while always maintaining a high bar on levels of achievement. Analyses of demands in the professional work place today also suggest that, in addition to musical competencies, young professionals must:

- be able to identify the disciplines of a unique practice,
- have the agency to materialize results,
- have strong communication competency, and
- effective collaboration competency.

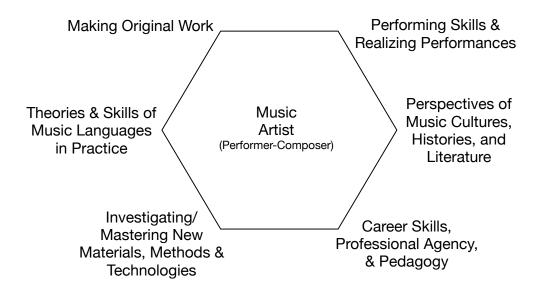
In essence, one of the most important core competencies our young music artists must be able to master is *how to clearly identify and delineate what is core* to the musical practice they are developing, and how that fits into the modern, interdisciplinary, professional landscape.

What is fundamentally core in music specifically? The answer could start with listening, active imaginative listing. Essential skills for this might be generalized as:

- strong incisive parsing skills with all sounds,
- strong ability to hear and delineate sonic and musical forms, shapes and structures,
- ability to audiolize musical objects—internalize physical and proprioceptive images for sound spectra, chords, modes, contours, etc.,
- > spectramorphlogy skills—hearing whole sounds and apprehending their internal structures—, and
- having comprehensive global perspectives on music skills.

A new core curriculum

In The Herb Alpert School of Music at CalArts, we are developing a minim core curriculum for all undergraduate students, with courses grouped into six general areas, visualized here again as a curriculum hexagram.



This minimum core is imagined to include four basic courses in the area of *Theories & Skills of Music Languages in Practice*:

- Modal Concepts in Theory and Practice
- Western Notation and Rhythmic Comprehension
- Tonal Concepts in Theory and Practice

➤ Hearing Forms—Music Structures and Transcription

The content of these core classes could be described as:

Modal Concepts in Theory and Practice

This course concentrates on linear/scalar forms in a wide range of musical genres: Hindustani, Persian, African, Blues, Rock & Roll, Medieval, other Western, etc., along with hybrid forms, are studied in depth. Ear training exercises are integrated with theoretical study and creative ensemble exercises, and composing projects are employed to link classwork with students' own original music and interests.

Western Notation and Rhythmic Comprehension

The class focuses on gaining strong facility with Western music notation, integrated with developing refined understanding of and ability to reproduce a significant repertoire of rhythmic forms. Becoming good readers of music is a goal, including metric forms, polyrhythmic forms, metric modulation, and related concepts. Understanding the concepts of music that is graphically inscribed is key, along with understanding beats, pulses, rhythmic ratios, how they are related and divided, and how they can be felt an executed.

Tonal Concepts in Theory and Practice

This course is about understanding tonal approaches to music and how and why they appear nearly universally. Using forms of melody as a beginning basis leads to understanding how harmonic hierarchies guide musical forms. Through multiple styles, with example pieces from each period and genre, differences and similarities in how harmony functions are studied. Ear training exercises are integrated with theoretical study and creative ensemble exercises and composing projects are employed to link classwork with the students' own original music and interests.

Hearing Forms – Music Structures and Transcription

This course is about active imaginative listening, how to parse musical forms in perception, how to hear musical organization, how forms can be dissected, and how the parts are put together. Exercises in transcription are key to connecting the theoretical, the practical, and the creative. Various forms are surveyed with historical examples. The nature of forms in the abstract, applied to multiple art forms, are also explored, along with deepening the understanding of how forms work in students' own original music.

Students may take these courses in any order, keeping in mind particular skills that are needed for success in each one. For example, students need basic notation skills in order to succeed with transcription exercises.

The "...in Practice" part of these classes is critical. It addresses the need for all theoretical concepts to be experienced not only in lecture format, but also in practical labs for applying them. The idea of a theory lab is under development. Also critical is that these concepts are brought to bear on the students' own, original music and the

music they already listen to passionately.

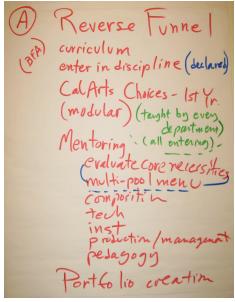
Next, the minimum core requires two survey courses in the area of *Perspectives of Music Cultures, Histories, and Literature*:

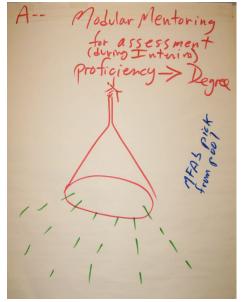
- ➤ Survey of 20th and 21st Century Music
- > Survey of World Music

In addition to the music they cover, these classes introduce incoming students to the range of specializations available in The Herb Alpert School of Music at CalArts, and prepare them to take advantage of the School's extraordinarily diverse musical offerings.

After succeeding in these initial core courses, students branch out into more advanced studies in a variety of specializations by following clearly stated prerequisite pathways. We refer to this as a "reverse funnel". Students enter at the narrow end of the funnel and emerge at the wide end, being able to broaden their areas of expertise with a myriad of options.

Reverse Funnel





Notes from strategic planning brainstorming by faculty in The Herb Alpert School of Music at CalArts (March 2012)

Students must also complete minimum numbers of course units in all six of the remaining core curriculum areas, but with considerable flexibility in making choices. The following lists illustrate the kinds of content that determine how courses align with these six core areas.

Theory & Skills of Music Languages in Practice

Listening and the Materials of Sound

Transcribing Skills

Traditional and New Notation Skills

Harmony, Modality, Intonation, etc. in Practice

Non-Western Theoretical Systems in Practice

Non-Tonal Systems in Practice

Microtonal Systems in Practice

Hearing and Analysis of Forms

Practical Ear Training

Scales, Modes, Intervals, Harmonies

Hearing Tunings

Rhythmic Comprehension and Proprioception

Spectromorphology and Ear Training for Electronic Media

Hearing Complexity

Support/Specializations

Counterpoint

Song Writing

Jazz

Non-Western Specializations

Learning Ensembles

Analysis

Performing Skills & Realizing Performances

Interpretation

Improvisation

Performance Practices

Ensembles and Solo Work

Conducting

Keyboard Skills

Performing with Technology

Performer-Composer Practices

Performing with other Métiers

Individual Lessons

Making Original Work

Composition

Jazz and World Music

Experimental Sound Practices

Experimental Pop

Music and Moving Images

Composer-Performer Practices

Methods and Skills

Current, Recent, and Post-Genre Trends

Sound Arts

Propositional Models/Extant Models/Algorithms/Systems

Time Based and Non-Time Based Techniques

Interactivity

Experimental Music

Composer-Performer Practices

Composition with Technology

Graded Determinacy and Improvisation

Practical Skills

Instrumentation/Orchestration

Score Creation

Production

Collaborative Strategies and Transdisciplinarity

Composition with other Métiers

Investigating/Mastering New Materials, Methods, & Technology

Technology—Research and Development

Production—Music and Cross-Media/Métier Production

Instruments—Developing & Interfacing

Recording and Video Production

Programming/Coding

Perspectives of Music Cultures, Histories, and Literature

Musical Literacy

Contextualizing Skills

Cultural Awareness

Subcultures and Media

Preservation and Reproduction

Music History and Literature

Career Skills & Professional Agency

DIY (Do It Yourself) Agency

Pedagogy

Recording and Media Production

Event Producing

Managing

Entrepreneurial and Venture Thinking

Promotion

Communications and Media Strategy Skills

Financial Literacy

Notes on pedagogies

Some technical pedagogical highlights, beyond traditionally proven ones, that make this system lively and inspiring include:

project based learning—creating collaborative projects that require developing particular skills and creative contributions,

- interactive learning—multi-media, multi-modal, research and creation,
- collaborative learning—implementing models for peer-to-peer (N-to-N) collaboration as fundamental pedagogy throughout,
- faculty participation—instructors coach from within ensembles and projects as equal participants with students, and
- community of artists—students are immediately regarded as artists in a creative community along with faculty.

Traditional methods also clearly produce results, but our challenge lies in how we mix them with the multiplicities of our time? These multiplicities include:

- diversity among professional skills needed,
- changing dynamics of attention in emerging generations,
- > modes of creativity flowering now, and
- > modes of learning we must recognize now.

Remember, a positive, joyful deviancy lies at the core of culture. "Culture continues what Mozart and Rembrandt had themselves continued by way of their work: an original, or deviant shaping of the tradition they received, original enough that it does not invite duplication of itself by others, but invites the originality of others in response."

Notes on implementation and integration in skills training

Here is a list of essential skills and pedagogical priorities for music in the Twenty-first Century:

- Active Imaginative Listening—regarding listening as a form of performance and of composition.
- ➤ **Hearing Forms**—exercises in identifying musical moments, events, changes, and the parameters articulating musical architectures; play them; use games; make spontaneous structures; alternative notations can help; try things like gesture mapping, variation making, continuation, imitation and memory games.
- First Sound then Harmony—teach the materials and psychoacoustics of sound early on; show the origins of intervals and chords from how humans perceive sounds.
- ➤ Chords as Verbs Not Nouns—improvise with drones moving slowly across the diatonic matrix; play additive components making emergent progressions.
- World Rhythms and Meters—improvisation exercises in world polyrhythms, internalizing circular and linear patterns.
- Microtonality, Modes, and Ornaments—tuning systems refine pitch proprioception, improvise with alternative scales and ornamentations (entering

⁶ Carse, J.P. (1986). *Finite and infinite games, a vision of life as play and possibility*. (New York: The Free Press, Macmillan, Inc.).

- and leaving tones), melodic modules combining traditions and genres, builds essential global perspectives.
- > Structuring Simultaneity (Counterpoint)—employ countrapuntal configuration spaces with possibilities for exploring how things combine.
- Audiolizing—internalizing images of musical materials; use improvisation in musicianship/ear training pedagogies; connect ear training with doing; use instruments as well as voice; employ repetition/persistence, ostinati and drones.
- Spectromorphology—training ears in hearing and parsing raw sounds; improvise with sound masses, objects, textures, timbres, spaces, live mixing &sound diffusion;—(see the work of Pierre Schaeffer, Denis Smalley, Lasse Thoresen, and others).
- ➤ **Prolongation, Repetition & Delay**—sources of harmonic and formal complexity—a general principle linking styles, deep looping, delay the movement of materials and hear the new forms grow, forms growing from sustaining materials, from *Plainsound* to chromaticism to expressive metal jazz and more.
- Parsing Complexity—comparing and identifying clouds of sounds; hearing changes in configurations of emerging forms; improvise with formal rules establishing parametric differences and scales.
- Co-creative Interactive Practices—essential for mastery and success in today's globally connected, collectively collaborative, technically interactive world

Finally, we connect everything with history, literature, and global perspectives in:

- > ensembles.
- > musicianship training,
- > cultural exposure, and
- musical creation.

Pedagogies for Creativity

Encouraging the development of creativity itself demands special pedagogies.⁷ The focus must be on the means of establishing a *creative practice*, including these fundamentals:

- teaching how to acquire and develop a unique artistic practice,
- > always asking what are *first principles* of that practice—defining your creative universe—, and finally,
- defining and refining the discipline and measures of agency that are needed to develop and materialize the practice fully.

⁷ Rosenboom, D. (2013). Fostering and supporting student creativity and innovation. In *Proceedings, The 88th Annual Meeting, 2012*. (Reston, VA: National Association of Schools of Music), 43-54.

Interdisciplinarity

Interdisciplinary or trans-disciplinary or post-disciplinary thinking is already fundamental in many students' minds. Modern technology has already enabled them to manipulate creative content in various media from the days of their childhoods. Their modes of thinking and, indeed, cognitive mechanisms have been profoundly affected, even including some of the neuro-psychological bases of thought.

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Unlike pedagogies with teleological intentions, interdisciplinary pedagogy cannot be about pre-defining outcomes. It is about applying resources to support emerging processes, artistic projects, and practices that cannot necessarily be predicted in advance. To be successful in this arena, institutions must find ways to nurture synergistic interaction spaces in their physical environments and curricula and reserve resources for enabling emergent potentialities to grow. This requires creatively observant and ever-watchful faculty and administrators to catch the creative sparks that ignite in their midst unexpectedly and help them grow into full-flames.

For students, interdisciplinary agency is primarily about two principles:

- > access—to faculty, facilities, equipment, potential collaborators, etc.—and
- giving oneself the license to establish a practice_that does not grow directly from historical or previously extant practices.

Finally, do not attempt to make interdisciplinarity a discipline. When that happens, it dies. For it to live, it must remain fluid and emergent. At CalArts these things develop from synergistic interaction and within a wide range of courses that are designed to be open collaborative spaces without pre-determined outcomes, such as:

Choreographers and Composers—a class in which students are asked to make new work from a common starting point, imagining a form of human interaction in which dance and music are not considered to be different forms of expression.

HyperOpera—a multidisciplinary class in which students imagine, create, and produce a collective work that re-examines the roles and collapses distinctions among music, theater, writing, and others arts as necessarily independent entities.

Improvisation

Every art form can have improvisational manifestations. Indeed, the history of musical cultures across millennia and around the globe shows that improvisation has usually been imbedded within general musical practices. In fact, in many cultures, composition, performance, and improvisation are not, and have not, been considered different disciplines. They are a part of the development of any fully integrated, *holistic musician*. Effective improvisation—*spontaneous music making*—may be one of the most difficult things to do well in music. It requires the full application of every aspect of each individual musician's whole being to every musical moment in time, always with tremendous depth of comprehension, listening, and creative form making.

Furthermore creative improvisation can unite several, all-important aspects of an evolved professional:

- > core inspiration,
- > passion,
- > competency,
- venture thinking,
- > career development, and
- > agency.

Global Collaboration

Open pathways for international and cross-cultural exchange are essential for the development of understanding, tolerance, and sustainability, and for a more evolved global society to emerge. Fortunately, pathways forward have been shown in numerous innovative projects in which CalArts has participated. These have included cross-cultural collaborative projects in which students and faculty worked together in international exchanges to create major new original, multi-disciplinary works. Many, many examples can be cited, including these two in particular:

A Counterpoint of Tolerance—a project in which young performer-composers from multiple countries were brought together in a project, lead by composer-performer David Rosenboom and writer Martine Bellen, to create a collective, interactive opera addressing the state of the world today, called *AH! opera no opera*.⁸



⁸ See website: http://www.ah-opera.org

Swarming Intelligence Carnival—a project in which 600 musicians and dancers from all over the world were lead by Sardono W. Kusumo, Otto Sidharta, Dwiki Darmawan, and David Rosenboom to make a multi-disciplinary composition together for the opening spectacle of the 2013 World Culture Forum in Denpasar, Bali, Indonesia.⁹



Schools of possibility¹⁰

The future begins now! Schools of music must first and foremost be healthy, fertile environments for the unfettered *evolution* of the global human enterprise we call *musicmaking*. Musicians must now move with conceptual and technical fluidity from one language to another, from classical to jazz, from networked interactive music to sound art, from improvisation and cross-cultural forms to the experimental and unpredictable. It may seem like music training naturally fits these learning principles, but do our curricula? We must remember these fundamentals:

⁹ See online description: http://www.davidrosenboom.com/media/swarming-intelligence-carnival

¹⁰ Rosenboom, D. (2008) A school of musical possibilities. [Online: http://www.davidrosenboom.com/media/school-musical-possibilities]

- Always focusing on enabling *possibilities* avoids the traps of rigid decisionmaking that can close off institutions from essential flexibility, responsiveness, and adaptability, and also helps avoid inadvertently throwing out core tested values.
- > The curriculum is here to draw out the talents of people who participate in it, not a game of limits to be conquered.

I believe that *education is open space*, fundamentally emergent, fueled by collective invention and critique among individuals integrating information at rates and in styles unique to each, and supported by systems for acquiring the techniques, skills, and disciplines necessary to realize projects in thinking and materializing with maximum ease and efficiency.

We do not educate—in the sense of doing something to someone anymore—, we compose opportunities for discovery in order to maximize the emergence of education happening.

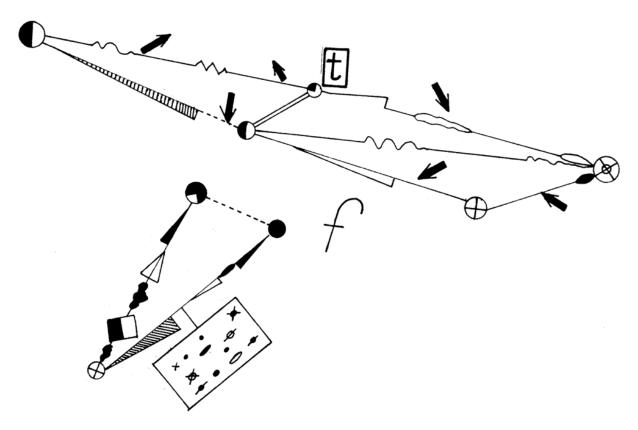


Image from one of David Rosenboom's scores, *Golden Gestures* (ca. 1986), in which possible sound objects, not instruments, are the subject of the notation.