



Searching for Meaningful Communication Across Disciplines

Report on the Deliberations of the

BRIDGING CHASMS Planning Committee, 9 - 10 November 2017

At the Conrad Prebys Music Center, UC San Diego

A list of the seven participants follows.

Discussion focused on five topic categories: PARTICIPANTS, MOTIVATION, CONTEXT, PROCESS, and OUTCOMES.

PARTICIPANTS:

The category of an ideal Event participant includes not only those already interested in cross-disciplinary communications, but also those who are exclusively focused upon and within their own disciplinary fields. An Event cohort will include both those who are and are *not* regularly engaged with “out-reach”, with efforts to make their fields accessible to non-specialists. It should, as well, include both introverts and extroverts.

A participant must have a willing mind, and be able to engage in an interactive exploration of strategies to improve inter-disciplinary communication. We do not want only those already converted to the value of such communication.

The participant cohort for each Event should be highly diverse, disciplinarily, minimizing overlaps in experience/ knowledge/ concerns.

There will be an exception. One individual among the cohort will be selected because s/he possesses an unusual level of expertise within two of the disciplines that are also represented by other, more narrowly focused individuals in the cohort. This individual might be termed “a π factor”*. Such a dual-expert would have a general sense of the over-arching relation of two separate disciplines and also be able to penetrate substantively into each of them. S/he would serve as a kind of “translator” and prod between those representing the two independent legs of expertise. The inevitable involvement of such a person is *not* assumed, but their presence allows an important communicative avenue to be examined.

Each Event participant is expected to commit to the process, without allowing other concerns/activities to divert attention away from Event sessions. We expect participant focus across the entire span of sessions within an Event.



S. McAdams (McGill). O. Graeve (UC San Diego), R. Reynolds (UC San Diego), B. Knapp (Virginia Tech), O. Zhiri (UC San Diego); Deborah Gordon (Stanford), and Scott Page (University of Michigan) not shown.

It is assumed that an Event sponsor will provide an attractive venue, transportation, lodging, and high-quality catering for all meals. We estimate that this cost would be approximately \$2000/participant.

The perceived “status” of potential Event participants as well as the aggregate cohort will be significant in relation to future funding, institutional interest, and eventual “weight” attributed to interim and final reports. Thus, gaining the cooperation of particularly admirable individuals adds to the potential interest of Events themselves and to the “Bridging” project in regard to media interest.

The disciplinary mix of each Event cohort will have decisive impact on the nature of the discussions/interactions that occur. We anticipate that participant selection will, in the early stages, proceed by word of mouth and by calling upon colleagues of those on the Steering Committee. A “network” will be cultivated and hopefully grow of its own accord. As awareness of the Bridging Project grows, there may well be self-nominations from unexpected quarters, and these will be welcomed.

We are resolved that future Event cohorts will include individuals with strong disciplinary focus who are not academics.



Stephen McAdams

MOTIVATION:

Bridging chasms in real-world contexts relies on the presence of affectively and intellectually compelling motivation. The nature of such motivation will doubtless manifest itself in different ways for different individuals. We want representation at each Event of someone who is *skeptical* of the values in cross-disciplinary communication.

The process of identifying potential participants and considering the make-up of a cohort will require us to examine why s/he might wish to communicate with others not disciplinarily aligned. We expect the process to illuminate the significant sorts of meaning that cross-disciplinary communication affords, what sorts of value is returned in the process, both in the moment and projected into the future. Such value was strongly in evidence during the Planning Committee's sessions.

Motivating factors can range in nature from noble to shameful (altruism, interest, fear, fame) and motivation is aroused not so much in the abstract as by the appeal/ challenge of a particular endeavor (Consider the Manhattan project and the necessary diversity that had to be managed in that instance.).

When both interest and occasion are in play, the effort necessary to communicate even under difficult circumstances can be anticipated.

The modest duration of an Event and its placement over a weekend slot will improve the willingness of participants to attend. We propose Friday evening dinner with remarks from the conveners, sessions through the day on Saturday with catered meals, sessions Sunday morning, and an early afternoon closing session (with an end-time set).



Olivia Graeve

CONTEXT

Particular attention will be paid to Event sites – especially exceptional ones – sites that promote congenial, unguarded, and concentrated interactions. (The size and acoustic nature of spaces [including height vs. floor area], colors, comfortable furniture, proximity to nature [forest, vegetation, sky, water ...], all will be significant factors considered.) We will be interested in sites that have stature in themselves – such as the Smithsonian Institution or non-US locations, such as the University of California's *Casa California* in Mexico City.

An institutional host for an Event will have primary decision-making authority in regard to its structure and participant cohort. But its planning will be collaborative with the Bridging Chasms Steering Committee. It would not be unreasonable that a host institution is more heavily represented in the participating cohort.

For perspectival and archival purposes, we will seek the involvement of an appropriate Bridging Researcher, someone who will study the Bridging process as it unfolds; having an evolving picture of the process in all its dimensions compiled by someone who is fascinated by the conversations themselves, and treats his/her work with the same gravitas as the participants and members of the Steering Committee, is essential.

The ideal size of an *Event cohort* is 6-8 persons. In addition, there would be one participant from the preceding Event, and one member of the Steering Committee present. These provisions are meant not to damp invention but to insure reasonable project continuity from Event to Event.

It is advisable to keep participants in (almost) continuous contact in a flux of formal and informal circumstances. This, in turn, assumes quality-catered meals/beverages that allow for sharing while nourishing the self.



Benjamin Knapp

PROCESS

A “Steering Committee” will be formed {nominally including those in the planning cohort that are willing to continue engagement with the Bridging initiative). This committee will assure thoughtful decision-making and continuity of process throughout the Project’s duration. This group should include no more than seven individuals.

The process undertaken during each Event will aim primarily to discover, explore, and evaluate communicative “tools” and “strategies” that could be useful in portraying *to* another the content one wishes/ *needs* to communicate, and also how one wishes to receive content *from* an other.

The identity and nature of these tools and strategies *are* the central concern of Events, and they will be found in the substantive discussions undertaken beneath the umbrella of the chosen Event theme. Not the content of interaction, but the way in which interactions happen is our interest. The effort of Bridging Chasms is to discover, describe and make available behaviors that can improve communications *without regard to the particular disciplinary interfaces involved*. Their generality is essential.

In addition, a chosen *theme* could serve as an “on-ramp” to the throughway of later, more complex portions of an encounter. And the Event theme has larger significance. It serves to establish a general and inviting space to which all participants could be reasonably expected to relate. So a theme is essential and the observation of the communicative strategies sought will arise under such a thematic umbrella.



Oumelbanine Nina Zhiri

A theme is not meant to constrain but to prove “evocative”, not to suppress but rather to nourish interaction.

Our initial list of theme candidates includes:

- “printing”
- “cooperation”
- “pattern”
- “empathy”
- “movement”

The term “session” is used to describe Event components. Each session has two primary parts: a discussion between participants and an evaluation of what happened during that discussion.

We foresee various categories of “interdisciplinary interfacing”, and in each case participants will need to communicate about their:

- disciplinary (and probably also personal) “outlook” or general perception of value/merit
- applicable disciplinary specifics (terminology, aim, methodologies, currency ...)
- evaluation of emotional resonance (between individuals, between prospects, engagements)
- motivations, or desired “takeaways”

It is assumed that guidance from an appropriate individual from within the cohort is necessary to assure optimal outcomes. Rather than “facilitating” in the sense of promoting agreement, the appointed “Guide” will keep her/his eye on the larger purposes of the Event and the session at hand. It is expected that moments of frustration, resistance, uncertainty, and so on will occur between participants during a discussion session. In fact, if they do not arise, then the level of communication being attempted is too much on the surface. The guide will press for more communicative risk-taking, question whether understanding was occurring, and so on.

Surveying the structure of an entire Event, there will be an opening session wherein goals and introductions are offered, and consideration of the preceding Event’s final report.

High-quality audio documentation will be provided for all sessions within an Event.

A variety of interactions will occur in the different sessions. Each will involve a distinct paradigm:

- group discussions (numbers to be determined) shaped by a theme
- 1 on 1 conversations/interactions in the presence of a theme and a “guide”; the other members of the cohort as observers
- 1 (or 2) on 1 in the presence of a guide, but *without* a thematic reference.

In all cases, the conversation/encounter will be immediately followed by an examination and evaluation of the just preceding effort to achieve cross-disciplinary communication.

Of course significant (specific) *barriers/ impediments* to effective and deep communication may also be identified. The project will collect and catalog not only those factors that improve but also those that inhibit communication. We will be looking both for enabling features of cross-disciplinary communication and also *disenabling* features.

Before the Event’s closing session, each participant will be asked to briefly describe a few nominees for future Event participation.

The closing session will include the nomination of candidate “tools” and “strategies”, their discussion, and adoption (or placement on a reserve list). There will be a parallel process for impediments.

While, at the Project’s early stages, host institutions will arise out of members of the Steering Committee (in addition to ongoing explorations at UC San Diego, Virginia Tech and UC Berkeley have already agreed to present an Event).

The Steering Committee will determine a Proposal process, within which there is an open call to any group/institution that wishes to mount a Bridging Chasms Event.



Scott Page (via Skype) with Research Assistant, Jacob Sundstrom

OUTCOMES

All Event sessions are recorded and the making of a transcription follows.

The transcription is “edited/roughly shaped” by members of the Steering Committee. The need for any illustrations, diagrams, and so on will be accommodated.

The edited transcript is circulated to the Event cohort and the Steering Committee for approval/emendation.

Emendations are incorporated and the final report is submitted to that Event’s participants and to the members of the Steering Committee.

This summary report is provided to those convening the subsequent Event.

A website will be established containing information about what has been happening in relation to the Bridging initiative, note any publications/ outcomes, indicate what is foreseen for the future. Through the website and associated social media, there can then arise a network of interested individuals and institutions.

The Steering Committee, on its own and working closely with the Bridging Researcher, will carry on monitoring of results, and assess as well as implement any consequent need for rethinking the evolving Bridging process. Lightly edited audio recordings and transcripts of Events will be posted.

As the succession of Events achieves a perceived “maturity”, efforts will be made to find appropriate outlets and uses for what has been learned. This could consist in publication, the design of undergraduate or graduate courses, the convening of conferences, and so on.

An effort should be made to keep social media and other means of information dissemination aware of and engaged with the Bridging Chasms Project throughout its life.

- The “ π factor’ would be more than simply a T-Shaped individual, someone who has disciplinary depth and the ability to reach across multiple disciplines as was originally discussed by David Kelly of IDEO.



Roger Reynolds

**PARTICIPANTS IN “BRIDGING CHASMS” PLANNING MEETING
CONRAD PREBYS MUSIC CENTER, UC SAN DIEGO, 9 – 10 November 2017**

Deborah M. Gordon: Professor of Biology, affiliated with Stanford Neurosciences Institute, Stanford Woods Institute for the Environment, Stanford University [Current research: the behavioral ecology of ants, and how collective behavior is regulated] dmgordon@stanford.edu

Olivia A. Graeve: Professor, Mechanical and Aerospace Engineering, Jacobs School of Engineering, UC San Diego [Current research: nano materials manufacturing; connecting fundamental principles of materials processing with specific engineering needs, with special emphasis on electromagnetic multifunctional materials for sensors and energy applications] ograeve@ucsd.edu

R. Benjamin Knapp, Director of the Institute for Creativity, Arts, and Technology (ICAT) and Professor of Computer Science, Virginia Tech. [Current research: human-computer interaction focusing on the development and design of user-interfaces and software that allow the augmentation of physical control of instruments through direct sensory interaction.] benknapp@vt.edu

Stephen McAdams: Canada Research Chair in Music Perception and Cognition, Professor, Schulich School of Music, McGill University [Current Research: psychophysical techniques capable of quantifying relations between the properties of vibrating objects, acoustic signals or complex messages and their perceptual results, perceptual and cognitive foundations of musical creation, performance and reception] stephen.mcadams@mcgill.ca

Scott E. Page: Leonid Hurwicz Collegiate Professor of Complex Systems, Political Science, and Economics, the University of Michigan [Current Research: complex adaptive social systems, such as political parties, stock markets, or ant colonies; modeling how heterogeneous agents of bounded abilities generate optimal solutions to difficult problems] scottepage@gmail.com

Roger Reynolds: University Professor, UC San Diego, Department of Music [Current research: conceiving and exercising computer algorithms for the real-time processing of natural sound;

intermedia creations involving spoken text, instrumental music, computer-processed and spatialized sound, imagery presented through flexible projection design strategies.]
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Oumelbanine Nina Zhiri, Professor of French Literature at the University of California San Diego. [Current research: French and Arabic literature; Early Modern culture; Comparative studies in European and Arab cultures; Orientalism.]
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