

## ARTS LETTERS & NUMBERS

Freedom to engage in creative discourse and critical research guided by intellectual curiosity and ethics demands continual transformation and thrives when the transformation is dynamic and organic. Education is, by definition, a transformative pursuit; individuals come together and engage in transformative interactions and experiences. Arts Letters & Numbers is an approach to constructing alternative pathways of interaction among a wide range of individual disciplines.

### *Disciplines and Transformation*

Each discipline affords us distinct modes of thinking and acting, of articulating: light, substance, space, energy, voice, and thought. They provide elements of perception, comprehension, and engagement. While each discipline presents unique means of comprehending and acting, they have a shared capacity to, at once, provide the instruments to create transformation and the principles to measure and withstand its consequences. This dual capacity positions disciplines as central to the navigation and re-articulation of a given period.

Like many complex structures such as language or molecular structures, disciplines are polymorphic. That is to say they can exist in more than one form; they can take on different meanings and organizations depending on their context and environment. However mutable they may be, disciplines retain certain characteristics against which their transformation may be measured. In this sense, a gathering of disciplines within a geographic and intellectual proximity constitutes a dynamic disciplinary geography.

We find insight into the question of how disciplines transform and are transformed by their environment in one of the core ideas of the Theory of Evolution: When individual agents are brought into proximity, they interact, building new linkages. Under the right circumstances, these interactions create transformation, developing new forms. The proximity and interaction of a great diversity of agency are fundamental to the emergence of new forms.

Knowledge evolves; the disciplinary geography within a given institution or gathering of institutions can take on different forms and possibilities depending on the proximity and interactions of the individual disciplines constituting the geography. Creating circumstances of proximity and interaction among a great diversity of agency will lead to mutual transformation and new forms of knowledge. While the evolution of the species offers a valuable metaphor, the components and durations of the transformation of knowledge are sufficiently distinct from evolution that another set of principles may serve well to further elaborate the question. In language, we can recognize a dynamic framework of proximity, interaction, and exchange. The shared framework of language is a consensus among many to express thought. This agreement that allows us to disagree offers a remarkable and omnipresent example of inter-dependence and autonomy. The communicative matrix of language is constructed, maintained, and transformed by the interaction and exchange of autonomous individual agents. This speaks directly to the potentials of interaction among individual disciplines communicating within a shared disciplinary geography. In this regard, institutions, the stewards of disciplines, are the crucibles in which many elements communicate, interact, evolve, and transform. Building new linkages within an institution's disciplinary geography where diverse agencies interact will undoubtedly develop new thought processes and new questions.

Central to this principle is the reciprocal amplification that occurs when diverse modes of thought are brought into direct engagement. As with musical instruments, concentrated individual practice is essential to the development of one's discipline. In concert, the proximity and interaction of multiple instruments create complex harmonics that often exceed the expectations of any individual participant. The primary logic is that the interaction among diverse instruments leads to the emergence of a polyphonic structure which in its content is often richer and more nuanced than the sum of the individual voices. These interactions do not diminish the individual instruments but amplify them; in fact, the depth and concentration of each individual practice/discipline are essential to robust interactions among them.

### *Historical Precedent*

While the envisioned potentials of interaction are particular to the transformative spirit of our historical moment, I believe there is ample

evidence that the realignment of modes of exchange between disciplines has led to profound shifts throughout history. Here, I would offer two examples: Paris in the 1920s and the United States in the 1770s; both, poignant examples of a convergence of diverse disciplines leading to mutual amplification and a dramatic epistemological shift. Paris in the 1920s saw a direct dialogue and exchange between the visual arts, the humanities, music, theater, science, and to some degree political philosophy. These engagements took the form of individual expressions as well as collective actions and projects. One could argue that this short period of amplification created the foundation for the rest of the 20th century developments in the arts and letters. Interestingly, America in the 1770s was a rapid confluence of ideas, resulting in significant shifts in the historic trajectory of the entire world. A group of thinkers from a wide range of disciplines gathered and revolutionized history. This group that includes Benjamin Franklin (inventor, scientist, printer, politician, diplomat, businessman, etc.), Thomas Jefferson (historian, architect, horticulturist, writer, archaeologist, paleontologist, etc.), Alexander Hamilton (soldier, financial expert, writer, political theorist), John Adams (teacher, lawyer, philosopher, etc.), John Hancock (merchant, politician, shipping tycoon, etc.) and all the rest, all coming together to ask and answer the call of their moment and the result is one of the miracles of history. In other forms and to different degrees, both the Renaissance and the 1960s offer remarkable examples of periods of interaction among diverse agents resulting in dramatic transformation. Clearly, the depth and complexity of all these examples exceed the scope of these short notes. These are just a few examples of brief periods where what Henri Bergson has called an *Elan Vital* or vital surge took place through the alignment and interaction of people, their disciplines, their questions, and their time.

### *Arts Letters & Numbers*

Our moment has its own urgencies, questions, and potentials for shifts in the historic trajectory. We are in the midst of unprecedented realignments of every aspect of our lives. The ubiquitous observation of our time is transformation: cultural, technological, social, political, and economical. Today, education in the broadest sense holds the capacity of developing new pathways of interaction and forms of knowledge that address the challenges of our increasingly complex world. Given the present and emergent possibilities, it is

time to build new dynamic forms of interaction between the multiple disciplines of Art, Design, Humanities, and Sciences. This greater community of disciplines; broadly defined as 'Arts Letters & Numbers,' currently exists and is latent with potential for interaction. The question is: "what is the proper form to release the potential energy of this expanded disciplinary geography into the kinetics of communicative interaction and exchange that our times demand?"

### *Dynamic Framework / Organic Growth*

If we return to the core principles of 'a proximity of diverse agents creating the possibility of transformative interactions' (evolution) and a 'shared framework of exchange that amplifies individual agency' (language), the form which best expresses these principles is a matrix, a dynamic framework consisting of multiple linkages between existing agents: people, disciplines, schools, and institutions. The mission and meaning of this framework are to foster, encourage, facilitate, and advocate for a greater diversity of agents to interact. The project then is not one that displaces any existing agent but of creating the communicative pathways for interaction between all of the existing agents. The guiding principle is to create a framework of interaction within a disciplinary geography of discrete bodies of knowledge (maintaining both their exploratory potential and their disciplinary integrity), thereby increasing the possibilities of individual agency within any given discipline. The discrete bodies of knowledge do not dissolve into the framework but form an interconnected and interdependent topography of interactions and experiences. The nature of this dynamic framework is not something that can 'begin at the end'; it must be developed through multiple forms of interaction sustained over time, and its final form will be a function of the creative inputs, diversity of its constituents, and richness of the interactions within itself and throughout its existence. The complex culture of a rich disciplinary geography built on a framework of linkages (a matrix of disciplinary interactions) encourages and facilitates transformative interactions, which, in turn, enables individuals to build connections between their multiple diverse disciplines.

There are people and institutions across all disciplines and across the globe that increasingly are confronted by the need for new models of asking the extraordinarily complex questions of our time. The challenges and possibilities

of such a moment are extraordinary; they call for creative urgency, considered stewardship, and new spaces bringing together diverse voices, Arts Letters & Numbers is just such a space.

Below, I have outlined a number of questions demanding new modes of knowledge building. These are just a few briefly outlined examples where careful and considered alignments in disciplinary geography could bring about amplifying exchanges and unpredictable questions.

In recent years, many new forms of knowledge generated within the fields of brain science have offered specific insight into those generated within the art, design, and science disciplines. The questions of cognition, perception, and experience are clearly of increasing value to the questions of creative navigation in art, design, and architecture. The reverse is also the case; the modes of thinking and acting developed within the art and design disciplines offer very specific contributions to the brain sciences. The specific interactions of eye/hand/brain at work for a painter speak volumes to the question of 'where' knowledge lives. Frank Wilson, the neurologist who wrote the book 'The Hand,' has said that the initial idea of the book came from watching his daughter's hands as she played the piano. It was clear to him that the brain could not be telling those fingers what to do; the hands were out front, guiding the brain. The commingling of perception, knowledge, and memory that occurs through the experience of painting, drawing, and making links evolutionary biology with desire and mental attention in ways that brain science is constantly attempting to comprehend. Introduce the difference between the actions of a painter, a printmaker, a furniture maker, and a digital media artist and an architect, and a new thesis can be formed about memory, creativity, and the present tense commingling of the senses.

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2. The financial crisis of 2008 have set in motion realignments of such historic significance that we have only just started to witness the changes to come. The very meaning of risk is transforming, as are the fundamental relationships between public and private, between security and securitization. These transformations are challenging the core ideas of the nation-state, governance, and collective judgment in ways that were not thought possible just 5 years ago. We see early evidence of the profound nature of these shifts in the re-positioning of Washington and Wall Street. What is currently being framed as 'financial reform' contains the seeds of a rethinking of the relationship between public and private interest on a scale not visited since Roosevelt and perhaps not implemented since America in the 1770s. This is, of course, global; we see the first serious challenges to the idea of a geography defined by a currency in the current EU debates. Across the entire planet, from individual central banks to the collective body of the United Nations, the crisis of '08 has provided the most serious challenges and opportunities in our lifetime. The instruments, mechanisms, and structures of capital exchange are so fundamental to the transformation of our current geographies that understanding their workings and logics is clearly of tangible benefit to all of the disciplines of arts and letters. But these benefits are not the only reason for the arts and letters to invest time and energy toward comprehending the modes of practice of capital exchange. As I often comment to the students, the practices of the arts and letters have at least as much to offer to the practices of capital exchange as capital exchange does to the arts and letters. The coming decade will see realignments of the meaning of public and private on a scale and scope the modern world has not known. The content, structure, and consequence of these realignments extend well beyond 'financial reform'; these

paradigm shifts call for exactly the kind of convergence of disciplines envisioned in Arts Letters & Numbers.

3. Comprehending the increasing speed and complexity of our communicative spaces: from the internet, to political discourse, to global cultural exchanges, certainly calls out for new forms of knowledge to be built. Within our high-frequency world where everyone is an actor and everyone is an audience, we see the very meaning of authorship transforming. The concepts of theatricality, narrative structure, of individual expression and shared stories, of cultural autonomy and coherence are all in transition. Here too the convergence of diverse disciplinary knowledge is essential to asking the relevant questions.

It is remarkable what is possible when the questions contained in these few examples are situated within a broad geography of disciplines. Bringing together diverse forms of knowledge to address difficult questions is the most precise means of navigating and creating the transformations of our time.

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