

## Endnote

### **That Drunken Conversation Between Two Cultures: Art, Science, and the Possibility of Meaningful Uncertainty**

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## **Abstract**

Using a quote from James Elkins's "Aesthetics and the Two Cultures: Why Art & Science Should Be Allowed to Go Their Separate Ways" as a launching point, Professor Andrew Yang discusses the ongoing conversation surrounding the obstacles, the critiques and the potential in art/science collaboration.

*"There is, in fact, an intermittent conversation about aesthetics going on between art and science — it takes the form of colloquia, sessions in conferences, scattered scholarly papers, and occasional books — but I would claim it's a 'drunken conversation' involving more or less drastic mutual misunderstandings of basic terms."*

- James Elkins ("Aesthetics and the Two Cultures: Why Art & Science Should Be Allowed to Go Their Separate Ways," 2009)

If we accept the view that art and science have in fact become very distinct cultures, then it is not surprising that their basic concepts and language should suffer from significant fissures over the roughly four hundred years they've had to diverge and specialize. Some see this as a rich opportunity for building disciplinary bridges in hopes of forging new forms of hybridity, while others see it as the surest sign that the two are best left to their own devices. But the reason the conversation between art and science is so difficult may have more to do with assumptions that presuppose the structure of the conversation itself.

The most conspicuous thing about so many art-science conversations is their implicit claim to be about "Art" and "Science," as if they were monotonic and easily summarized, rather than astoundingly diverse and heterogeneous fields of practice. Oversimplification inebriates us. Although science includes string theory as much as it does entomology, and art describes British landscape painting as well as Butoh dance, we assume that somehow there is a common denominator such that "Science" and "Art" are tenable categories of comparison in some overarching sense. As historical and evolving domains of inquiry, what counts as art or as science is a moving target. But if reducing practices safely and pre-emptively into standard forms closes down the possibility of more richly textured exploration of their relationship, it is important we also recognize this is largely by design. Communities of

scientists and artists put considerable work into maintaining their disciplinary boundaries, and ironically so-called art-&-science initiatives can be one of the most convenient devices to help accomplish this.

The Wellcome Trust's "sciart" program, for example, was one especially high profile program content to adopt C.P. Snow's well-worn notion of "two cultures," fundamentally framing the interaction of artists and scientists as a matter of interdisciplinary collaboration. This no doubt reflects the nature of many of the Wellcome projects, but an immediate consequence of adopting the two cultures model is that by definition the *inter* becomes a kind of illegitimate (albeit novel and sometimes charming) offspring from the point of view of the established disciplines.<sup>1</sup> Indeed, a common critique of art-science projects is that they typically fail to do a satisfying or proper job of accomplishing either. As Elkins has argued:

*"The science in art, especially in the past two centuries, is simplified, misunderstood, or otherwise modified, and after a point it becomes counterintuitive to think of it as science at all...The scientific content will therefore be embedded in a new matrix, one that will necessarily work against the scientific content as much as it enriches or otherwise alters it. At some point this should be troubling to people who study appearances of science in art, because it seems that what is being counted as scientific content is nothing more than remnants of scientific forms stripped of their content."* (39)

But if, as Elkins claims, "the 'science' becomes something weird, a dream or nightmare or collage or garbled mistranslation of science, but it isn't science" (44), we have to pointedly ask: are not those very fuzzy and uncertain possibilities the whole point of the art's undertaking? If art-science projects were to cleanly meet the standard of either discipline, we'd find them simply duplicating that discipline's work, not experimenting with its forms and testing the edges or standards of practice. When an art work generates new perspectives on scientific practice or values such work entails, it is perhaps no surprise that scientists feel (at least initially) that their science is being misunderstood or misrepresented in comparison to their own idealizations of what they do.<sup>2</sup> The protracted "culture wars" among scientists, sociologists, and cultural scholars throughout the nineties demonstrated just how heated the defense of intellectual turf could be. All this to say, it is important to recognize that from the eyes of an established scientific discipline, art-science projects are very likely to appear problematic rather than "productive." The more interestingly and interpretively problematic, arguably all the better for catalyzing deeper, albeit, uncomfortable questions about what is at stake in presuming to make knowledge and change the world.

Critiques such as Elkins' illustrate how the seemingly open and exploratory space of so-called interdisciplinary practice can in fact be a means to efficiently corral modes of practice and patrol the cultural borders of art and science. The "inter" practices between the two proper disciplines then end up existing in a space that appears as overly permissive on the one hand, given all the aesthetic and conceptual liberties being taken, and on the other hand an intensely scrutinized arena where it is more than easy to attack the authenticity of work that doesn't quite live up to some hypothetical standard. Given the prevalence of bad art and tepid science, it is natural to expect as

much variation within practices called art-science. Questionable aesthetics, clichéd tropes, misplaced metaphors, or false criticality will arise in art-science projects just as they inevitably do in any experimental process. The question remains: are art-science projects dubious by virtue of the circular logic by which we hold these hybrid practices to disciplinary standards, or because art and science truly are domains that lack any interesting potential for being a little less disciplined/disciplinary. A term like “sciart” may itself betray the poverty of our language and current imagination to make conceptual sense of something that is neither quite *this* nor quite *that*.

It’s arguable whether the vocabulary and theoretical framework necessary to distinguish art that is fruitful critique, fancifully fictive elaboration, or derivative fetishization of science is sufficiently developed in the art-science discourse as it stands today. But what if the current limitations within the art-science discourse are even more symptomatic of something we are neglecting to acknowledge and *cultivate* as common ground rather than with the presumption of The Experiment itself? Something that operates at the level of epistemic principle rather than the usual suspects of aesthetics, materiality, or language? The kind of principle I have in mind could be called an *uncertainty principle* of sorts, and describes those “having faith in uncertainty, finding pleasure in mystery, and learning to cultivate doubt.” These characteristics are part of what poet John Keats called the artist’s “negative capability,” and while seminal art texts like John Dewey’s *Art and Experience* discusses this capability, this particular paraphrasing comes from biologist Stuart Firestein in his recent book *Ignorance: How It Drives Science*. Describing the fundamental sensibility of scientists, Firestein goes on to say how:

*“Working scientists don’t get bogged down in the factual swamp... It’s not that they discount or ignore them, but rather that they don’t see them as an end in themselves. They don’t stop at the facts; they begin there, right beyond the facts, where the facts run out.” (15).<sup>3</sup>*

It is a fluxing and vast space of “what-if,” a practice of provisionality, and a constant re-jiggering of the relations between theory and phenomena. The negative capability is a very general but particular form of exploration, and one that resonates strongly with the ways that both artistic and scientific practices often seek opportunities to configure new, and largely uncharted, kinds of meaning. How might this kind of uncertainty invite its own experiment?

When physicist Anton Zeilinger carried out demonstrations of quantum entanglement in the main hall of dOCUMENTA (13) in Kassel, Germany this past year, we see one model for creating a space of meaningful uncertainty. This iteration of the documenta exhibition was notable for its engagement with various aspects of science as practice and philosophy, with participants that provided a rich framework to consider the ideas of productive uncertainty as well as a healthy respect for indeterminacy. Donna Haraway’s essay for the exhibition’s *The Book of Books*, for example, introduced her concept of “sf” which she describes as a, “semiotics sign for the riches of speculative fabulation, speculative feminism, science fiction, science fact, science fantasy...,” while

philosopher Karen Barad's essay explored what larger questions might be at stake in how we interpret uncertainty, indeterminacy, and "nothingness" within both the quantum mechanical and humanly phenomenal worlds.

For meaningful and robust practices premised on uncertainty to flourish, however, the whole apparatus of our disciplinary expectations must not only loosen its fixation with singular standards of evaluation, but established institutional identities must also be challenged. Jill Bennett's essay for dOCUMENTA (13) confronts this kind of uncertainty in discussing the collaborative forest ecology project of sound artist David Dunn and physicist James Crutchfield:

*"Disciplinarians would insist on a bifurcation here: one is either being an artist/physicist or pursuing the sideline of saving the forests. But do we need to maintain such a tight grip on institutional practices?... what if our institutions are simply not managing to frame a practice that is, of necessity, becoming increasingly distributed, extensive, polymorphous; a practice whose dynamic points of connection escape the purview of the gallery exhibition? The question then is how might the art gallery or the art department transform in order to sustain such new-paradigm practices?" (346-47)*<sup>4</sup>

In this uncertainty we see that art may in fact function as is often hoped – as an agitation and critical provocation to institutional, disciplinary, and conceptual boundaries - including its own. When this uncertainty is embraced to the root of practice, then the terms of art and science are rendered up for grabs. This rich uncertainty goes hand-in-hand with a fertile sense of ignorance that lies beyond matters of fact. Such uncertainty might then correspond to what Bruno Latour calls "matters of concern," which he describes as the "highly complex, historically situated, richly diverse" things that we are deeply and collectively invested in, but that resist easy statement or deconstruction more typical of facts (2004, 2005). But it is questionable whether pure "art," pure "science," or any inter-hybrid as usually conceived will suffice in generating and negotiating the new kinds of understanding we are collectively invested in.<sup>5</sup> As Latour has aptly put it:

*"I hope it is clear that there is no possible reconciliation between art and science, no aestheticisation of beautiful results of science (fractals, galaxies, brain scans, etc), but an immense building site where once again, just as in the 16th and 17th century every intellectual skill from artists, scientists, politicians, statesmen, organizers of all kinds, merchants and patrons, are trying to reinvent an Art of Describing, or rather an Art of Redescribing..." (2005, 46)*

Instead of relying solely on terms and conditions of disciplines and experts, the idea is to activate a variety of "skills from" in a synthetic fashion. Either way, the result would not be the creation of yet a "third culture" derivative of the canonical two, but the possibility of any number of  $n^{\text{th}}$  cultures that do more than simply replicate their own norms and forms indefinitely, but instead propose novel, adaptable, and robust ones that still lack a complete map. The artist, scientist, writer, philosopher, or activist could be one in the same person - and authentically so - working among great uncertainty to redescribe the world in motion. The way through the art-science conundrum, then,

might be understood as some form of *return*. Latour suggests a sense of the “revolutionary” - with a circling back to the kind of conceptual flexibility that existed before the modern division of art and science.<sup>6</sup> Or an even more apt metaphor may be the rhizomatic one, which pushes, connects, and fuses in ways fitting of the kind of teeming conceptual “compost” that it seems dOCUMENTA (13) eventually became.<sup>7</sup> The *return* in that case is to a kind of cultural soil that is about setting a fertile ground of possibility more than any one, easily understood outcome.

Compared to the aesthetic focus on the images or objects of science, the epistemic focus on uncertainty seeks a greater engagement with how, why, and with what cultural stakes both science and art are practiced. The value of such work and its impact should be judged on the energy and rigor of the discourse itself and its dispersal through culture more broadly, not whether it contributes to any new discovery in science or appropriately serves in communicating its theories. In this sense, art involves dwelling in the uncertainty of things, navigating and making meaning among the uncertain relations that exist between the natural and supernatural, the real and represented, invisible and the merely unseen. As Jack Burnham put it over 40 years ago in articulating the (then new) notion of “systems esthetics” we see that the artist in fact, “becomes a symptom of the schism between art and technics,” such that “progressively the need to make ultrasensitive judgments as to the uses of technology and scientific information becomes “art” in the most literal sense.”

The art-science conversation, drunken as it continues to be, has set the stage for a diversity of incipient ones that may benefit in being less pre-occupied with either Art or Science, while fully engaging with them as practices all the same. If uncertainty abounds, embracing and supporting the creation of n<sup>th</sup> cultures may not provide the right answer, but may led us to the next and most interesting questions.

## ENDNOTES

- 1 In reading *Insight and Exchange: An evaluation of the Wellcome Trust's Sciart programme* one can see how reliant on the “two cultures” concept we continue to be:

*“While recognising that there were connections between the ‘two cultures’, a number of interviewees stressed the importance of artists and scientists being able to benefit from the opportunity to collaborate without feeling pressure to compromise or dilute the distinctiveness of their own professional discipline: ‘For me, the importance of any interdisciplinary activity is that you can let an artist be an artist and let a scientist be a scientist; that division, of keeping them in their places, is actually more productive because they are separate fields of knowledge. They can inform each other, but I don’t think that they often truly blend. That can be a misleading aim...It [Sciart] should only support projects that have an ability to stand up in the realm of art, independently of the relationship with science, and vice versa...As soon as you depart from that you get watered-down science and watered-down art, and that is not what it set out to do...’” (76)*

The question becomes to what extent these starting assumptions do not merely frame, but also inhibit, the possibilities that can result from such collaborations, both productive and interpretive. For more on the critique of the two cultures metaphor within art-&-science discussions, see Zilberg (2011)

- 2 Discussed further in Yang (2011).
- 3 Firestein's advocacy of ignorance as a strategy for seeking meaning resonates with Henry David Thoreau's thoughts on the subject over 150 years ago:

*"We have heard of a Society for the Diffusion of Useful Knowledge. It is said that knowledge is power, and the like. Methinks there is equal need of a Society for the Diffusion of Useful Ignorance, what we will call Beautiful Knowledge, a knowledge useful in a higher sense: For what is most of our boasted so-called knowledge but a conceit that we know something, which robs us of the advantage of our actual ignorance? ...A man's ignorance sometimes is not only useful, but beautiful—while his knowledge, so called, is oftentimes worse than useless, besides being ugly."* (149 – 50)

- 4 The distinction between "trans" and "inter" disciplinary is too involved to discuss here. Suffice to say it might propose a model where neither has to "stay in its proper place" as terms of the interaction.
- 5 Roger Malina (2011) has proposed a metaphor of art and science more dynamic than typical formulations: "To avoid the trap of the false dichotomy that C.P Snow led many into, I would prefer to imagine a river delta. The river beds themselves move with time and silt can create new banks and territories."

However it is important to note that this conception is still framed in a way that the banks, and not the river itself, remain the key features-

*"Rainer Schulte points out that the German word for "to translate" is "übersetzen". In its most basic visualization, the German word means 'to carry something from one side of the river to the other side of the river'. The metaphor carries a number of complexities...the landscape on each bank of the river is different, so objects are transformed, or grow or shrink, in their new context;...the idea is not to pave over the river to unite the banks, but rather to encourage trade and barter between the banks; travel between the banks is in itself enriching..."*

In his Spinoza Lectures (2005), Latour introduces a surprisingly similar metaphor in reference to a different concept - the divide between the worlds of the "representation" and the "real." The idea is not to attempt to simply "bridge" these worlds that lie on separated banks, but rather focus very differently and embrace the risky proposition of going "kayaking" in the river that flows in between, to navigate that active space from which each bank seeks to draw their identity from in the first place: *"I proposed that we consider that the mystery of bridging the gap...is not as deep and revealing as the experience of going with the flow..."*

If we take Latour's spirit of kayaking to the "banks" or art and science then we are dealing with the river - although the water is uncertain, it is space that is something distinct, dynamic, yet intimately related to both sides.

- 6 Stephen Nowlin recently argued:

*"For science, the supernatural is a non-concept, there is only the natural to contain all that is marvelous. Which brings us back to art and science. If art is going to engage true science, if it is going to excavate the deeper human meanings that lay tantalizing ready beneath the surface novelty of art and science, if it is not going to be art and pseudo-science, or art and new age mysticism, or just art as sciencey gizmos - if it is truly going to be art and science, it will need to acknowledge the ongoing tension between a natural view of everything versus a supernatural one. It needs to ignite that discussion and embed it in the art-science discourse."* ("LASER-UCLA-2013-04-18-02-Stephen Nowlin")

The approach that I am advocating for would acknowledge the tension between the natural and supernatural, but it would not necessarily *accept* it on face value. As the supernatural gets continually transformed into the natural through scientific discovery, we also find that same naturalistic scientific practice raising seemingly supernatural possibilities, especially in the worlds of cosmological and quantum physics. If we are to evoke some form of a 16<sup>th</sup> century sensibility, then we are embracing a spirit of some uncertainty as to what in fact the natural and supernatural constitute and how they meaningfully relate. Nowlin is right to say that art might do more to ignite that discussion, however that is assuming scientists are willing to listen, and further still, engage with it on terms other than those exclusively set by science.

7 As discussed by dOCUMENTA (13) artistic director, Carolyn Christov-Bakargiev, during a talk at the School of the Art Institute of Chicago, February 25, 2013.

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