# Didactic Disruption:
# Roy Ascott's Models for Arts Education and Research

## Elif Ayiter Ph.D., Diane Gromala Ph.D, Mike Phillips, Paul Thomas Ph.D., Peter Anders Ph.D.

Elif Ayiter:  Sabanci University, I-Node Planetary Collegium    ayiter@gmail.com

Diane Gromala: Simon Fraser University of Arts and Technology    dgromala@sfu.ca

Mike Phillips:  Plymouth University School of Arts and Media, Planetary Collegium   m.phillips@plymouth.ac.uk

Paul Thomas:  University of New South Wales, Fine Arts Program    p.thomas@unsw.edu.au

Peter Anders (Moderator):  Kayvala PLC, ISEA International    ptr@kayvala.com

## Keywords

Roy Ascott, Planetary Collegium, arts education, arts research, Plymouth University, CAiiA-STAR, interdisciplinary studies

## Abstract

This paper summarizes a panel discussion held at ISEA2015 in Vancouver B.C. Its subject was artist and educator Roy Ascott's development of models for interdisciplinary studies in universities and distributed research centers.

## Panel Summary

This panel discussed alternative models of arts education that have emerged from Roy Ascott's career and practice. Ascott, the founder of the University of Plymouth's Planetary Collegium, is widely regarded for his role as an arts educator and theoretician. In a field that integrates arts, technology and science, he has presented concepts and terminology that frame debates and define new territories. Ascott has published and presented his work internationally and has given keynote addresses at several arts-science congresses, including ISEA symposia.

It has been over 20 years since Ascott founded a radical distributed research center and doctoral program. He founded the Centre for Advanced Inquiry in the Interactive Arts (CAiiA) in 1994 at University College of Wales Newport, and later established STAR (Science Technology and Art Research) in the School of Computing at Plymouth University. CAiiA-STAR constituted a joint research platform with access to supervisory and technical resources at both universities.

In 2003, Ascott relocated the platform to Plymouth University, giving it its present name *Planetary Collegium*. The Planetary Collegium's global reach extends beyond the UK through mimetic nodes in Italy, Switzerland and Greece, with a new node currently forming in China. Having successfully graduated over 50 PhDs, the Planetary Collegium is now host to a dynamic community of over 70 doctoral candidates and researchers.

The panel reviewed the singular aspects of Ascott's pedagogical challenge to conventional models of advanced art research in Europe and North America. Its panelists presented a history of Ascott's innovative curricula as well as the development and operation of the Planetary Collegium and its nodes. In the course of the panel discussion Elif Ayiter presented Ascott's Ground Course as a precursor to his later work in distributed transdisciplinary education. Diane Gromala discussed the application of her experience with the Planetary Collegium on her research and professional development. Mike Phillips described Ascott's influence on artists and educators as a form of contagious virus of creativity. Paul Thomas discussed the influence of Ascott's integration of technology with art, and how it affected his career. Peter Anders moderated the discussion.

Summary papers by the panelists follow:

### Elif Ayiter:  Roy Ascott's Ground Course

The Groundcourse was a two-year long, cutting-edge foundation art course taught at Ealing Art College in London from 1961 to 1964 and at Ipswich Civic College in Suffolk from 1964 to 1967. Its radically innovative strategies never became wide-spread, nor did they extend into prevalent art teaching methodologies in England or elsewhere in the world. Thus to this day, for the most part, the Groundcourse is a well-concealed secret.

In her article for Frieze Magazine in 2006 Emily Pethick remarks that "with alumni that include Pete Townshend, Brian Eno and Stephen Willats there is no doubt that the courses in Ealing and Ipswich made their mark, and it is curious that, while renowned at the time, they have not been more widely acknowledged in British art history."

It is of no great surprise that the Groundcourse has no immediate siblings or easily identifiable ancestors within the historic flow of art educational theories that have been built upon each other, providing the antecedents to the post-modernist debate that is unfolding today. By placing cybernetics at the centre of his method, Ascott looked far beyond the theories that were available to him in art education alone, both in terms of its history as well as in terms of the different movements underway that were coeval to his inquiry.

Another difficulty in placing Ascott within the canon of art education is the transdisciplinary nature of his inquiry. Art educational theory has been known to look at other academic fields for theoretical input. Nonetheless a survey of its history lacks evidence of a successful merger of art and science at a cogitative level deep enough to qualify as a true precedent for Ascott's work.

Therefore, instead of trying to set up tenuous connections to established art educational theories that are built upon a rationally associated historic tradition, the genealogy of the Groundcourse, as well as Ascott's subsequent teaching practices, should be construed by examining Ascott's own sources of inspiration which mostly lie outside of this body of knowledge, i.e., Cybernetics and the body of Experiential Learning theories instigated by John Dewey.


## Mike Phillips:  Dancing on Tabletops (And Other Bad Behaviourables)

*When art is a form of behaviour, software predominates over hardware in the creative sphere. Process replaces product in importance, just as system supersedes structure. Consider the art object in its total process: a behaviourable in its history, a futurible in its structure, a trigger in its effect.*

Roy Ascott (1968) [1]

This quote was probably my first contact with the distributed Ascott mind. It must have been in a Leonardo Journal somewhere in the early 1980's, but it was the catalyst that made me realise that the Art College was doomed. Not the incredible pedagogic, haptic, hallucinatory, behavioural disruptive experiential education the Art College provided, but doomed because of its focus on 'things'! This quote is a requiem which marks the dissolution of the objet d'art. And of course all the markets, arrogance and institutions that glorify them.

Of course, thirty years later the Art College is clinging on and is probably generally not aware of this requiem, but for me, this quote gives a sense of hope. Now, through my twenty years involvement as a Principal Supervisor on the Planetary Collegium, I feel content that this repose for the soul of the objet d'art is being sung by the hugely influential international community of artists, designers, performers, architects, theorists and academics, all infected by the same viral realisation.
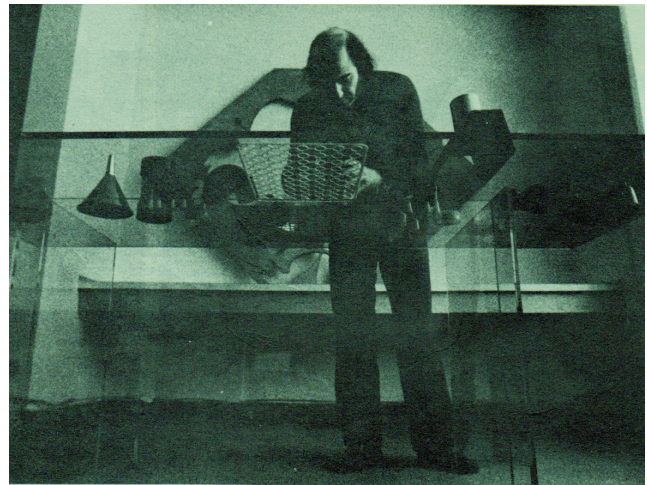


Figure 1: The President's Office Desk at Ontario College of Art! 1971. [Courtesy of the Estate of Roy Ascott].

What is interesting about this infection is that it is not just a pandemic, the contagion is not just a horizontal network of nodes, influences and value chains, it operates across generations, vertically, the first telematics temporal contamination, perhaps.

Ascott's creative practice is syncretic with his pedagogic strategies that draw on the inspiration to enhance creative behaviour through processes based on the principles of cybernetics. By founding the Ground Course at Ealing College of Art in 1961 he created a platform for a radical cybernetic approaches to learning through participatory, interactive and disruptive strategies that locate the viewer/learner as an active participant.

What is significant about the archaeology of Ascott's practice is that the 'things' he is most known for are ephemeral, temporal and transitionary - things with the least physical trace. The recalibration of human behaviour enacted through the Ground Course leaves few relics. As with the later telematic projects which predicted and defined protocols, behaviours and manners now hidden below the surface of internet transactions and online identities, there are few material artefacts. The recovery of Ascott's early work, exhibited the 'The Syncretic Sense' and subsequent exhibitions, reveals that the most important

components are not the wood and glass but the behaviour of the viewer and their transformation into an active participant.

This strategy of dissolving the material artefact into a sequence of behaviours is now an invisible process underpinning all of our digital transactions - logging on,



Figure 2 : Ground Course Behavioural Project 1963. [Courtesy of the Estate of Roy Ascott].

handshaking, parsing, messaging and interfacing with API's. Traces reverberate through Brian Eno (a young version Figure 2) and Peter Schmidt 'Oblique Strategies' (1975) and can be subsequently traced through to be manifest in the IDEO Method Cards (IDEO, 2002). [2] [3]

The vertical nature of this pandemic was evident on stage at the Brit Awards in 1996. A not-so young Brian Eno presented Thom Yorke of Radio Head fame – with Yorke almost as young as Eno was in 1961. (Figure 3) [4]



Figure 3: Brit Awards 1996.
https://www.youtube.com/watch?v=QgVbkjNmV1U

I am not sure if I can claim any direct infection of Yorke during his days as my project student on his Fine Art and English. Maybe had he stuck with Hypercard he might have made something of himself, but I am sure they say to each other as they leave the stage, "You know Mike Phillips/Roy Ascott?" Of course they didn't, but Yorke carries the virus, Eno carries the virus, it's evident and manifest in their work.

The contamination was not just of PhD researchers. I had contacted Eno in 1992, asking if would consider being the External Examiner on the BA/BSc MediaLab Arts course that I was running in the Computing Department at a young Plymouth University. He turned it down, saying he had just finished a stint with Roy Ascott at Gwent, and really needed a rest (I blame Paul Sermon - also infected - who was part of that cohort). He subsequently became a Virtual Advisor, taking part in European Satellite Broadcasts (Mediaspace) and online environment, and I was able to secure him an Honorary Doctorate. Roy Ascott joined us as the External and we latter secured him to cultivate STAR (Science Technology Arts Research), one half of the CAiiA-STAR consortium, and later the Planetary Collegium.



Figure 4: STAR, CAiiA-STAR, Planetary Collegium Logos.

The point is that, not only had he infected the Ontario College of Art (it tried to decontaminate), San Francisco Art Institute, Gwent College of Art and the Planetary Collegium, but secondary infection can be found in Plymouth. Now a carrier, the contagion can be seen in people like: Adam Montandon (who created the first Eyeborg for Neil Harbisson whilst on my MA/MSc Digital Futures Course); Nema Hart (Digital Economy for the Arts Council who worked at a national level defining Governmental digital policy under Gordon Brown), Ruairi Glynn (now directly infecting students as Director of the Interactive Architecture Lab at the Bartlett School of Architecture, UCL); Emmet Connolly (who left the MA/MSc Digital Art & Technology course for Google and created Android Wear – years before Apple imagined its Watch); Dan Effergan (Director of Aardman Digital Studio); and B Aga (doomed to forever work at i-DAT). Just a tiny sample of victims of a highly contagious transmissible infection, a short phrase, a string of DNA, a spell cast.

**Routing Table**
The first table top encounter would have been in Toulouse, a collaboration with Rob Pepperell (also seriously infected)

at the Slade School of Art, developing networking protocols on the UCL EUCLID mail server system, was played out in 1985.



Figure 5: Networking in Toulouse, 1985. [5]

Subsequent telematics network contaminations, such as *Aspects of Gaia* (Ars Electronica 1989), were played out remotely over modems transmitting Binhex files through Kermit via EUCLID. Once infected it is hard to shake, the sound of modems logging on still resonates like tinnitus.

More recently the Tabletop was recovered through the collaboration and co-curation between Plymouth Arts Centre (lead by Paula Orrel) and i-DAT (lead by B Aga) of *The Syncretic Sense - Roy Ascott*, from 4 April to the 24 May 2009 at Plymouth Arts Centre, England. The Syncretic Sense explored the influences of Ascott's early work on digital culture and the impact these experimental ideas and activities had on art education. The material framed for this exhibition formed the core of the show at Incheon International Digital Arts Festival, Incheon, South Korea in September 2010, and at SPACE (studios) in Hackney, London in 2011. Following this, Syncretic Cybernetics, a comprehensive exhibition of Ascott's work was featured in the 9th Shanghai Biennale 2012. The contagion spreads…

A preoccupation with inter/transactions across tabletops emerges, resonating with a blend of ludic strategies and the telematic protocols of the *Dowding System* (RAF Fighter Command Operations Room processes). Whilst on the vertical plane, recombinating transparent panels predate the gestural trends of Natural User Interface design. Ascott's *Tabletops* and *Change Paintings* leave a trace that can be experienced some fifty years later in this new century. Whilst Apple and Samsung wield clips of 2001 a Dave Bowman (Kubrick, 1968) caressing touch screens in war of attrition over the genetic origins of the multi-touch surface, prior art can be found in Ascott's Change Painting from some ten years earlier. [6] Leaving aside his influence within the telematics and educational spheres there is a rubric for participation through an interface that is now manifest in every multitouch screen. As we sit in cafés caressing, flicking and stroking our smartphones we should consider the heritage of this behaviour…

Now that this pandemic is truly embedded, the concern is that the patient is actually being killed off by something else. Academisation of Art may actual be the personification of death. The vitality of Ascott's requiem is that it is truly transformative, the telematics and technoetics are instrumental as a mechanism of transmission of disruptive behaviour, they transcend technology which conveniently illustrates the vision. Ascott is the router, wifi the carrier and the message, broadcasting a disruptive meme of creative practice…metaphorically and actually… The Art College would, after a short fever, reawaken, renewed and revived to dance on the tabletops. The bludgeoning of Art Practice by bureaucracy and indifference that we are witnessing across the University sector offers no redemption.

## Paul Thomas:  Reformatting Art Education Through Viral Transmissions

There are many reasons why we want to explore the future and how we as humans respond to the emerging and changing contexts within culture. One of the dominant changes that have taken place is the digital and technology, incursion via systems thinking in art education.

This talk looks at seepage and the effect of a visionary artist who through his intellectual and conceptual generosity inspired and transformed art education through a form of syncretic osmosis or instigating a network virus. Invisible to many students who exist within seemingly normative art institutional structures, the entitlements were part of a hard fought effort.

At the start of the network age of telecommunications I.P. Sharp provided artists with an electronic exchange network system (ARTEX). ARTEX enabled the beginnings of the first international artistic text and cursory graphic collaborations over the computer network. The telepresence on the network began with work such as a *Hole in Space* (1980) by Kit Galloway and Sherrie Rabinowitz, that demonstrated the slippage appearing in the way artistic discourse and practice could be carried out. Roy Ascott conceived the impact of a global network and this vision was pertinent to generating his first network projects. As Ascott stated:

*More broadly, in my mind, the concept of a global creative network, a cybernetic art matrix, was clear but not until some fifteen years after I had first digested the significance of integrative systems did I come upon the technology which could effect these transformations of culture I had so eagerly anticipated.*

The global creative network also had it opposite meaning invented simultaneously. For example, Paul

Virilio's observation that high-speed trains automatically generate the potential for high-speed rail disasters. The network effect was also a sharing of consciousness but, by default, the inception of a cognitive virus. Ascott's network was a conceptual and physical exchange of minds that enriched ideas in the world through the immediacy of a cyberspace that was unexplored, formative and still innocent. In the antipodes this enriching/viral communication was of great importance in staging a sense of connectedness. Ideas posited in art education were simultaneously (and instantly) arriving in Perth, the most isolated city in the world. The lapse in time was one that might also have been felt here in Vancouver as things developed.

In 1983 Eric Gidney invited Tom Klinkowstien to Australia 1983 (One of the outcomes of this event was that I first met Ascott telematically) as part of telecommunications project based on the topic of Australia 2003. The topic was to introduce students to

...new telecommunication technologies and the new "electronic living spaces" that [Ascott] believes will be an important creative environment for artists in the near future.

Australia 2003 was a telecommunication fax link-up project between students in Sydney, Adelaide, Newcastle and Perth. This project does not concern us here, but with Klinkowstiens visit to Perth came a phone-coupling device incorporated into a typewriter that was set up for a global telex communication with IP sharp. In the lounge room Tom (an artist in residence in Perth) demonstrated this piece of equipment which had me totally excited by its potential to banish the tyranny of distance I felt in Perth. The fax project was taking place in the same year.

At the same time Roy Ascott was instigating LA PLISSURE DU TEXTE and in a letter to his colleagues he laid out the plan.

...a computer networking art project designed by ROY ASCOTT for the major exhibition devoted to the historical and contemporary review of Electricity in Art organised by FRANK POPPER for the Musee d'Art Moderne de la Ville de Paris. The exhibition is called "ELECTRA I983" and will open at the beginning of December I983 and run for three months.
La Plissure du Texte is a collaborative story telling project using a computer timesharing network of artists located in Europe, North America and Australia. Artists using terminals in their own studios or at publicly accessible locations will be involved in a process of "distributed authorship". They will employ the ARTBOX network of I.P. Sharp 's APL system (who have donated free network time to the project). The video display and print-out of this collaborative oroject in the form of a "Planetary fairy tale" will constitute the contribution to ELECTRA.

Catherine Mason's book *A Computer in the Art Room* presents Ascott, in 1964, beginning his exploration of system thinking in art by making works where the viewer becomes a co-author. Painting was Ascott's chosen medium. Marks made on moveable pieces of glass made the viewer complicit in the creation of the artwork. Ascott would use painting as the lens by which he viewed the effects of emergent technologies on society, a significant redefinition of the contemporary role of the artist. The education of artists as to *whether technology was art* shifted when posed with the question of *how will technology change art*. It called for the conversion of the face-to-face program of the master and apprentice to a distributed network of global knowledge where the user could access from any node. This was seen as a cultural, physical and spiritual goal.

Ascott was the inspirational visionary of a future who not only lived this vision but gave the vision a reality in his practice and through education. On discovering in 1986 that Ascott was coming to Australia I invited him to detour via Perth. One of my own telematic artwork projects instigated in 1986 was *I You Send One* (1987, with Neil Hollis and Benno Poeder).

Ascott's ongoing visions for the future have been profound, creating aspirational perspectives for new understandings of life in which all aspects of being human are challenged and contextualized. These visions are generous, freely given gifts at the cutting edge of contemporary art practice and syncretic education. The spread of the ideas dominated my involvement with emerging technologies and the role of art education. The Artslab concept became part of the Centre for Advanced Inquiry in the Interactive Arts, (CAiiA) general educational format.

**CAiiA introduction**

There is a great need for art to play a cultural role when emerging technologies exponentially drive the economic framework. Ascott pointed out the potential of research into nanotechnology. Things were evolving to a point that

...molecular robotics, positional assembly, and self replication suggest exciting possibilities for moving atoms around, building new materials, manufacturing nano machines, and generally building the fundamental blocks of nature into any configuration we desire, there is a danger that the outcomes, even when beneficial in engineering, medical and social terms, could be spiritually hollow, and as such would exacerbate rather than relieve the excessive materialism of our time.

Ascott, 2004 [7]

Our quality of life depends in large measure on finding creative and constructive value in the new technologies

*and in shaping them to human needs. Advanced telecommunications, digital multimedia, computer-mediated and post-biological systems are playing an increasingly important role in the transformation and globalisation of culture. Artists working in the space between art, science and technology are uniquely prepared to influence, shape and exploit these changes, and to radically rethink artistic and cultural strategies.*

From Roy Ascott's CAiiA document

The context for the talks was to show the formative stages of ensuing work and how a new reality would come into being. In 1998 I used some of Roy's text in the development of a proposed digital research lab.

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# Authors' Biographies

**Elif Ayiter**
Elif Ayiter Ph.D., aka. Alpha Auer, is a designer, educator and researcher whose creative interests are based in three-dimensional online virtual worlds and their avatars, as well as in developing and implementing hybrid educational methodologies between art & design and computer science. She teaches full time at Sabanci University in Istanbul and is also the Director of Studies of the I-Node of the Planetary Collegium in Greece. Her texts have been published in academic journals such as the *Leonardo Electronic Almanac, the Journal of Consciousness Studies,* and *Technoetic Arts,* and she has authored many book chapters in edited academic books. She has presented creative and research output at venues including the John Hansard Gallery, UK; ISEA2011, SIGGRAPH, Creativity and Cognition, SPIE, Computational Aesthetics and Cyberworlds. Elif Ayiter also is the Chief Editor of the academic journal *Metaverse Creativity* with Intellect Journals, UK.

**Diane Gromala**
Diane Gromala Ph.D. (born 24 February 1960) is a Canada Research Chair and a Professor in the Simon Fraser University School of Interactive Arts and Technology. Her research works at the confluence of computer science, media art and design, and has focused on the cultural, visceral, and embodied implications of digital technologies, particularly in the realm of chronic pain.

Dr. Gromala was one of the first artists to work with immersive virtual reality, beginning with *Dancing with the Virtual Dervish,* co-created with Yacov Sharir in 1990. From that time, she has co-founded transdisciplinary graduate and undergraduate programs four universities in North America, and two in New Zealand. Currently, she is the Founding Director of the Chronic Pain Research Institute, a transdisciplinary team of artists, designers, computer scientists, neuroscientists and medical doctors investigating how new technologies—ranging from virtual reality and wearables to robotics to social media—may be used as a technological form of analgesia and pain management. With Jay Bolter, Gromala is the co-author of *Windows and Mirrors: Interaction Design, Digital Art and the Myth of Transparency*. Her work is widely published in the domains of Computer and Health Science, Interactive Art and Design.

**Mike Phillips**
Mike Phillips is Professor of Interdisciplinary Arts, Plymouth University, School of Arts & Media,Faculty of Arts. He is the Director of Research at i-DAT, an Arts Council England National Portfolio Organisation, and a Principal Supervisor for the Planetary Collegium. His R&D orbits digital architectures and transmedia publishing, and is manifest in a series of 'Operating Systems' that dynamically manifest 'data' as experience to enhance perspectives on a complex world. He manages the FulDome Immersive Vision Theatre (IVT), a transdisciplinary instrument for the manifestation of material, immaterial and imaginary worlds and is co-editor of Ubiquity, The Journal of Pervasive Media: http://www.ubiquityjournal.net/

**Paul Thomas**
Paul Thomas Ph.D. is Associate Professor and Director of the Fine Arts program at, UNSW Art and Design. Thomas initiated and is the co-chair of the Transdisciplinary Imaging Conference series 2010, 2012 and 2014. In 2000 Paul instigated and was the founding Director of the Biennale of Electronic Arts Perth 2002, 2004.

Thomas is a pioneer of transdisciplinary practice. His work takes not only inspiration from nanoscience and quantum theory, but actually operates there. Thomas's current research 'Quantum Consciousness' is based on the research being conducted by Associate Professor Andrea Morello, Quantum Nanosystems, UNSW, looking at the visualizing and sonifying the electrons

superposition in the development of quantum computing. Thomas's previous projects investigated silver, the mirror and quantum theories of light and parallel universes in the work 'Multiverse'. Thomas's nanoart works include 'Nanoessence' which explored the space between life and death at a nano level and 'Midas' a study on what is transferred when skin touched gold. Thomas is the author of the book, *NanoArt: The immateriality of art*, published in 2014.

**Peter Anders (Moderator)**
Peter Anders Ph.D. is an architect, educator, and information design theorist. He has published widely on the architecture of cyberspace and is the author of "Envisioning Cyberspace", published by McGraw Hill, which presents design principles for on-line spatial environments.

Anders received his degrees from the University of Michigan (B.S.1976) and Columbia University (M.A.1982) and the University of Plymouth Planetary Collegium (Ph.D. 2004). He was a principal in Kiss, Cathcart, Anders, an architectural firm in New York City which designed facilities for the production of photovoltaic panels. He has received numerous design awards for his work and has taught graduate level design studios and computer-aided design at universities including the New Jersey Institute of Technology, University of Detroit-Mercy, and the University of Michigan. He is presently the chair of ISEA International and principal of Kayvala PLC, a design practice specializing in architecture and media/information environments.

His work has been featured in professional journals and he has presented his research on the architecture of cyberspace in several international venues including The New York Architectural League, Xerox PARC, ISEA, CAiiA, Cyberconf, ACADIA, AEC, ACM-Multimedia, InterSymp, SEGD and the World Future Society.