

PROPAGATING TRANSDISCIPLINARY THEORY

Wendy Coones

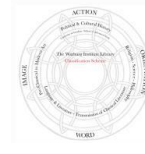
The propagation and cultivation of an international field requires diverse and concerted efforts. Between formal education curricula, digital and print dissemination points, common research tools, national / international collaborations, and continually developing interaction structures; a poly-cultural space can evolve.

THE WARBURG INSTITUTE LIBRARY 4th FLOOR: ACTION - ORIENTATION

ACTION : CULTURAL & POLITICAL HISTORY

ORIENTATION : MAGIC & SCIENCE

PSYCHOLOGY	THEATRE	TECHNOLOGY	ETHNOGRAPHY	ITALIAN HISTORY	MELAN HISTORY	NATURAL SCIENCES	HISTORY OF MEDICINE	PHILOSOPHY
15P 15C 15D 15E 15F 15G 15H 15I 15J 15K 15L 15M 15N 15O 15P 15Q 15R 15S 15T 15U 15V 15W 15X 15Y 15Z	16T 16U 16V 16W 16X 16Y 16Z	17A 17B 17C 17D 17E 17F 17G 17H 17I 17J 17K 17L 17M 17N 17O 17P 17Q 17R 17S 17T 17U 17V 17W 17X 17Y 17Z	18A 18B 18C 18D 18E 18F 18G 18H 18I 18J 18K 18L 18M 18N 18O 18P 18Q 18R 18S 18T 18U 18V 18W 18X 18Y 18Z	19A 19B 19C 19D 19E 19F 19G 19H 19I 19J 19K 19L 19M 19N 19O 19P 19Q 19R 19S 19T 19U 19V 19W 19X 19Y 19Z	20A 20B 20C 20D 20E 20F 20G 20H 20I 20J 20K 20L 20M 20N 20O 20P 20Q 20R 20S 20T 20U 20V 20W 20X 20Y 20Z	21A 21B 21C 21D 21E 21F 21G 21H 21I 21J 21K 21L 21M 21N 21O 21P 21Q 21R 21S 21T 21U 21V 21W 21X 21Y 21Z	22A 22B 22C 22D 22E 22F 22G 22H 22I 22J 22K 22L 22M 22N 22O 22P 22Q 22R 22S 22T 22U 22V 22W 22X 22Y 22Z	23A 23B 23C 23D 23E 23F 23G 23H 23I 23J 23K 23L 23M 23N 23O 23P 23Q 23R 23S 23T 23U 23V 23W 23X 23Y 23Z



The categories of Action, Orientation, Word, Image, constitute the main divisions of the Warburg Institute Library and encapsulate its aim: to study the survival and transformation of ancient patterns in social customs and political institutions (Action, 4th floor); the gradual transition, in Western thought, from magical beliefs to religion, philosophy and science (Orientation, 3rd & 4th floor); the persistence of motifs and forms in Western languages and literatures (Word, 2nd floor) and the tenacity of symbols and images in European art and architecture (Image, 1st floor).

Library Plan, detail 4th Floor: Action – Orientation. 2011, The Warburg Institute, University of London, School of Advanced Study.

Propagating Transdisciplinary Theory

Transdisciplinary for Theory

The theory and actuality of Transdisciplinarity are currently being written, with examples like large research institution's staffing, [1] international scientists / theorists [2], curricular practice [3], and national academies [4]. This emerging understanding of intellectual practice is, "ranging from a diffuse

The first letter of the premark of a book indicates the floor on which it is to be found. At the entrance to each floor there is an alphabetical list which gives the key number on which individual premarks are located. This is the only way to find a book precisely since the sequence of premarks on the shelves does not follow the order of the alphabet.

FINDING A BOOK

conceptual term located above individual disciplines” [5] to proposals for Transdisciplinary Universities. The panel for which this paper is presented at the ISEA, Istanbul 2011 includes Transdisciplinary Research and Transdisciplinary Practice, with a larger view to inform the Leonardo Education and Art Forum (LEAF). So, how can the education of theory, the humanities, also benefit from a transdisciplinary approach and become a Transdisciplinary Theory? What we are looking for is an undefined direction in a not yet existing world. Of the various disciplines related to the Visual Arts, Science & Technology, those who may contribute to a transdisciplinary discourse are defined or discovered by the question needing to be answered. As the needs for theory to lend its hand towards tackling a real-world problem arise, the necessary participants are determined. These participants may be separate people coming from separate fields, like in a classic interdisciplinary or cross-disciplinary cooperation, but it is the fact of focusing around a common question lying in an unknown space which transforms the interaction into transdisciplinarity. It is a co-evolution, co-creation, co-existence, co-operation all impressed today by the digital revolution.

Although transdisciplinarity is a relatively new term, there are elements of its practice that seem quite familiar. Transdisciplinarity questions focus around real-world problems that cannot be sufficiently answered by one discipline. The combination of skills and knowledge sets necessary to take on a particular question is determined by the stakeholders and the potential uses for the answer. This resembles in many ways the learning theories of Constructivism and Applied Academics. The Santa Fe Institute was created 25 years ago when a lunch group of Senior Scientists from Los Alamos had the idea of starting an institution where scientists could pursue problem-driven science (versus the usual imperatives of paradigm- or funding-driven science) directed at ‘hard’ problems. [6] The ‘hard problems’ being set forth in complex systems research needing physicists versed in chaos theory, mathematicians, climatologists, computer animators, and more. Any use of a transdisciplinary approach put towards a question of the humanities, a question of theory, would also find the necessary “disciplines” already imbedded within the nature of the question, its stakeholders, and the use of its outcome.

CONCEPTUAL MODELS

Two conceptualizations for what this space of inquiry might look like, this ‘trans’ in transdisciplinary seem fruitful to bring into the discussion. One is Basarab Nicolescu’s concept of the ‘Hidden Third.’ [7] That between the object and the subject of a problem lies a Hidden Third element that must be discovered anew each time. For the purpose of education, this means that an assignment from one year to the next, with generally the same objects and subjects, might have a completely different set of questions that arise from year to year. This Hidden Third is difficult to write into a curriculum plan, and ever more difficult to describe in a research proposal.

The second conceptualization is the historical poly-cultural planting practice of many Native American tribes who planted the ‘Three Sisters;’ corn, beans and squash. All three were planted on a mound together, the corn grew first, creating a stalk for the beans, the beans provided nitrogen for the soil, the squash covered the ground, inhibiting weeds and insects and acting as soil shade and waste recycling. Some even planted a fourth sister ‘bee weed,’ that encouraged pollination and was used for food, medicine and dye. It is possible to plant all these crops separately, requiring increased resources, but the poly-cultural system is more efficient and works even in the most difficult environments. The needs of one plant (vine needing pole,) leaves off where the characteristics of another begin; a kind of good

neighbor system. A truly transdisciplinary approach to theory would find the combination of these Sister Plants best suited for growing in the space of Nicolescu's Hidden Third.

CURRENT EXAMPLES – MEDIAARTHISTORIES AND IMAGE SCIENCE

Between formal education curricula, digital and print dissemination points, common research tools, national / international collaborations and continually developing interaction structures, a poly-cultural space for transdisciplinary theory can evolve. Two examples to be brought into the discussion are the endeavors and activities of the Department for Image Science at the Danube University during the past 5 years, and the international platform www.MediaArtHistory.org and its international conference series.

The first Media Art History conference in the series took place at the Banff New Media Institute in 2005. In the fall of 2004, a broad call for papers was announced, encouraging submissions from the following fields: *art history, anthropology, architecture, computer science, collecting, cd-rom & dvd creation, cultural studies, curating, cyberfeminism, documentation, ethnography, film studies, history of science, history of technology, image science, interaction, interculturalism, media archaeology, media art, media studies, museum direction, museum exhibit creation, nano arts, performance, photography, pop culture, presence research, preservation, psychology, robotics, scenography, science writing, semiotics, sociology, sound studies, supercomputing, teaching, theatre, videography, and visual culture*. Over 300 scholars responded and colleagues from 19 different fields presented papers at Refresh! The First International Conference for the Histories of Media Art, Science and Technology. Currently the 5th conference in the series is being planned for 2013, with no end for this transdisciplinary international conference series in sight. Focused around questions of common interest, answering the call for papers with themes bridging the spans between disciplines, the outcomes of this conference series are strong and continue to evolve. The MediaArtHistoriesArchive is the digital text repository of this new field, perhaps it is one of the newest transdisciplinary fields in the humanities created during the current digital revolution.

The Department of Image Science at the Danube University in Krems, Austria is currently the only higher learning institute of its kind conducting research and offering post-graduate studies in the field Image Science. The field of Image Science is translated in German as Bildwissenschaften, which means the study or science of the image, with "image," including everything from moving, still, historical or conceptual images. It draws from the academic pursuits in: *Art History, Archeology, Philosophy, Psychology, Ethnology, Media Studies, Communication Studies, Film Studies, Semiotics, Political Science, History of Science*, with relations also to: *Computer Science, Computer Visualization, Cognition Studies, Biology, Physics, and Medicine*. These are disciplines and theories that cluster around the image and their connections, images that cross normal academic boundaries. One of the fathers of Image Science, Aby Warburg organized his library on the "Law of the Good Neighbor" (Gesetz der guten Nachbarschaft) and gives a primary example how Image Science is a historically transdisciplinary field. As Leland de la Durantaye explains, "the various sections and the books within them were arranged as a function of their ability to engage with the books on either side of them.... Visitors to Warburg's Library are thus confronted by an enigma – so intensely that upon first entering it Ernst Cassirer declared that one needed either 'to flee from it' or 'to remain there a prisoner for years.'" [8] The complexity and ingenuity of the Warburg Library connections can be seen in Fig. 1. Resembling the poly-cultural Three Sisters, the curricula and research strategies of the Department for Image Science bring together a variety of mutually beneficial theories and disciplines based on the problem to be addressed, with a curriculum constantly evolving to

fit the needs of the field and the larger questions related to the image. The breadth of theoretical questions requiring a transdisciplinary approach demand an open, fluid and poly-cultural oriented Image Science.

DIRECTIONS NOT CONCLUSIONS

Between the Media Art History Conference Series with its archives and the research and teaching at the Department for Image Science, a path in a larger transdisciplinary direction is being developed. Both are in pursuit of an unknown future (a Hidden Third), which constantly changes course and evolves. Just as Transdisciplinarity Research and Transdisciplinary Practice can be conducive to approaching over-arching questions, so can larger theoretical questions requiring a complex system of inquiry bring together mutually beneficial theories in a transdisciplinary way.

References and Notes:

1. *Santa Fe Institute News Media*, "SFI seeks broad, creative, risk-taking, transdisciplinary thinkers," August 10, 2011, <http://www.santafe.edu/news/item/resident-faculty-posting/> (accessed August 15, 2011).
2. *Basarab Nicolescu, Manifesto of Transdisciplinarity*, trans. Karen-Claire Voss (New York, State University of New York Press, 2002).
3. *Derry, Sharon and Gerhard Fischer*, "Toward a Model and Theory for Transdisciplinary Graduate Education," (Paper presented at 2005 AERA Annual Meeting, April 2005).
4. *Hirsch Hadorn, Gertrude and Holger Hoffmann-Riem, Susette Biber-Klemm, Walter Grossenbacher-Mansuy, Dominique Joye, Christian Pohl, Urs Wiesmann, and Elisabeth Zemp*, *Handbook of Transdisciplinary Research* (Springer Science + Business Media B.V, 2008). Results from the project of the Swiss Academies of Arts and Sciences, td-net for transdisciplinary research.
5. *Hirsch Hadorn, Gertrude, et.al.*, 2008, 427-432.
6. *Santa Fe Institute FAQs*, unknown creation date, <http://www.santafe.edu/about/faq/> (accessed August 15, 2011).
7. *Basarab Nicolescu*, "Transdisciplinarity. The Hidden Third, between the Subject and the Object," Invited talk at the International Workshop "Science, Spirituality, Society", Cluj-Napoca, Romania, 21 May 2009. http://basarab.nicolescu.perso.sfr.fr/Basarab/On_line.html (accessed June 4, 2011).
8. *Leland de la Durantaye, Giorgio Agamben* (Stanford, CA: Stanford University Press, 2009), xviii.