

A transdisciplinary approach to research-creation. (When art is part of everything else) Dr. Ricardo Dal Farra

Concordia University / CEIArte-UNTREF
Montreal, Canada / Buenos Aires, Argentina
ricardo.dalfarra@concordia.ca

Abstract

The solution to complex problems is being explored, increasingly, from multi and/or interdisciplinary perspectives. However, those strategies are not enough in many cases and therefore developing a transdisciplinary approach becomes an essential tool. The traditional academic structure based on rigid disciplines has proven not to work well to face problems such as climate change or poverty, taking here only two among many multi-dimensional challenges we are facing. Can we really and effectively develop innovative useful ways to do research and apply our findings with a creative approach? This is an introduction to some experimental strategies used in transdisciplinary projects focusing on research-creation, aiming others could benefit and eventually emulate some of the experiences carried out.

Keywords

Transdiscipline, Collaborative Research, Education, Research-Creation, training.

Introduction

I was seeing a documentary where scientists from around the world were explaining that trees are connected, they have feelings, they take care of each other. Trees have families and friends and they inform others when one is attacked. Life is about communication and mutual understanding or disagreements. Nevertheless, humans have created systems and regulations in trying to understand how this world works but we are far from finding answers to complex issues. The traditional academic structure based on rigid disciplines has proven not to work well to face problems such as climate change or poverty, naming here only two among many multi-dimensional challenges we are facing.

Can we really and effectively develop innovative and useful ways to do research and apply our findings having a creative approach. The solution to complex problems is being explored, increasingly, from multi and/or

interdisciplinary perspectives. However, those strategies are not enough in many cases and therefore developing a transdisciplinary approach becomes an essential tool.

There are different definitions about multi-, inter-, cross-and transdisciplinary research. The approach of considering transdisciplinary research as a way to create a unity of intellectual frameworks looking beyond a disciplinary perspective seems to be appropriate and useful also from the arts perspective.

Research, Creation, and Knowledge

Gian Giudice, Italian physicist and head of the Theory Department at CERN, the European Organization for Nuclear Research, has said in an interview that “the level of complexity of the different branches of theoretical physics is such that nobody can be an expert in everything” and that he believes that “the way science develops often follows paths that are much less logical and rational than most people think” adding that “only at the end of the process a clear picture emerges and then, in retrospect, everything looks simple and straightforward”. A doctor in physics too, Spanish professor and writer Jorge Wagensberg compares scientific with artistic knowledge. While for science communicability and intelligibility are fundamental, he understands art as a powerful way of communicating unintelligible complexities. Can an anthropologist, a philosopher, an illusionist or an investment advisor not only participate but also to actively contribute with their personal experience and background to an electronic art class? Why did we decide to be a mechanic, a composer, a historian, a baker or an astrophysicist? I am not only speaking here of the context and the circumstances that could have conditioned or inspired us, I am also considering the decisions that we take in our daily life and that are slowly taking us to follow a

road and not a different one, finding us later as a flutist, a cardiologist or an engineer. Is it possible to integrate characteristic elements of architectural thought into structural processes of music creation? It is not the idea here of a simple translation based on the geometry of the spaces, their dimensions or other aspects that could be measured and transposed in a relatively simple way. This is not about adapting and converting from one field to another, from space design to musical composition models, for example, just to show a possible application. The motivation, intention, and goal here would be to find ways of integrating various methodologies, visions and overall values in a process that could help us to understand better how to collaborate and share, discuss, comprehend and -expectedly- apply our findings.

Changing Glasses

This is not a proposal to dissolve disciplines. It took centuries to build the complex system we have today for the teaching and learning of the various fields of knowledge, as well as to support the research that has been allowing us “to advance”, at least in the terms that we understand it in our Western civilization. At the same time, it is necessary to recognize the different visions that people have of the world, and even if sometimes could be hard for us to understand or accept it, some of that can teach us and can be reflected in our academic or professional activity.

Art is not apart from anything, is part of everything. It is not part of a bubble of musings. It helps us to connect with the world or to isolate ourselves, to understand and embrace or to dissent, to make sense or to confuse, it can be an engine to free our creativity or to lock it. Art is linked to politics and economy, it can convey feelings and emotions, can also lead us to think about human biology or complex mathematical equations; it can apply principles of fluid mechanics and key elements from game creation, and can open new spaces, make use of very simple or extremely complex techniques, be based on serendipity, and navigate between the accidental or casual and causal, too.

When we talk about multidisciplinary we refer to join various disciplinary fields needed to reach a goal but considering experts coming from their own individual disciplinary space. Interdisciplinarity can take us to another level of interaction, integrating methods or knowledge from different disciplines. The proposal to consider transdisciplinarity as an intellectual

framework that goes beyond the vision imposed by independent disciplines is certainly a major challenge. We are usually looking (and acting) as a consequence of those “glasses” we have grown with, those that we used during our years of studies at school or in the university when we learned how to interpret the world, probably according to a traditional structure of education with clearly separated disciplines. We need to learn about crossing borders again and going beyond the limits, even if some of them are strong as walls. We should be able to understand different perspectives about the world and generate knowledge from a broader apprehension of reality. The quest to create new conceptual and methodological frameworks, the pursuit of innovations that could allow us to capture and shape the knowledge of multiple disciplines could make possible to cross the usual barriers and create not just a simple mixture but an integration that goes beyond the parts. The result of the operation could be then more than the sum of the individual elements, an added value significant enough to enhance our understanding and clarifying that collaborative work has a relevant role in getting results. This could be the approach to consider when facing a complex problem that the traditional disciplinary way cannot solve, but it could also be a line to follow for looking again to the strict disciplines that molded our understanding, now from a broader perspective facilitating us to reach a better overall comprehension and grasping the deeper meaning of what we do, how we do and why we do.

Experimental Transdiscipline

The conceptual proposal of transdisciplinarity might be interesting to some but still too far from a possible practical implementation. These ideas have emerged from a long period of intellectual elaboration but are not intended to be merely an intellectual offer of good intentions that cannot be applied in daily activities. Some examples of activities developed considering a transdisciplinary approach follows. Activities that have been bringing art and disciplines apparently far from each other close enough to work from a unified but large conceptual framework.

The Transdisciplinary Creation and Performance class originally proposed about six years ago to Concordia University in Montreal was finally offered to the Music Department students in 2015. In this class opened to composers and performers, music students were

working with academics and professionals from fields as diverse as dance, philosophy, economy, anthropology, illusionism, space engineering, computer science, design and more. This experimental class allowed also a truck-driver and a call-center supervisor to participate, and in most cases, the process was revealing and the results amazing.

With students from the Interactive Design and Creation Master program at the University of Caldas - Manizales, an intensive transdisciplinary workshop was done in 2016 with results beyond expectations. Participants with backgrounds in pedagogy, graphic design, history, visual arts, X-ray analysis, music, industrial design, programming, marketing and more were producing projects focusing on the consequences of extreme mining activities, actions to be implemented in their university to reduce climate change effects, and a mobile lab created after a thorough field study of the local actions to recycle wasted food.

Following a similar line of thought is the international symposia Balance-Unbalance that “bring artists together with scientists, economists, philosophers, politicians, management and policy experts, sociologists and engineers from across the world with the intent of engendering a deeper awareness and creating lasting intellectual working partnerships in solving our global environmental crisis”. A spin-off of the Balance-Unbalance series is the sound miniatures ‘art! ∩ climate’ international contest organized in partnership between the Red Cross / Red Crescent Climate Centre and the Electronic Arts Experimentation and Research Centre (CEIARtE-UNTREF) from Argentina. The Red Cross Climate Centre’s mission is to help address the humanitarian consequences of climate change and extreme weather events. In its efforts to engage people at risk, government agencies, academic institutions, donors and other stakeholders, it has become clear that information is rarely sufficient to trigger behavior change. As a result, the Climate Centre has been designing and facilitating methods for learning and dialogue that involve not only brainpower but also the emotions of participants (such as collaborative workshops, participatory games and short educational films linking information, decisions and consequences on disaster management). The ‘art! ∩ climate’ contest has two main objectives: a) Provide the Climate Centre with sound-based art material that can support their actions; and b) Improve knowledge about the human dimensions of the

environmental crisis and promote awareness about the effects of climate change, both among creative artists and among those exposed to their work. The contest has a double jury, one for artistic quality and another made up of experts from the Red Cross Climate Centre. For the Climate Centre, it is increasingly important to have artworks to help with preventive and remedial tasks. This is because the traditional ways of addressing many of the complex problems they face are not sufficiently effective. Thus, they have found in art an important factor that facilitates and improves the efficiency and effectiveness of its work.

Final Words

Art as an engine of change, as a key element that adds and helps to build the web of life. Art, not isolated but united by force fields to the network (and to the many networks) helping to design the map of tensions that allow us to create, usually on the edge of understanding. The route of uncharted territories, where certain signs could open new paths or stop us, following our experience and desires but also according to the way we see, we listen, we act. The collective construction done from individual effort, where the contours can be diluted, values are questioned, and frames are unraveled.

References

- Attali, J. (1977). *Noise. The Political Economy of Music*. Translated by Brian Massumi, 1985. United States: University of Minnesota Press.
- Dal Farra, R. (2015). Breaking Paradigms: Electronic Arts & Humanitarian Actions. Balance-Unbalance 2016. Colombia. Retrieved from: http://www.balance-unbalance2016.org/docs/Dal_Farra_BunB_Breaking_Paradigms_2015.pdf
- Dal Farra, R., Suarez, P. (2014). Red Cross/Red Crescent Climate Centre and Balance-Unbalance: the art climate project. *Leonardo*, Vol. 47, No. 5, 493.
- Hirsch Hadorn, G., Hoffmann-Riem, H., et al [editors] (2008). *Handbook of Transdisciplinary Research*. Germany: Springer.
- Jarlett, H. (2016). In Theory: Are theoreticians just football fanatics? Switzerland. Retrieved from: <http://home.cern/about/updates/2016/03/theory-are-theoreticians-just-football-fanatics>
- Jensenius, A. (2012). Disciplinarity: intra, cross, multi, inter,trans. Norway. Retrieved from: <http://www.arj.no/2012/03/12/disciplinarity-2/>

- Max-Neef, M. (2005). Foundations of transdisciplinarity. *Ecological Economics*, 53. 5-16.
- Wagensberg, J. (1985). *Ideas sobre la complejidad del mundo*. Spain: Tusquets.

Author Biography

Dr. Ricardo Dal Farra is a composer, new media artist, curator, educator, and historian whose work has been focusing on new music and the electronic arts for several decades. He is a professor at Concordia University, Canada and director of the CEIArtE-UNTREF Electronic Arts Research Centre, Argentina. His music and media artworks have been presented in about 40 countries. Dal Farra is the founder-director of the Balance-Unbalance (electronic arts & the environmental crisis) and Understanding Visual Music conference series and has been a researcher for UNESCO in France, De Montfort University in the UK, Amauta in Peru and the National Ministry of Education in Argentina. He was director of Hexagram, the interuniversity international network for research-creation in media arts, design, technology and digital culture, and coordinator of DOCAM, the Documentation and Conservation of the Media Arts Heritage research alliance. Dr. Dal Farra created the Latin American Electroacoustic Music Collection hosted by The Daniel Langlois Foundation.