



## The Psychology of Transdisciplinarity

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### Abstract

The implementation of transdisciplinary projects and processes depends on their acceptance by all the actors involved. The attitudes of people unfamiliar with the principle of Transdisciplinarity, its methodology and the particular kind of commitment required can be a determining factor for the success or failure of transdisciplinary initiatives.

A series of dialogues among the participants in the Dialogue Session ? Implementation is proposed as a common-sense method of looking at the psychology of people who oppose Transdisciplinarity, as well as of those who accept it. A series of possible psychological obstacles to acceptance of Transdisciplinarity will be analyzed and potential ways of overcoming these obstacles suggested and summarized for future work.

### A - STRUCTURE

#### 1. Introduction. Rationale

The implementation of transdisciplinary approaches to problem-solving depends strongly, in my view, on the attitudes of people towards Transdisciplinarity. The Dialogue Session on Implementation is, accordingly, a preferred venue to discuss psychological aspects of people's interest in transdisciplinary research and action. Basarab Nicolescu has emphasized (1) that social evolution is impossible without individual evolution. This depends in turn on an interior perception involving the integration of the paradoxical information which scientific and social theory and experiment provide. Transdisciplinarity enables the link between individual and social evolution, and consequently between individual and social psychology, by providing a framework for understanding the correspondence between the levels of perception of the individual and the levels of physical reality. However, only some individuals seem to possess the required mental structures, imagination and global perception of their environment to participate in this process. Changes in attitudes, which could result from the approach proposed in this paper, might help in furthering development of such structures.

I see the output of this Session as a contribution to the understanding of the resistances and difficulties encountered by Transdisciplinarity, to which reference was made in the May Guidelines of the Conference. This would be a first step in a potential process of overcoming such resistances, which could facilitate development of institutional arrangements and acceptable personal/social incentives to implement transdisciplinary practices. In addition, at least some specific techniques and solutions for overcoming resistances can also be proposed.

## **2. Objective**

The objective of the proposed Session is, therefore, to carry out a common-sense, non-technical appreciation of the psychology of individual responses to transdisciplinary concepts. This would be an auto-poetic, that is, a self-organizing process for the participants in the Dialogue Session, which could give an additional dimension to the framework for the many critical problems the Conference is already scheduled to address.

In this outline, it is impossible to take into account or even to refer to the research in psychology done (since Sartre) on the "anti" type of personality. Contact will be sought with participants who have such academic and practical knowledge and could place it at the disposal of the Dialogue Session to assist in the validation of its conclusions.

## **3. Some Key Concepts**

For the purposes of any Dialogue Session, it seems essential that the participants share their working definitions of Transdisciplinarity and related concepts, especially, Multi- and Inter-disciplinarity. The definitions need not be identical, and they should not be debated as such, but they should be clearly stated. My preferred ones follow:

Transdisciplinarity: following Nicolescu, Transdisciplinarity for me is what lies through and beyond individual disciplines. A common-sense formulation would say that it involves a dialogue between disciplines which are not only themselves modified by the dialogue (as in Interdisciplinarity), but from which new ideas and knowledge emerge.

The "three pillars" of Transdisciplinarity: complexity, levels of reality, and the logic of the included middle.

Contradiction: as discussed in the philosophy of Stéphane Lupasco, the basis of a logic of antagonism, better, of a dynamic onto-logic of experience. In this connection, Georges Lerbet has analyzed the model of the "psychic universe" in the work of Stéphane Lupasco (2). His paper deals with rather idealized human psyches, however, and does not address in particular the antagonism between those who favor and oppose Transdisciplinarity.

## **4. Problematics**

A number of Conference themes and areas of application of Transdisciplinarity could benefit from the suggested analysis of their underlying assumptions:

New modes of learning and decision-making processes;  
Cooperative and integrative approaches; "partnerships";  
The demand for knowledge;  
Overcoming obstacles to transdisciplinary research.

Success in all these areas would seem to require understanding of the psychology of people who oppose, as well as of those who welcome, transdisciplinary thinking. This is consistent with the remarks of Julie Thompson Klein on consent-dissent/agreement-disagreement and the importance of communication in establishing "zones of transdisciplinary interaction" in her discussion of the social epistemology of Transdisciplinarity(3).

## **5. Input**

The input to the Dialogue Session - Implementation would be the informal attitudes, views and opinions of the participants in it, interactively developed via a series of sub-Dialogues, including their views on the content of this contribution. There should be no claim made for rigorous validity. (Such an approach is of course by no means limited to the area of Transdisciplinarity.)

## 6. Methodology

The three broad topics of the sub-Dialogues are the following: the Attitudes of people toward Transdisciplinarity; the Basis for such attitudes; and the Changes, which might be desirable and possible to effect. As agreed with the Chair, aspects of the first and/or the second sub-Dialogues, on Attitudes and the Basis of Attitudes respectively, will be discussed on-line via E-mail and/or listserv prior to the Conference. It is the intention of the author to initiate the on-line dialogue by indicating his own attitudes towards Transdisciplinarity as well as his ideas of the attitudes of others and the basis for them.

## 7. Output. Synthesis for the Goals of the Conference

The actual Dialogue Session should provide insight in the following areas, in relation to the Conference themes indicated above in 4. Problematics:

Why are some people "attracted" to transdisciplinary concepts, and accept them as critical for problem-solving?

How can individual barriers to acceptance of transdisciplinary concepts be defined?

What might be some ways of reducing these barriers?

What, in a transdisciplinary spirit, are the possible trans-actions between people who accept them and those who do not?

How might one characterize relevant individual psychologies of people exposed to such concepts, for example, those of educators, bankers, managers of environmental organizations, private vs. public industry leaders, consultants, etc.?

Could transdisciplinary concepts of complexity (4) be useful in helping to change the cognition which economic and political leaders have of their own activities?

How might such insights suggest needed evolution of existing institutions, in particular, the University?

What possible research might be done in this area?

In my (limited) experience with Transdisciplinarity, I have observed that it is possible to overcome resistances to the complex methodology by what one might call strategic simplification. This involves not insisting initially on the necessity (for discussion) of the "three pillars" of Transdisciplinarity all at once! Further suggestions for implementation, that is, possible approaches to changing people's attitudes, will be made during the actual Session. These will be based on the responses to these questions by the other participants as well as on the results of the other topics to be discussed in the Dialogue Session.

## B. PROCESS

As indicated above, the discussion would proceed via a series of sub-Dialogues on three broad topics, the Attitudes of people toward Transdisciplinarity, the Basis for such attitudes and the Changes which might be desirable and possible. Some sub-topics are suggested for consideration.

### 1. Sub-Dialogue: Attitudes (Description)

Own attitudes

Attitudes pro

Attitudes contra

Summary for 2.

Eric Schwarz, of the Center for Systems Studies at the University of Neuchâtel, in his extremely concise and relevant outline of "Pluridisciplinarity, Interdisciplinarity, Transdisciplinarity and All Those Kinds of Things" (5) has listed the following eight obstacles to the acceptance of Transdisciplinarity, which requires a transition from a dualist to a holistic paradigm.

- Diversity of modes of thought

- Lack of spirit of openness, tolerance, and confidence
- Homeostasis, hegemony of disciplines (fear of change)
- Conflicts of interest and power
- Absence of critical studies of epistemological and ontological beliefs
- Preference for differences rather than similarities
- Confusion between a theory of everything and a theory of the "all"
- View that synthesis work is a demonstration of weakness (the cult of the expert)

My suggestion is that each participant in the on-line "colloquium", as his first contribution to this sub-Dialogue, would indicate, in discussing his attitudes, both his views on this list of obstacles and suggested additions and changes.

There is another, pernicious attitude which consists of saying that not only is what lies "through and beyond individual disciplines the empty set", but Transdisciplinarity is "nothing new". Cognitive science, for example, is held up as being sufficient to provide a basis for needed exchanges and progress in the world. Jean-Jacques Ducret, a major follower of Piaget, has shown (6) that cognitive science had chosen until recently some realist paradigms (computationalism - Chomskian linguistics and representationalism) that were particularly reductionist, bearing little relation to the complexity and the dimensionality of human life and spirit.

## **2. Sub-Dialogue: Basis for Attitudes (Analysis)**

Personality traits - Age  
 Socio-economic background - Political views  
 Major discipline, if any - Ignorance  
 Educational diversity - Other  
 Summary for 3.

It is essential to the spirit of this inquiry that all the partners make the effort to look for and to communicate patterns of behavior that could inform any real approach to implementation, both in themselves and in others.

## **3. Sub-Dialogue: Change (Synthesis)**

Types of changes to be effected  
 Operators for change (e.g., this Conference)  
 Management of differences (resistances)  
 Summary

From one point of view, all changes resulting from the implementation of transdisciplinary programs, research and practices will have some consequences which could be expressed in economic cost vs. benefit terms. The "Living Reality of the Transdisciplinary Economy" of René Passet (7) could be characterized and used as a basis for orienting action. However, unless Transdisciplinarity is accepted by individuals at all socio-economic levels, as well as by actors in the various spheres of the economy, some of whom are listed in Section A. 6. above, initiatives would seem to be doomed to failure. Critical changes are, accordingly, changes in individual psychologies, and it is these that the approaches outlined are intended to address.

## **C. INTERIM CONCLUSIONS**

As Nicolescu points out, "Transdisciplinarity always engenders anti-Transdisciplinarity" (8). We are thus brought very quickly, as might be expected, to consideration of systems approaches to communicating transdisciplinary concepts and overcoming resistances. The work of Stafford Beer on "Syntegrity"(combination of synergy and integration), as carried further by Markus Schwaninger (Management Institute, University of St. Gallen (9)) should

be cited in this connection. These authors describe principles and methods for optimizing organizational activity and interactions. Their "technology" involves a non-hierarchical network of persons who organize themselves into teams using the structures of regular polyhedra, ideally, thirty in that of an icosahedron. It should be clear, however, that we are not talking here about the use of such techniques for furthering the efficiency of a single group or organization.

Anthony Judge, Director of the Union of International Associations, has developed an outstanding website of data bases of ideas, issues and world problems. In his 1991 paper, "Metaphors as Transdisciplinary Vehicles of the Future", Judge talks about the use of complex metaphors to help, among other things, "reconcile apparently incompatible perceptions" (10). In another paper (11), Judge suggests the "use of metaphor as a way of articulating attitudinal responses to a complex environment ? even among the most disadvantaged" as a "temporary bridging device" for dialogue. We might consider the identification of the metaphors the participants use themselves in discussion of the psychology of Transdisciplinarity, as well as their potential for broader use, as one of the objectives of our Dialogue Session.

Finally, I believe it is imperative that all participants, but especially those concerned with implementation, see and insist on the need for follow-up action, beyond the publication of the proceedings of the Conference. The creation of on-going working groups (e.g., on attitudes towards Transdisciplinarity in different social contexts) would be a minimum to go "through and beyond" the fundamental debate, dialogue, and mutual learning of the Conference itself.

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