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Voices of the Community - a Collection of Statements on Integration

The statements were collected in the context of the 2nd td-conference „Integration in Inter- and Transdisciplinary Research“ and appear in no particular order.

Integration in inter- or transdisciplinary research is for me the successful outcome of an encounter (or several encounters) between different disciplinary research fields or research domains, e.g. the natural sciences and the social sciences). ‚Outcome‘ refers to results and/or research findings that would not have come about without such an encounter; ‚successful‘ means that the original research questions raised, even if they were framed in a disciplinary mode, have been transformed into questions that were answered in a mode transcending them.

Helga Nowotny
European Research Council, Bruxelles

We try to integrate different disciplines in interdisciplinary research-teams as well as participants from practical fields. All our research projects involve all members of the different practical fields. We offer them access to our results during the process of research and discuss these results together with them in order to get a common validation. The consequences for their further way have to be decided by our research-partners themselves.

Larissa Krainer
Institut für Interventionsforschung und Kulturelle Nachhaltigkeit
Alpen-Adria-Universität Klagenfurt

I understand integration in the rather restrictive sense of framing, integrating and generalizing knowledge through theoretical frameworks. Integrative frameworks in transdisciplinary research transgress disciplinary frameworks, integrate different forms of evidences (esp. non-academic local, traditional, practioners‘ knowledge), are framed in order to address societal issues (i.e. problem-oriented) and have the strength to guide new research over the long-term, i.e. a criterium of the quality of transdisciplinary integrative frameworks is that they can form a research interest beyond a single project.

Christoph Küffer
Institute of Integrative Biology, ETH Zürich

I understand ‚integration' as the process of translating between different disciplinary realms in order to create a fuller picture of a ‚wicked problem'--one that escapes any one disciplinary epistemology, set of questions, or methodologies. I haven't come across any key texts that summarize this issue adequately...

Susan Squier
Department of English, Pennsylvania State University

(Research) integration is the process of improving understanding about a problem by bringing together and synthesising relevant disciplinary and practice (stakeholder) knowledge, as well as the various unknowns about the problem.

Gabriele Bammer
National Centre for Epidemiology and Population Health
Australian National University

I have a rather specific view on this, which I can only explain in terms of a metaphor. Imagine producing of a block of styrofoam, in which each constituent particle is a discipline. It seems to me that most people hope for integration to occur by blowing the particles together with sufficient organizational force so that the whole of the block is created — but only for a while. After a short time the particles start to fall apart and the block becomes non-existent. Somehow the block of the whole has to be woven together in some more enduring manner. And that is my life-long search: how to do this (and to witness the „unexpected thinking" that can emerge as a by-product) and, if I have the skill, how then to pass it on to those who will follow after me?

Bruce Beck
Environmental Systems Analysis, University of Georgia

There is no universal formula. The focus varies, from generalized treatments of knowledge, metaperspectives, and overarching conceptual frameworks to particular methods for particular problems. Integration is also influenced by the goals and scope of a specific program or project, the questions being addressed, the participants who are involved, their research traditions and methodological preferences, the institutional setting, and the type of interdisciplinarity or transdisciplinarity being practiced.

Julie Thompson Klein
Interdisciplinary Studies Program, Wayne State University

The success of transdisciplinary integration depends on the commitment of all participants to address a common and integrative research question. Integration has to start at the beginning of transdisciplinary research activities not at its end-point. Integration is mainly on processes rather on results.

Armin Grunwald
Institute of Technology Assessment and Systems Analysis, Karlsruhe

Integration in Inter- and Transdisciplinary Research

From an Inter- and Transdisciplinarity perspective, we define the polysemic concept of „integration“, from the latin integrare which means to incorporate all parts into a global and integrated whole, as a macro-process which involves the articulation of theories, methods and practices between three complementary sub- processes, including:

a) The integration and synthesis between, across and beyond scientific disciplines and paradigms (epistemologies and teaching and research methodologies) in order to describe, analyze and understand the complexity of theoretical and practical questions in various fields.
b) Integration on the inter-institutional, managerial and structural levels aimed at developing new organizational strategies and modes of governance which are adapted to inter- and transdisciplinary teaching and research practices.
c) The integration of academic and non-academic networks and actors so as to identify complex problems, develop research questions and elaborate solutions in life-world contexts.

Integration, which is both an outcome and a process, must be understood as a dynamic, co-productive, non-linear and non-hierarchical mechanism, which articulates in a ternary logic (a) the emerging eco-auto-reorganization of disciplines and scientific paradigms; (b) the changing institutional and organizational structures; (c) and all the networks and stakeholders which are implicated in theoretical or practical problems to be solved on the basis of a new contract between science and society.

Frédéric Darbellay
Institut Universitaire Kurt Bösch, Sion

The lack of clarity might be induced by the hard problem — the epistemological circle: integration is an integrative topic; interdisciplinarity is an interdisciplinary theme. Nobody has, therefore, at the moment the priority access and the privilege to define integration and interdisciplinarity.

Jan C. Schmidt
Unit of Social, Cultural and Technology Studies
Darmstadt University of Applied Sciences

Interdisciplinary or transdisciplinary integration is less a matter of methodology than a tonal quality—a sensitivity to nuance and context, a flexibility of mind, and an adeptness at translating concepts from one disciplinary domain to another.

Robert Frodeman
Center for the Study of Interdisciplinarity, Department of Philosophy and Religion Studies
University of North Texas

We define the polysemic concept of „integration“ from the Latin integrare which means to incorporate all parts into a global and integrated whole. We thereby consider integration as a macro-process which involves the articulation of theories, methods and practices between three complementary sub- processes including integration between disciplines and paradigms, integration on the inter-institutional and organizational levels, and integration between academic and non-academic networks and actors to elaborate solutions in life-world contexts. Integration, which is both an outcome and a process, must thereby be understood as a dynamic, co-productive, non-linear and non-hierarchical mechanism.

Carl Hanson and Frédéric Darbellay
Institut Universitaire Kurt Bösch, Sion

Integration supports the identification of practical solutions to daily problems of people like you and me.

Thomas Teuscher
Roll Back Malaria Partnership, Geneva

Without differentiation no integration.

Willi Haas and Barbara Smetschka
IFF Social Ecology, Vienna

Our view is that a deeper understanding of the integrative properties of trandisciplinarity is likely to emerge through exploration of heterarchical conceptual frameworks. Heterarchy, a concept that originated during the 1940s in theoretical work that laid the foundation for computer and cognitive science and that is now applied in applied in many disparate fields (e.g., paleoanthropology), provides a lens for viewing the reciprocity of ideas and influences across multiple layers/levels where, in contrast to hierarchical structures, there is no discipline or concept authorization. Such a conceptual framework avoids the trap of reducing analysis to one supposedly fundamental level. Indeed, the emergent essence of integrative transdisciplinary research is, even more than interdisciplinary research, the opposite of reductionism.

Patricia L. Rosenfield
Carnegie Corporation of New York

Frank Kessel
Department of Individual, Family and Community Education
University of New Mexico

‚Interdisciplinarity' denotes the cooperation of individuals from at least two scientific disciplines aimed at common questions and at achieving shared results, guided by common objectives. Interdisciplinarity thus implies the synthesis of various disciplinary points of view, whereas ‚transdisciplinarity' refers to a special form of interdisciplinarity involving extra-scientific experts and stakeholders in research. The requirements of successful interdisciplinary research consists in what we call ‚consensus', ‚integration' and ‚diffusion': By means of suitable procedures and methods, the members of an inter- or transdisciplinary projectteam have to arrive at a shared view of problems, at common objectives, at shared questions and at a common approach for dealing with them, and they need to develop a common language (‚consensus'). Consensus doesn't mean ‚agreement' or ‚authorisation' in an everyday sense, and it doesn't mean to ignore, to cover up or to deny differences. Rather, it means the development of methods, models, and theories that integrate the various disciplinary viewpoints in such a way that the result, for example the description of the research object, is shared by all. Integration refers to the common results: From the beginning, suitable methods and processes need to be combined in such a way that the results from the different disciplines lead to a common result which aims at answering the common questions. The common result (synthesis) should form a whole, which is more than the simple addition of individual results.

Rico Defila and Antonietta Di Giulio
Interdisciplinary Center for General Ecology (IKAÖ), University of Bern