

Directed Creativity – an Invitation

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Introduction

The aim of this proposal is to encourage people to consider looking outside their own field for solutions to problems faced. The idea is that there is no need to 're-invent the wheel' when it is already in use elsewhere. This transdisciplinary approach is not new of course. The ability to find and apply analogies from other domains and to recombine elements has been fundamental to human achievement across numerous domains, including architecture, design, technology, life sciences and art [1 - 3].

Despite its importance, finding and translating relevant principles from one area to another remains challenging because real-world problems are often complex. On the other hand creativity - the ability to create something new from seemingly unrelated things - is innate to humans.

Communication is at the centre of a transdisciplinary approach. The 'bridge' (linker) must have the ability to translate the principle/ the 'essence' from one context to the other. This requires both a 'language' that can be understood in both worlds and the right mind-set of the sender and the recipient. The principle must be extracted from area/context 1 and then adapted into area/context 2.

Methods/Tools

Proposed tools (not exclusive):

- TRIZ (the Theory of Inventive Problem Solving): a toolkit for fast and effective problem solving [4]
- Pattern language: patterns are a systematic way to capture the experience of experts about good designs or best practices and document these nuggets of wisdom in an accessible way for peers [5]
- Analogy transfer: the ability to find and apply deep structural patterns across domains [6]

ACKNOWLEDGEMENTS

To my brother Christian.
I would like to thank everybody who made him smile.

REFERENCES

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Proposal

Building a transdisciplinary problem-solving culture

Phase 1 - 'Planting the seed' and 'collecting seeds'

- Inspire like-minded people, i.e. people who enjoy recombining elements, to try transdisciplinary problem-solving approaches
- Generate ideas from already available transdisciplinary approaches

Phase 2 - Building a 'user-forum'/network

- Share ideas and experiences, establish 'what worked well'

Phase 3 - Developing new initiatives = moving forward

- Distil effective transdisciplinary approaches/tools and disseminate
- Education: foster a transdisciplinary problem-solving mind-set culture (to avoid silo-thinking)
- Always seize new opportunities that may unfold

Phase 4 - Building the infrastructure for a transdisciplinary mind-set culture

- Dismantle knowledge boundaries
- Use concepts as filters to be able to effectively use the abundance of information available

Outlook

I hope that this proposal can help to further accelerate the process of finding innovative solutions to the diverse set of challenging problems that our society faces in a fast changing world. Views, experiences, ideas and actions are welcomed.