

Strategies for the Integration of Thought Styles

a theoretical sketch

td-conference 2009

Integration in Inter- & Transdisciplinary Research

Berne, 19.-21. Nov 2009

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- Based on the project: „Konzepte Interdisziplinärer Technikbildung“
- Inter- & transdisciplinary study modules at Darmstadt University of Applied Sciences:
 - Links between specialised and general knowledge.
 - Balance between support of future professional practice and its critical reflection.
 - Knowledge or competence orientation?
- Transdisciplinarity in higher education
-> theory of transdisciplinarity.

Theory of Thought Styles by Ludwik Fleck:

- „Thought styles“ and „thought collectives“ instead of disciplines and extrascientific practices.
- Specialised thought styles are part of more general ones.
- Thought styles develop historically, they can divide, include elements of others, or recombine to form new thought styles.
- A person can be member of different thought collectives, moving from more general to more specialised circles.

„Thought style“ is a theoretical framework which tackles different issues of transdisciplinarity with just one very flexible concept:

- The difference between inter- and transdisciplinarity is merely gradual.
- Social, institutional and cognitive integration can be described together.
- The approach covers research, teaching and practice.

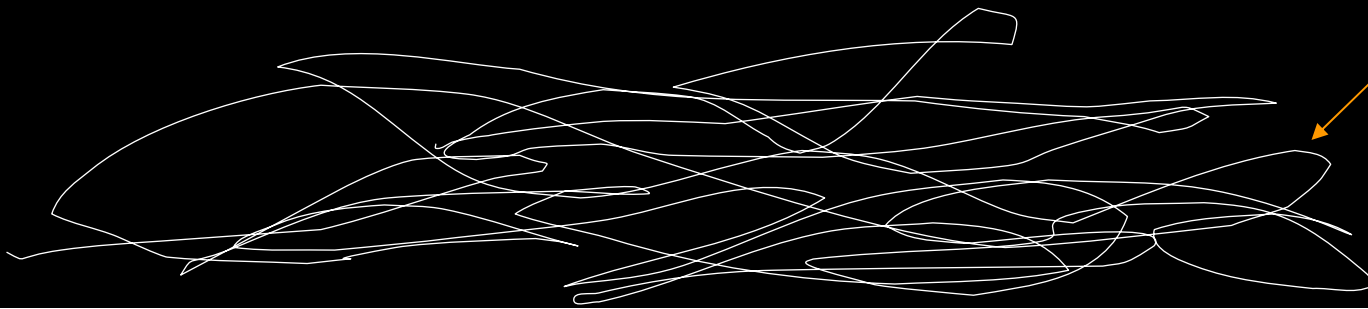
Yet this perspective does not merely erase distinctions, it also opens up new ones.

Thought Styles

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general thought
style



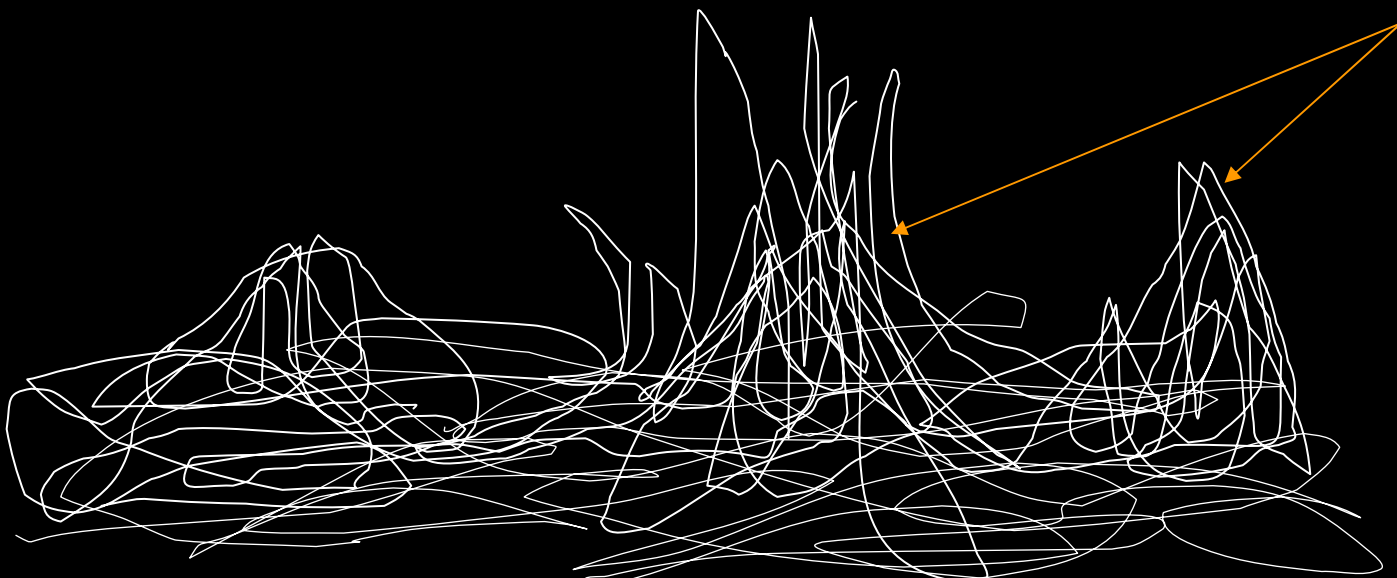
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Thought Styles

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specialised
thought styles

general thought
style

6

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Thought Styles

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science: highly specialised in different directions

specialised thought styles

general thought style

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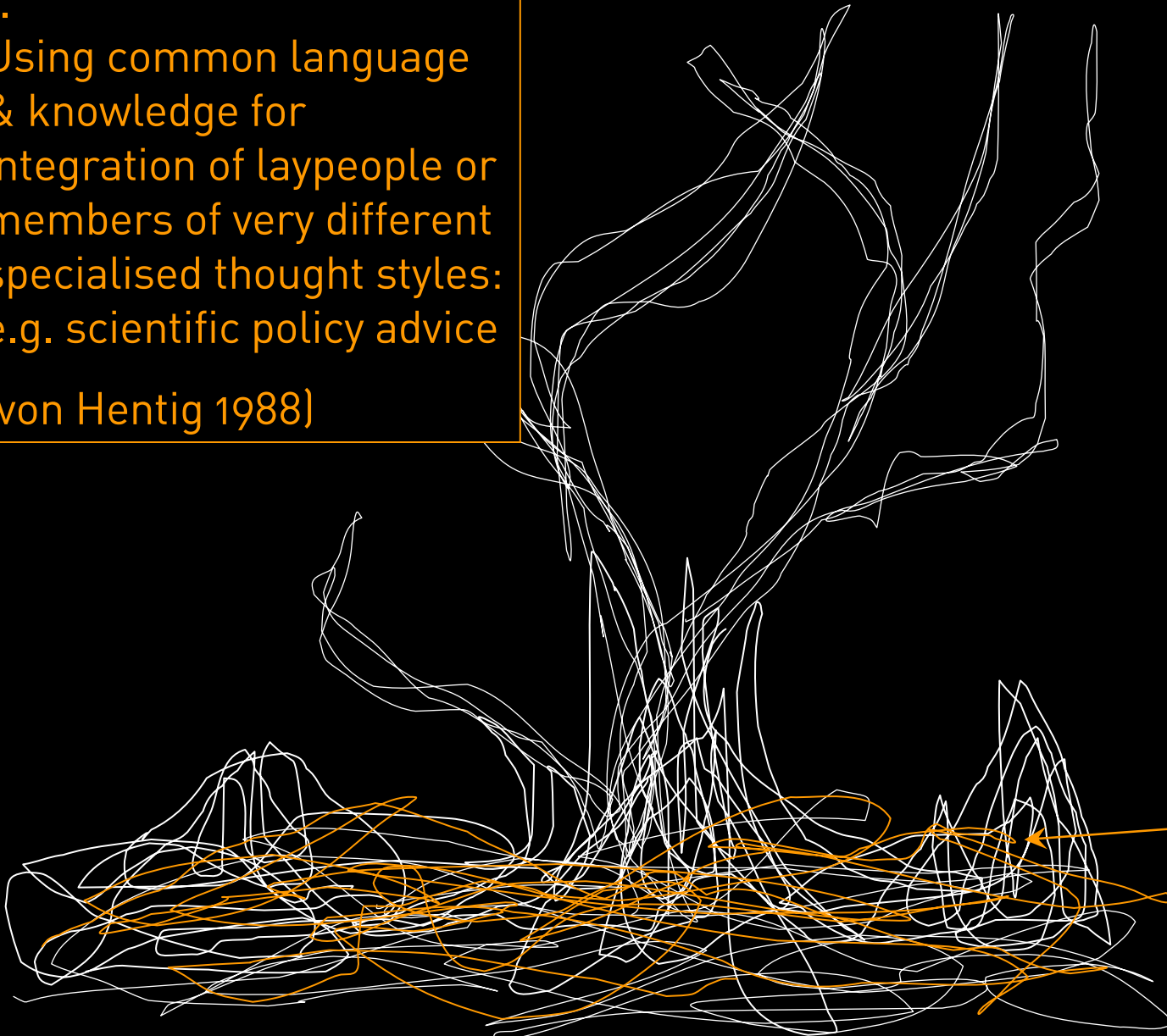
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1.
Using common language
& knowledge for
integration of laypeople or
members of very different
specialised thought styles:
e.g. scientific policy advice
(von Hentig 1988)



common language
& com. knowledge

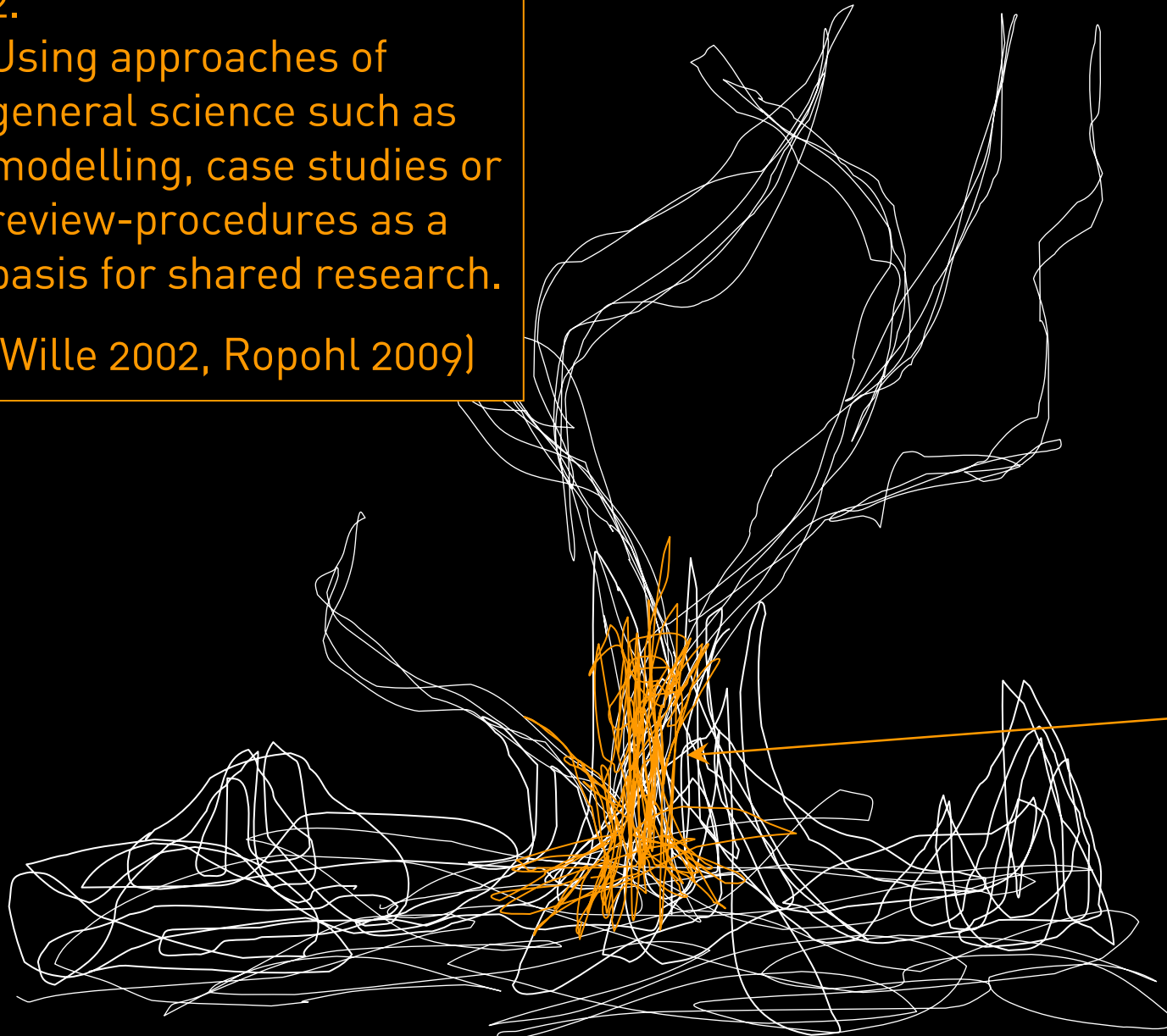
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2.
Using approaches of
general science such as
modelling, case studies or
review-procedures as a
basis for shared research.
(Wille 2002, Ropohl 2009)



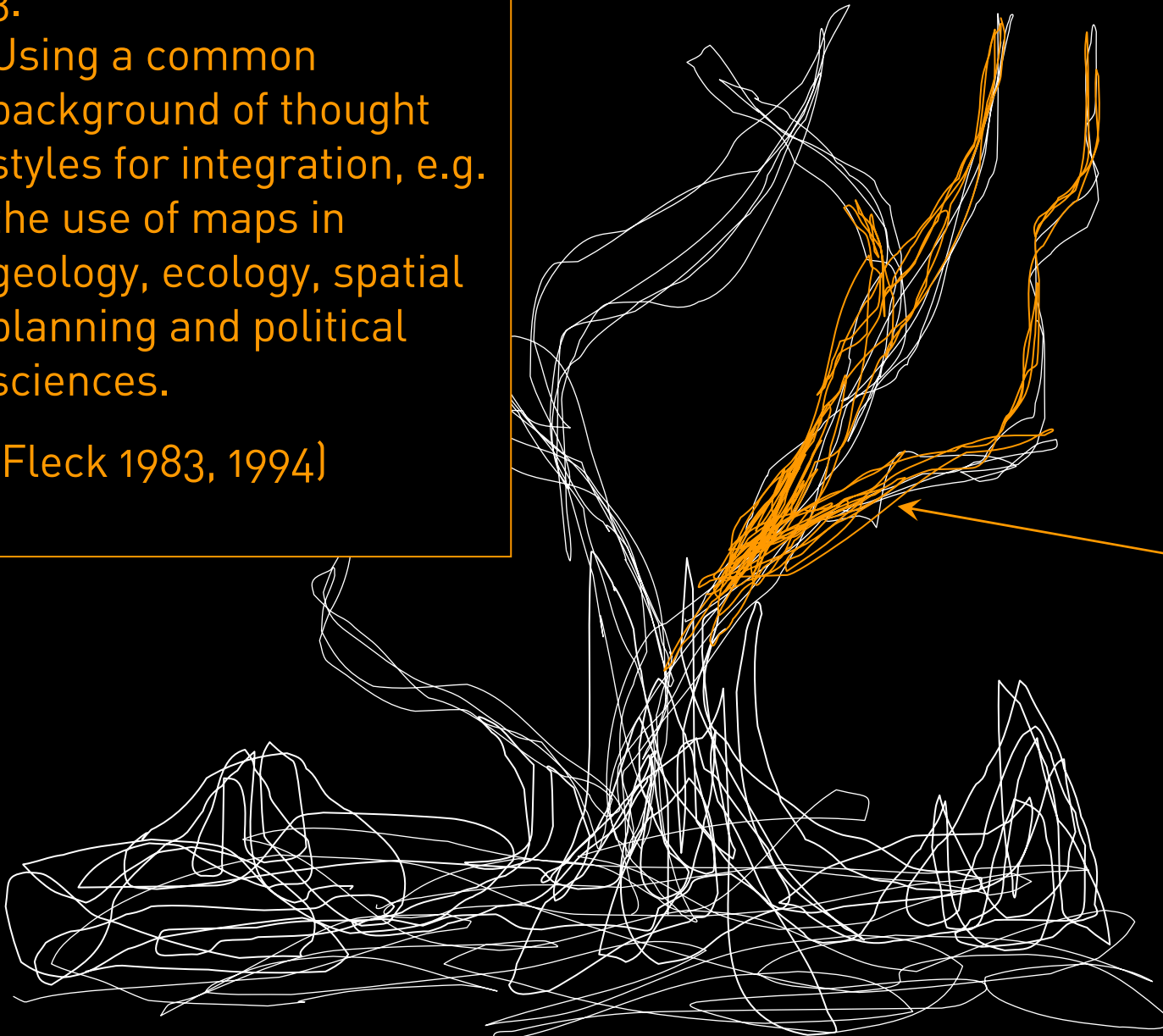
general science

common language
& com. knowledge

Strategies for the Integration of Thought Styles

3. Using a common background of thought styles for integration, e.g. the use of maps in geology, ecology, spatial planning and political sciences.

(Fleck 1983, 1994)



shared
background

general science

common language
& com. knowledge

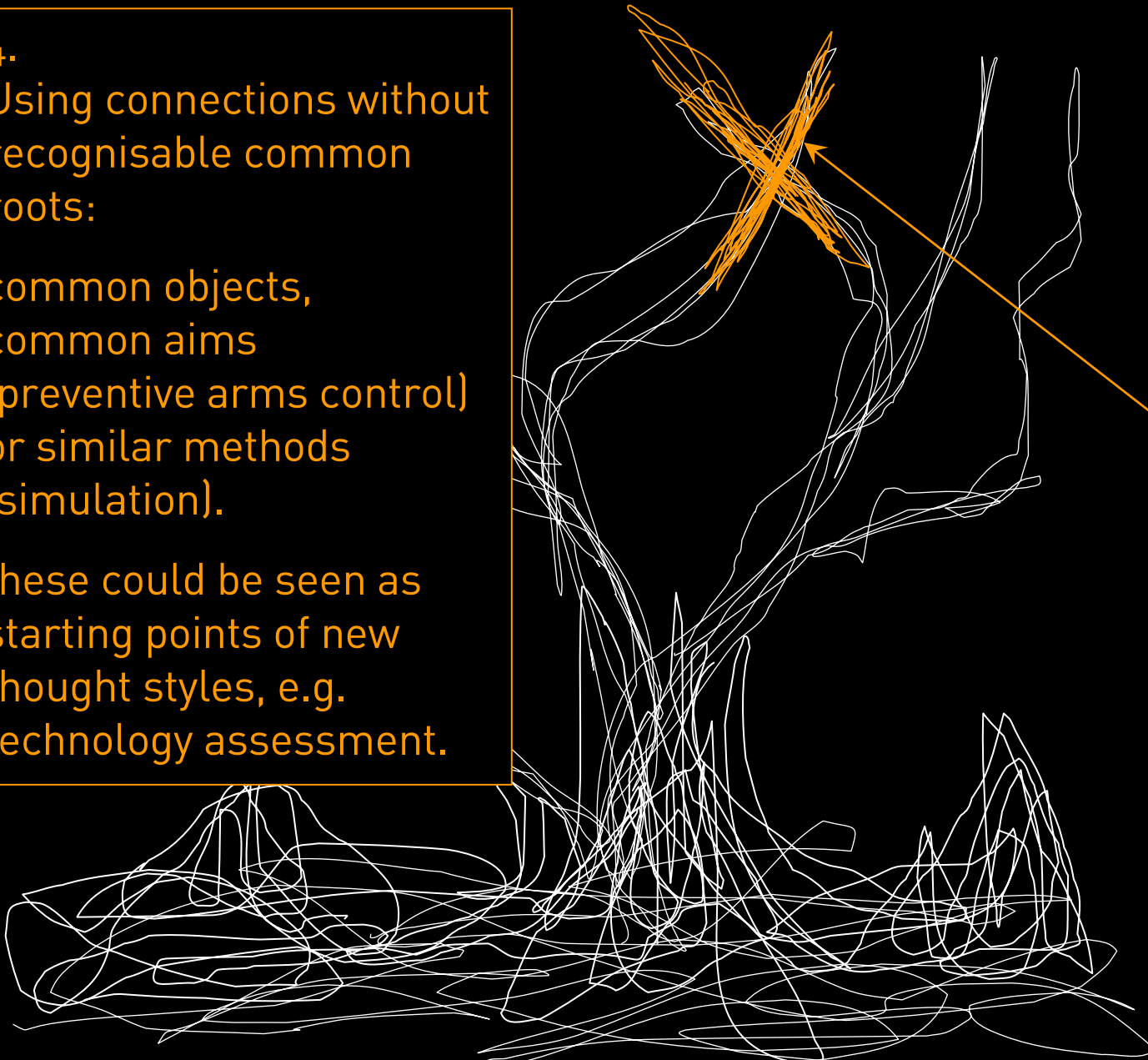
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4.
Using connections without
recognisable common
roots:

common objects,
common aims
(preventive arms control)
or similar methods
(simulation).

these could be seen as
starting points of new
thought styles, e.g.
technology assessment.



shared objects &
methods

shared
background

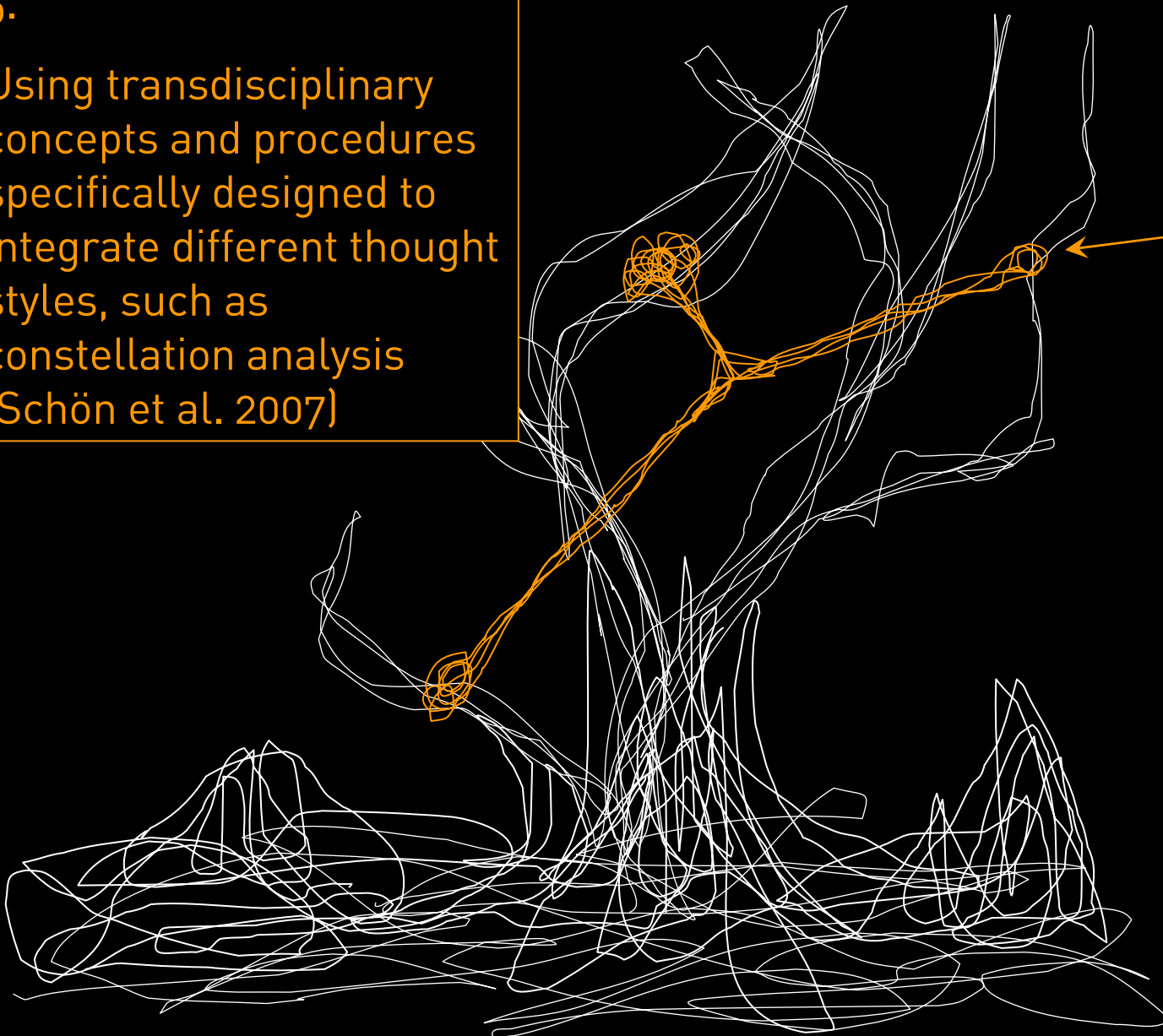
general science

common language
& com. knowledge

Strategies for the Integration of Thought Styles



5.
Using transdisciplinary concepts and procedures specifically designed to integrate different thought styles, such as constellation analysis (Schön et al. 2007)



transdisciplinary concepts & procedures

shared objects & methods

shared background

general science

common language & com. knowledge

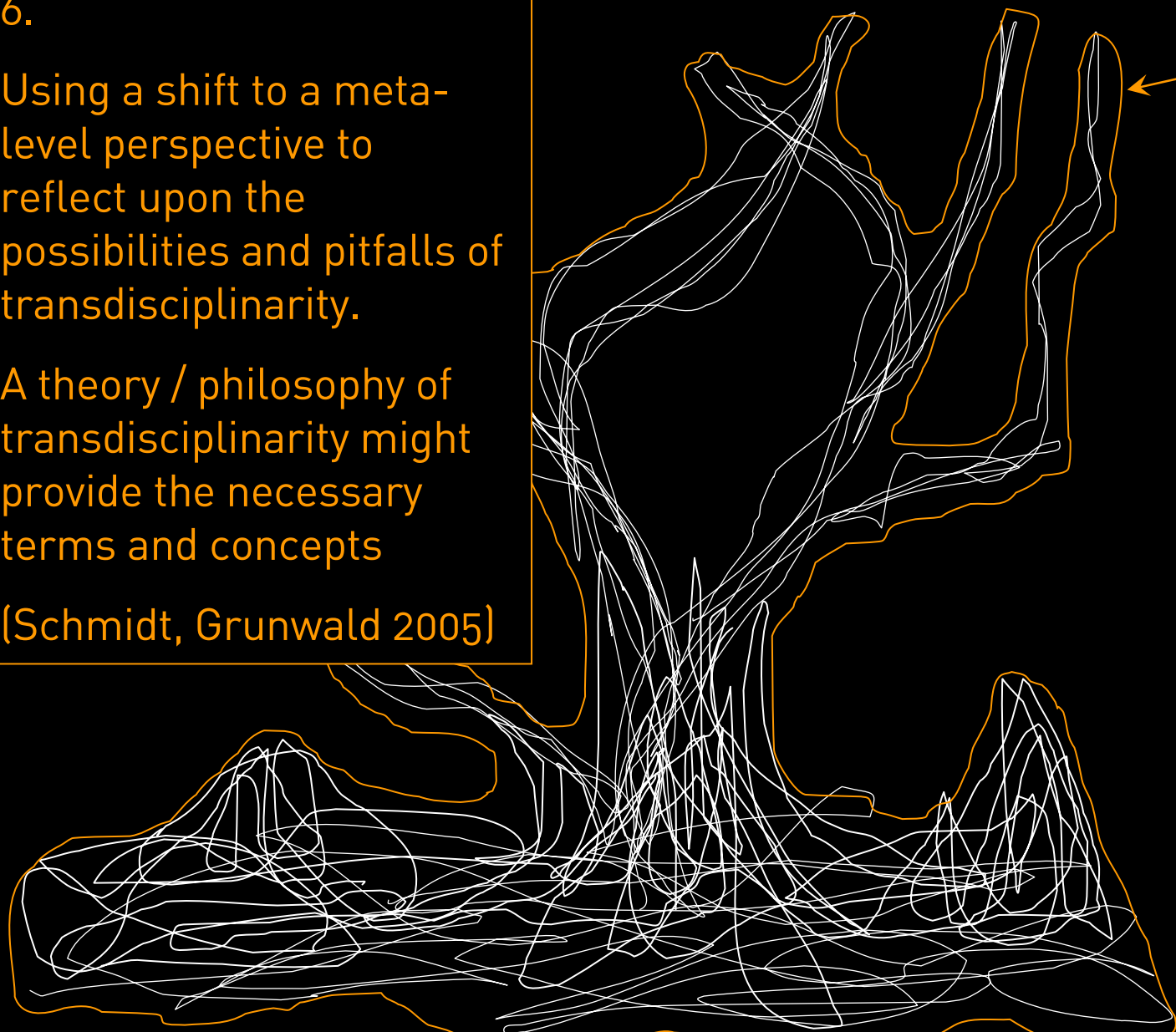
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6.
Using a shift to a meta-level perspective to reflect upon the possibilities and pitfalls of transdisciplinarity.

A theory / philosophy of transdisciplinarity might provide the necessary terms and concepts

(Schmidt, Grunwald 2005)



reflection

transdisciplinary
concepts &
procedures

shared objects &
methods

shared
background

general science

common language
& com. knowledge

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reflection

transdisciplinary
concepts &
procedures

shared objects &
methods

shared
background

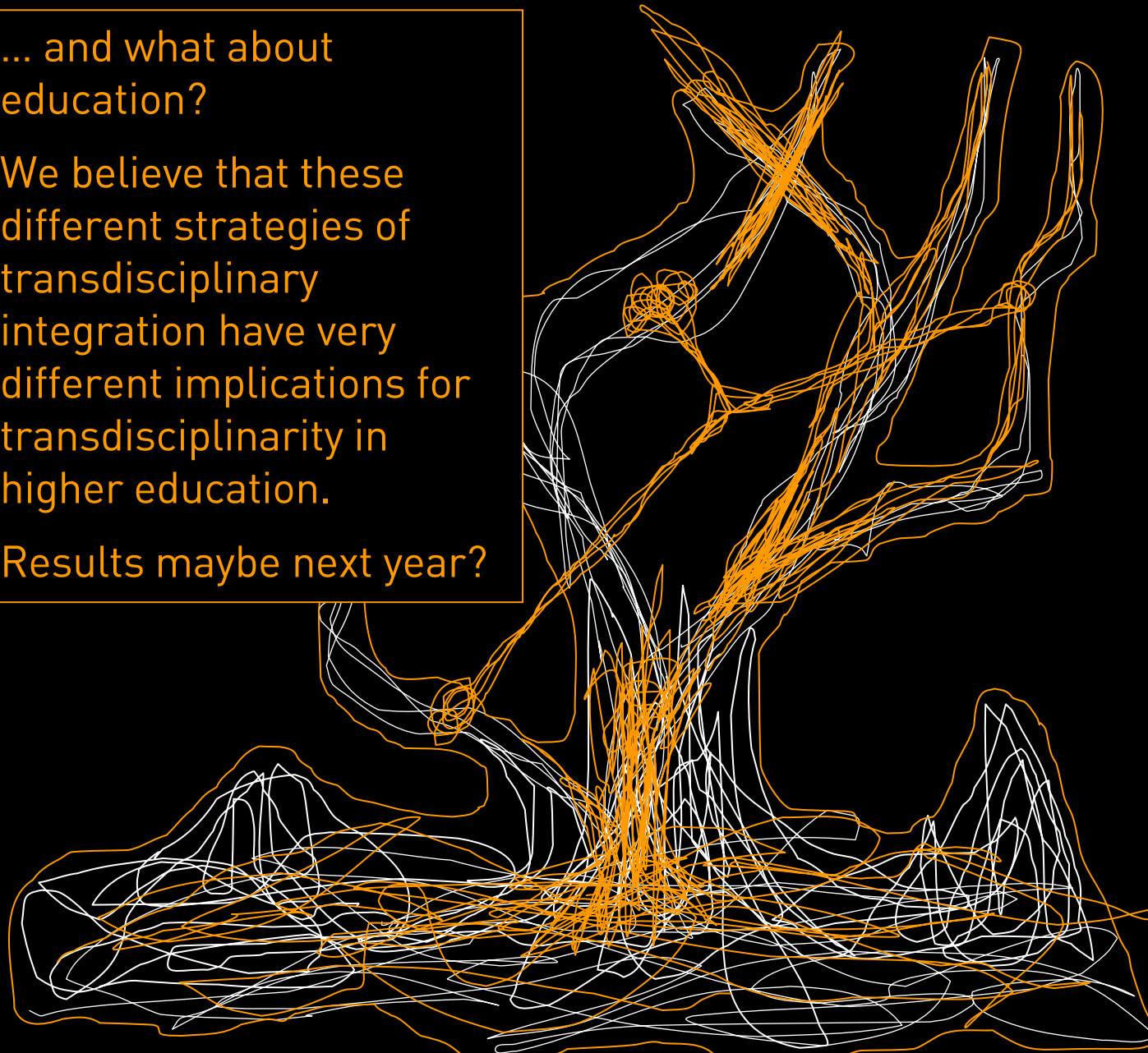
general science

common language
& com. knowledge

... and what about
education?

We believe that these
different strategies of
transdisciplinary
integration have very
different implications for
transdisciplinarity in
higher education.

Results maybe next year?



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Thank you for your time!

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