

Interdisciplinarity: from myths & confusions to (analytical attention to) diversity & complexity

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Appetizer 1

- “Global funders to focus on ID” *Nature* oct 2015
- “... the GRC (Global Research Council) aims to establish a common position on ID – a topic on many people’s minds worldwide...”
 - Report to be completed between Oct 2015 – mid-2016
 - “The report will survey current policy and practice among global research funders. What forms ... How and where ... outputs and impacts? ... look for good practice ...”
 - “We need much better definitions ... And better intelligence about what works.”
- Comment 1: Thieves!
- Comment 2. Good luck, haha! It’s gonna be easy!



Appetizer 2

■ Study asking about attitudes about statement

“interdisciplinary knowledge is better than knowledge obtained by a single discipline”

- 70% of faculty agree
- 19 of 21 disciplines agree
- Economics and mechanical engineering disagree

- But hey, what does it all mean?
 - Did all respondents take it to mean the same thing?
 - ‘interdisciplinary knowledge’ ... ‘is’ ... ‘better’
 - Note: normativity of the question, presupposing a descriptive concept



yesterday 1

- **At the end of the day:**
 - **“What you think are the mandatory features for defining ID?” → [was spontaneously transformed into] “What are your reasons for appreciating ID?”**
 - **= conflation of definition and evaluation/justification**
- **Definition of X or ‘X’ properly understood:**
 - **What is X? What does ‘X’ mean?**



yesterday 2

- Olivia: **Policy statements – vagueness, generality of ID terminology**
- John: **Ok to be left open, to be specified in particular contexts**

- **But but: when panels sit down and start considering research proposals with an alleged ID appeal, they typically fail to assess the proposal for its particular ID character and promise – so where and when does the specification take place?**
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- **Important: rhetoric around ID**
 - **Rhetoric of calls & Rhetoric of proposals**



yesterday 3

- **Paradox:**
 - Those wishing to promote ID are interested in **broad perspectives**; but they typically come to **define the key categories in a harmfully narrow fashion**
 - Consequence: **much of ID in actual scientific practice missed**
- **Define a concept in terms of many specific attributes, thereby making it thick / rich in contents → Concept becomes narrow regarding the domain of its applicability**
 - **thick intension → thin extension (red noses!)**
 - ‘female Portuguese urban geographer’ is a thicker concept but has a much thinner extension than eg ‘geographer’



Dispense with the ID jargon?

- **Do we need these categories at all?**
- Perhaps rather drop them entirely given their **ambiguities and fluidity**, and given **the messy and heterogeneous domain** (that of ID) that we are talking about?
- Given the messiness and heterogeneity of the domain, we are **even more desperately in need of good concepts for organising (our thoughts about) that domain, so don't throw categories away!**
- But given the unavoidable ambiguities of the categories, it is **even more pressing to ..**
 - .. **exercise continued analytical care of the concepts**
 - .. **keep them open for further revision, don't try to fix their meanings for good**

Beware: Myths & Legends around!

Attn: Complexity! Diversity! Nuance!

- **1** talking about it – using the vocabulary of ID – as if knowing what one is talking about [our ws theme!]
 - → **diversity!**
- **2** expressing an unconstrained preference for ID, believing we need more of it, (almost) no matter what
 - → **complexity of constrained normative judgement!**
- **3** believing that in order to get more of it – or better kind of it – we just need more resources and more supportive institutional infrastructure
 - → **pay attention to the intellectual & affective shop floor!** Real people working with cognitive tools that are embedded in their disciplinary intellectual commitments and affective affiliations

one-dimensionality

- 1] ID comes in degrees: more ID ... --- ... less ID
 - 2] There is one “true” or “genuine” or “correct” or “proper” ID (to be pursued, to be used as a standard) [*Nature* Editorial]
 - 3] Bibliometric operationalisation of ID in terms of citations across disciplinary boundaries
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- claim 1: **there is no such thing as degree of ID: more-less**
 - claim 2: **there is no such thing as one “true” or “genuine” or “correct” or “proper” or “the-best-in-class” ID**
 - claim 3: **cross-citations are at most suggestive of some limited forms or aspects of ID**
 - claims 1-3 reject some **common premises** in much/most thinking of ID: **just one dimension along which ID varies**

many-dimensionality

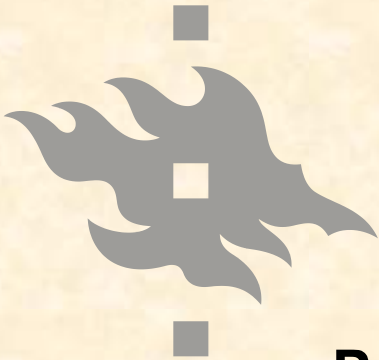
- Degree – and kinds! – of intellectual transfer
- Degree – and kinds! – of integration
- Degree – and kinds! – of collaboration
- Degree – and kinds! – of participant involvement
- Degree – and kinds! – of inherent ID
- Degree – and kinds! – of propensity to import / export / engage in collaboration
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-
- Motivations & Triggering conditions

Diversity 1 of ...

- kinds and degrees of **transfer of ..**
 - principles, model templates, methods, standards, evidence ...
- kinds and degrees of **integration**
 - contact at the edges ... unification by a shared core
- kinds and degrees of **collaboration**
 - egalitarian & respectful ... 'imperialistic' & dismissive
- kinds and degrees of **participant involvement**
 - as producers / consumers / evaluators / funders / audiences
 - kinds and degrees of power possessed and exercised
- Cf *Nature* Editorial: "An ID project cannot exist as one main subject that sucks the majority of the resources and leaves the partners as orbiting satellites." "There must also be no hierarchy equal academic rigour and scientific standing..."
- Cf Ana Viseu in *Nature*: asymmetric integration "not genuine integration" ... "For integration to be productive, we must change its very meaning, from one of service to collaboration between equals."

Diversity 2 of ...

- ... motivations and triggering conditions
- **A** Promote creativity, intellectual innovation, new perspectives, unity, assurance...
 - Novelty
 - Unity
 - Confirmation
- **B** Solve practical problems
 - Save the world! Tackle wicked problems!
 - Serve commercial & political interests! Help innovate! Do what extra-academic parties ask you to do!
 - (Is this the sort of ID we all want?)
- **B** is the main source of contemporary fuss around ID
 - growing societal pressures on science
 - culture of societal relevance and accountability
 - ongoing (re)design of academic institutions
 - curious combination of inflating and deflating science



TYOLOGIES OF ID: ANY VALUE?

- **Popular simplistic picture** (in terms of what is considered 'degree of integration')
 - **Multi-d:** juxtaposition of separate disciplines
 - **Inter-d:** integration of disciplines
 - **Trans-d:** integration of discipline(s) with extra-academic contributions
- **Flaws**
 - Lumps attributes / dimensions together
 - Misses numerous versions, eg those that do not involve integration etc
 - Not terribly careful with the underlying dimensions of the typology



'inter': Ways of being related

- Neglect
- Dismissal
- Criticism
- Support
- Borrowing
- Metaphor transfer
- Sharing
- Application
- Inspiration
- Conflict
- Collaboration
- Integration
- Reduction
- Conquest, colonisation
- Interdisciplinary herd behaviour: intellectual fashions spreading across disciplinary boundaries



possible relata

- Concepts
- Theories
- Models, Model templates
- Methods, Techniques
- Styles of reasoning
- Data, Evidence
- Standards, Criteria
- Institutions
- Organizations
- People
- Other resources



X-disciplinarity → X-Y

- **Mono- / Multi- / Inter- / Cross- / Trans- / Post- / Anti-**
- **Unit issue**
 - **Disciplines internally not uniform, and their heterogeneity varies from discipline to discipline**
 - **Subdisciplines, fields, specialties, schools, paradigms, theories ...**
 - **What's often identified as ID is actually inter-field, inter-theory etc, and the meaning 'inter' in these contexts may vary like with ID**
 - **→ X-Y**
 - **Variety of relata + Variety of relationships**

normativity

- expressing an unconstrained preference for ID, believing we need more of it, (almost) no matter what
 - → **complexity of constrained normative judgement**
- **Popular conflation:**
- **descriptive definition / normative evaluation & prescription**
 - cf yesterday
- Comment: **not all ID is that terrific**
 - .. **so we should not want it**
- Comment: **much of ID that we want (and should want) fails**
 - ... but does not cease to be ID



Normative assessment: type by type, case by case

- **No generalized statement** about the normative recommendability of either disciplinarity or interdisciplinarity is recommendable
 - (Recall the survey cited in the beginning of talk)
- **One has to separately (and comparatively) assess each type of disciplinarity and of interdisciplinarity and each particular instance of them**

Problem of standards

- Some admin declarations: **ID, thereby higher quality** (oh my!!!)
- **Disciplinarity** and its strength characterised in terms of being in possession of (relatively) unambiguous standards and principles
- **Enter ID: which standards to apply?**
- **Similarities** among members of families of disciplines or fields
 - Eg experimental physical sciences, bunches of humanities etc
- .. and significant **dissimilarities** between such families
- Possible solution: **externally set extra-academic standards**
- But **issues intensify and further issues arise** as extra-academic parties / knowledge become involved:
 - **Autonomy, Objectivity, Quality, Urgency**
 - Cf *Nature* Editorial: “ID science takes longer... True ID science cannot be rushed...”

Shop floor!

- instead of believing that in order to get more of it – or better kind of it – we just need more resources and more supportive institutional infrastructure
 - → **pay attention to the intellectual & affective shop floor!**
- **That's where the action takes place – and often fails**
- In order to understand – and anticipate and promote -- successes and failures of ID, one needs a **detailed understanding of the theoretical and cognitive structures of participant disciplines**
 - From generalized preaching to concrete analysis!
- **Performance of an ID endeavour – success or failure – traced to X**
 - To understand the role of a funding scheme, one needs to understand how the other possible factors play out their roles



TINT

- Trends and Tensions in Intellectual Integration
- Academy of Finland Centre of Excellence in the Philosophy of the Social Sciences
- 2 Missions
 - Practically relevant philosophy of science
 - Towards a philosophy of interdisciplinarity

Themes/streams

models and other transferable surrogate tools
explanation and evidence across disciplines
social ontology
economics and interdisciplinary trade
analytic sociology

30+ researchers from ≈ 10 countries

AID /Agora for Interdisciplinary Debate