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# Global Studies in a Material World - How far can Natural & Social Sciences Integrate?

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## Foreword - and Acknowledgements

An analysis of and reflections on a teaching experience suggested that one major pedagogical challenge for a teacher supervising students following a 'interdisciplinary' university course is how to go about enabling 'integration' between the social and natural sciences - i.e. a process by which data, ideas, theories and methods of disciplines are blended to be of value to students. The UCPH course in Global Environmental Governance (GEG), providing the experience, serves a double function in this paper, one a case in its own right, and one as a partial proxy case for a course which mainly exist on paper (as it just started last month). Further, the GEG course rather explicitly embodies – or calls for – workable 'integration'. It is therefore relevant to demonstrate that interdisciplinarity is not only a [subject oriented] didactic, but also a concrete pedagogical, challenge - both at the level of course design, at the level of day to day teaching and in terms of assessment practice.

In addition to the by-proxy component and reflections from teaching and supervising students at the GEG course at UCPH in 2014, qualitative methodology applied was one of a strategic case study using semi-structured interview of strategically selected respondents[1], analysis and review of literature and relevant documents such as course descriptions, accreditation report and course planning materials.

[1] Two representatives of the Coordination Committee of the GD programme (Henrik Hansen, Christian Lund), one representative of the Course in Global Environmental Governance (Iben Nathan, Course Leader) and the IFRO deputy director

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## Intro

Interdisciplinarity - creating something new by crossing existing boundaries and integrating disciplines, including methods, terminology, and research - is important to address complex issues facing our world and employers want *students who master interdisciplinary thinking* (2016 Strategy, University of Copenhagen, italics added). Today this importance is widely acknowledged in scientific literature, from all realms[2], by the world scientific community and reflected in celebrations of early practitioners[3]. UNESCO speaks of a coming post-disciplinary age in which the social sciences and hard [natural] sciences can *integrate* (2010: 189, italics added). Among the drivers for the vision expressed in the UNESCO report is a past frustration of what I would call a significant further *potential for alignment* between the nature of the mainstream (western) social science, including economic, disciplines and the diversity of cultures and realities existing throughout the world.

A motivation for this paper is to pursue understanding of and reflect upon how courses at UCPH may be further improved in respect of a new disciplinary communality, if not integration, and constructive alignment between course content and global cross-cultural realities, as well as the fact that we all live in a finite material biogeophysical world on a single planet.

Exploring – by proxy - the case of a new MSc. programme in Global Development (GD), we ask whether and how the GD programme could perhaps strengthen its interdisciplinarity to further exploit its close institutional location close to the bio-geo-physical disciplines at the UCPH Faculty of Science, and further strengthen its partial foundation at the Department of Food and Resource Economics (IFRO). A sub question investigated

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who followed the evolution of the GD programme, in his capacity of leader of studies (Per Svejstrup Hansen)

[2] see e.g. Darbellay and Stock 2012, O´Shea 2012, Andreatta et al. 2011, McCarl 2010. This is also the case within the social sciences where the importance of 'opening up' has long been acknowledged - although as 'to whom and for what' has remained more of an open question (Burawoy 2007).

[3] see e.g. (Turner & Fischer-Kowalski 2010)

is whether and how a course in Ecological Economics (EE) could serve to this end. Given the fact that the GD programme is yet to complete its first semester [ever], a course on Global Environmental Governance is used as a partial 'proxy', i.e. for methodological reasons, see appendix A.

## Constraints facing interdisciplinarity

Complex barriers and serious challenges and constraints continue to work against interdisciplinary research and research collaboration (König et al. 2013) - and thus against interdisciplinary research based teaching. At the same time funding agencies increasingly invite design of inter- or transdisciplinary research programs, and scholars call for the need 'to go beyond assembling multidisciplinary teams' (Wilk 2012). Some of the constraints are fundamental, rooted in epistemology, different choice of scales of analysis or assumptions about human nature, and different institutional arrangements such as organizational divides, and specialized journals (Wilk 2012). Some are related to age of the performers or strategic value of the research (Rijnsoever & Hessels 2011)(see also appendix A). So, 'Inter' is contested space, inter-disciplinarity has many definitions[4] and 'degrees' (see appendix A). For the purpose of this paper we shall rely on the illustrations in figure 4.1, which carry these (selected[5]) definitions:

- multi-disciplinarity: people from different disciplines working together, each drawing on their disciplinary knowledge;
- interdisciplinarity: integrating knowledge and methods from different disciplines;
- transdisciplinarity - unity of intellectual frameworks beyond the disciplinary perspectives.

[4] The (US) National Science Foundation defined interdisciplinary research as: ´a mode of research by teams or individuals that integrates information, data, techniques, tools, perspectives, concepts, and/or theories from two or more disciplines or bodies of specialized knowledge []´(2004).

[5] See the source figure (link) for definitions of intra- and cross- disciplinarity.

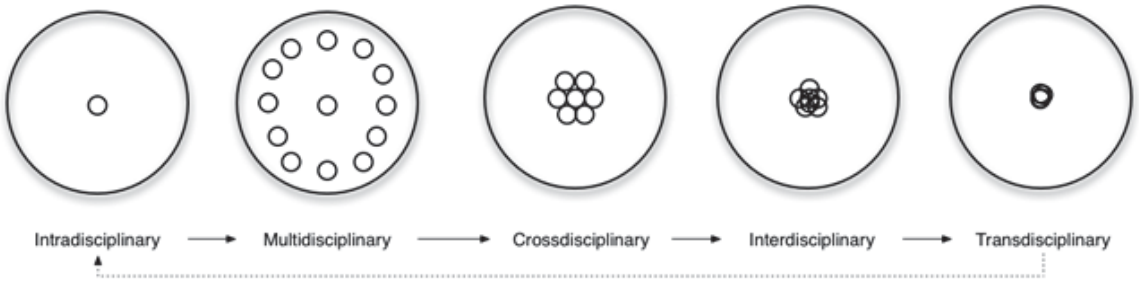


**Fig. 4.1.** Source: http://www.arj.no/2012/03/12/disciplinarities-2

## The case of the MSc programme in Global Development (GD), at University of Copenhagen (UCPH).

The new 120 ECTS MSc programme in Global Development (GD) at University of Copenhagen (UCPH) launched in September 2014 on the background of an excellent accreditation. The graduates will bear the title MSc in Global Development and have a 'new' social science expertise - where analyzing and understanding drivers and incentives of the market economy combine with understanding culturally determined perceptions, institutions and organisations (http://studier.ku.dk/kandidat/global-udvikling/). The programme result from two years of preparation in collaboration between the (UCPH) faculty of Social Science and faculty of Science, the (UCPH) Board on Education Strategy, coordination and advisory committees as well as four meetings with user panels[6]. Planning involved a course plan development retreat followed by syllabus development and pedagogical '*montage*' - to balance lectures, exercises, and excursions, and finally the GD application fulfilled all accreditation criteria[7].

The accreditation criteria included:

(1) Demand side and match between competence goals and employer demand;
(2) Foundation in Research and research environment;
(3) Educational profile and learning objectives;

[6] including Danish Industry, UNDP, ABB, Grontmij, Danish Ministry of Foreign Affairs and Danfoss.

[7] The above section is based on interview with one of the founders of GD, Professor Christian Lund, 25th June 2014.

(4) Programme structure, design and planning, including alignment learning objectives and assessment and evaluation, and obligations to apply existing guidelines for pedagogical quality assurance and standards, and finally
(5) Use of continuous quality assurance systems, including a UCPH teaching quality assurance systems in accordance with the European Standard Guideline (ESG) monitoring the curriculum and ensuring (certified) teacher qualifications (Akkrediteringsinstitution 2013).

One source of inspiration to develop the new MSc in GD was an individual experience which I believe is perhaps similar to the India-experience allegedly laying the grounds for Ester Boserups transformation into 'An interdisciplinary visionary relevant for sustainability' (Turner & Fischer-Kowalski 2010)(see appendix A). GD was envisioned to allow a more holistic understanding of development processes, providing students an interdisciplinary understanding early enough to optimize their competences as 'developers'. However, aware of the great challenge many economists experience in interaction with the bio-geophysical sciences, which have a longer time perspective than that of the market (now or near future) and the political system (next election), founders defined the GD to be a predominantly social science education, the interdisciplinarity of which would be limited to reach across a handful of social science disciplines sharing an anthropocentric view of the world[8].

## The GD curriculum and intended learning objectives

Globalization processes, living conditions and economic growth are core concepts to the [2 year master] GD education. The programme will concentrate on 'social science aspects of global development' and educate students to 'understand, analyse and act' in this 'new globalized reality' (http://studier.ku.dk/kandidat/global-udvikling/). Students are expected to 'undertake relevant job functions' and 'qualifying them for enrolment in a PhD programme in global development' (KU 2014) – a statement reflecting that there is no consensus on the extent to which GD is/should be a research education – one of the founders will be satisfied if around 10% of the students can be recruited as ph.d. students, another rejected the idea of GD as a research education.

[8] The above section is based on an interview with one of the founders of GD, Professor Henrik Hansen, on 3. Juli 2014.

The involvement of Department of Geoscience and Natural Resource Management and IFRO means that while the GD is mainly a social science education, formally speaking it is a combined Social Science – Science faculty venture. With a first year featuring six mandatory courses plus a three week 'fieldwork' stay [in a low- or middle-income country], a second year of 'choice' combining optional courses, more fieldwork and internship, and finally a thesis (cf. figure 4.2) opportunities exists for all GD partners to contribute: IFRO and Science has responsibilities vis-à-vis the field course(s) and the field course therefore provide some opportunities for demonstrating to students the relevance of Science disciplines and the opportunities to follow Science courses in the 'open window' of the GD[9].

| ECTS: | 7.5 | 7.5 | 7.5 | 7.5 |
|---|---|---|---|---|
| 1st semester | 1) Global Development: Theories, Facts and Current Issues | 2) Advanced Research Methods in the Social Sciences | 3) Global Business and Economics | 4) Transnational Actors, People and Placemaking |
| 2nd semester | 5) Global Politics | 6) Economic Growth and Inequality | 7) Field Methods/Field Course (15 ECTS) | |
| 3rd semester | Study abroad, internship and/or courses within social science (30 ECTS) | | | |
| 4th semester | Thesis (30 ECTS) | | | |

**Fig. 4.2.** Source: KU. 2014

The GD course catalogue is broad, comprising introduction to development theories, qualitative and quantitative (social science) research methods, a private sector oriented component introducing students to international trade, FDI´s, value chains and finance, an actor oriented component, a component on global politics and one on economic growth (and distribution). All the courses have themes, where at least 2 different disciplines are represented and the field course – following the otherwise multidisciplinary elements - will 'integrate methods and disciplines'[10]. Exam

[9] Interview with Per Svejstrup Hansen, Associate Professor, Deputy Head of Department, 27/06/14.

[10] Interview with Christian Lund. This respondent - one of the Chief Designers of the GD programme who has himself a strongly interdisciplinary profile – characterized the aim of the programme as multi-disciplinary, and the field course as the opportunity to go beyond this and explore interdisciplinarity.

forms vary significantly between the six courses (7 including the field course) and students are allocated a thesis supervisor already at the end of 2nd semester, indicating perhaps how the GD is designed for the 'new normal' of post 'progress reform'.

With about 65 students, around 13 from Germany, and 7 from outside EU (Australia, Canada, USA, China), and a majority of applicant motivation letters aiming for a private sector career, it seems highly plausible that the GD programme can 'play out' as outlined in the accreditation document.

In terms of intended learning outcomes/objectives (ILO's), the GD profile of competences includes knowledge and understanding enabling students to *'identify complex problems related to development and possess knowledge, based on the best international research, of theories and methods used to address such problems, in addition to being able to critically reflect upon this knowledge on a scientific basis'*. Expected skills include for students '*with regard to validity, reliability and applicability*', to be able to '*critically evaluate, discuss and prioritise among scientific literature and key methodologies in the field of global development*'. Finally, expected student competences include ability to 'evaluate, validate and disseminate existing data and design, carry out and co-ordinate scientifically valid and focused research, to advance knowledge in a particular problem area or issue on global development'.

Rhetorically, of course, one could ask whether including or excluding biogeophysical or 'earth' sciences is preferable in terms of the above expectations to be realistic. Based on our analysis of the GD Curriculum (KU 2014), the core disciplines of which is anthropology, economics and political science, we tend to conclude that as far as the current level of ambition is concerned, the interdisciplinarity objective of the GD programme is attempting a partial 're-pair' of the historical divorce that separated culture, economics and politics – a divorce creating narrower disciplines tending to abstract from the fact of their subject matters being integrated cultural, social and institutional constructs. While the GD curriculum aim to focus on quantitative economics, it is unclear to this analyst at least, whether this may result in 'neglect of institutional factors' sensu Gunnarsson (1991) by design.

Given certain developments since that 'divorce', including accentuation of some of the 'constraints' mentioned, this ambition is perhaps already high, despite the fact the GD components are all social sciences (only). Based on the semi-structured interviews it seems clear that scoping out into

an interdisciplinarity – or transdisciplinarity - including also natural sciences is perhaps more of long term objective, at this point in time. One may conclude, therefore, that while the GD attempts opening up [nomothetic] economics to other social sciences (here anthropology and political science) and vice versa, a stronger contemporary UNESCOish, if not older 'Wallersteinian'[11] ambition of 'opening up' the(se) social sciences to other sciences, including biology and the ecological sciences, in which the UCPH Science Faculty excels, seems a more distant perspective.

## The Global Environmental Governance (Diploma) course

At UCPH, the GEG Diploma course stands out as one of the few courses pursuing a real ambition of combining and drawing upon both social and natural sciences to gain interdisciplinary competences and understanding. As per its ILO´s GEG aim directly to '*equip the students with interdisciplinary skills*' and bring about knowledge on how international organisations 'interact *in relation to the task of governing the society-nature relationship*', and therefore ability to '*critically evaluate information related to social and physical aspects of global environmental problems and their eventual solutions*'. The course thus aims for students to gain 'extensive understanding' of both political and institutional issues as well as of '*natural science*' aspects of the environment, - and student competences to comprise taking '*technical, natural science and social science aspects into consideration when working with global environmental issues and problems, consequences and solutions´ and bringing ´natural science based knowledge about environmental problems into play in an international political, legal and administrative context*'. (KU 2014. GEG Course description 2013/2014, italics added). In other words, GEG has a strong element of political ecology sensu Bryant (1992).

The origin of this 7,5/10 course goes back to 2007, when a perceived need for a course with a global perspective on environmental problems was acted upon, on a background of many existing (UCPH) courses addressing the regional or EU level only. The ambitions was to give students 'a taste for interdisciplinarity', and avoid them losing their foothold in their 'traditional' disciplines, and instead supplement these with broader

[11] Here referring to the title of the Gulbenkian Commission, headed by I. Wallerstein: opening up the social sciences

multi/interdisciplinary insights´ - a notion which may be quickly illustrated metaphorically: the 'perception of a forest may very much depend on whether you are an artist, a lumberjack or an economist'[12]. One of the GEG planning documents put it this way (own translation from Danish):

> '[The] most important objective is to supplement existing student competences by providing an option for students to gain experience with interdisplinary work on of relevance for their subject. Through the program [GEG], the students will thus be able to research both political and natural science and legal problems, within the field of "global environmental governance"'.

At the same time - and compared to the case of the GD (above) - the GEG course documents more explicitly address, if not fully draw the consequences of the fact that GEG will recruit many students with a (soft) natural science profile. GEG course documents says:

> 'students from natural sciences [will] through this program gain better insights in social and legal aspects of the global environmental field. As graduates, therefore, they will have a better chance to bring their natural science knowledge to play in global og national management processes'

The same document aim to ensure the interdisciplinarity goes in both directions:

> 'Similarly, students of law and political science faculties, will gain better insights in fundamental Science concepts and problems of importance to the global environment. It is expected therefore that as graduates they will be able to better understand and deal with natural science problems or, at least, have a better capacity to draw on or collaborate with experts having a Science background, thus adding quality to policies and management processes of essence to the global environment'

Finally, the document provides a perspective: [GEG] can be developed towards an international master's program, with similar aims.

A 2008 report on the GEG course indicates an early plan of extending the course interdisciplinarity all the way to Biology – so far geography has been successfully integrated. The 'inner market' of UCPH courses is

[12] This section is based on a (SKYPE) interview with Associate Professor Iben Nathan on 9th July 2014

still evolving, meaning some 'trade barriers' remain in function, like some faculties having block structures where others still have semesters, some have a tradition for interdisciplinarity, some not[13].

## A teaching experience informing the analysis

During my teaching at the GEG Diploma course, more particularly in my function as supervisor for student group projects, the agenda – or ambition - for my research based teaching[14] was to help the students – many of who originated from a Science background - to successfully 'integrate' the social science ['governance'] dimension of the course, with the [biogeophyscial] Science dimension (See ku.kurser.dk).

The pedagogical principles applied – in accordance with the course design – was a problem oriented approach using dialogue (supervision meetings) to activate and allow students pursue in assigned 'projects' the intended learning objectives of the course, particularly the 'taste of interdisciplinarity' and 'natural science and social science' [integration] objective.

From these intended learning objectives of enabling students to 'understand' or integrate natural and social science (see ILO´s above), the following example is based on personal experience, teaching and supervising students at the GEG course, including censorship and examination: several (science) students proved fascinated about apparent potentials for stronger (environmental) sustainability identified in terms of agricultural production systems (including systems such as certified organic agriculture and permaculture) presumably demanding less energy (emergy) and causing less environmental damage compared to most existing and conventional agricultural systems. Given this enthusiasm, one challenge for the (interdisciplinary) course teachers, of course, were to ensure the same students would also understand (/learn) and be able to apply an institutional (social science) perspective, focusing on how existing or new potentials for environmental sustainability identified by the natural sciences may (or may not) come into play in a global market society by the way of social institutions.

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[13] Interview with Iben Nathan, GEG course leader, July 2014.

[14] A teacher who likes to design and create didactical situations and ´activate´ my students, I oscillate between [P.]. Kugel phases ´3´and ´5´ - between focusing on students while aiming to explain so they understand, and focusing on students as independent thinkers with responsibility for their own learning

In the [contrasting] cases of certified organic agriculture and [civil society carried] Permaculture, for instance, teachers found a point of departure for combining the ´empirical´ work of the activated (mainly science oriented) students, with theoretical approaches and concepts from the social science 'governance' literature – drawing on say *constructivism* in international relations theory and concepts such as *market based non state* global environmental governance– to help students gain a conception of how any 'solution' or 'potential' for environmental sustainability can be promoted or understood [only] through a focus on actors and agency representing 'social carrying' of the same solution into markets and/or reality through institutional 'solutions' as well.

The course exams indicated that this learning objective was partially realized – i.e. at the time of exam, *not all* students seemed to have realized the importance of balancing and integrating social and natural science approaches.

## A Component of Ecological Economics: A Pragmatic Option for Strengthening Interdisciplinarity of the GD Programme?

Ecological Economics (EE) is a transdisciplinary field drawing on insights from natural sciences, social sciences and the humanities, a (trans)discipline which [much like GEG students] studies conflict between the growth of the economy and the environment (Røpke 2005), and which has evolved significantly during the last few decades both quantitatively in terms of numbers of practitioners (international societies, conferences, and journal publication) and qualitatively, in terms of contributions to scientific and real world challenges and problems (Røpke 2005).

What is unique about EE is that understanding of nature's cycles and processes', including principles of irreversibility/non-substitutability of capitals (Daly & Cobb 1989), and the thermodynamic laws, is core to its analyses, concepts and views of capitals (which in EE can be of many kinds other than monetary, i.e. reflecting plurality of values), value and valorization, systems thinking, and metabolic understanding [of the economy] (Martinez-Alier & Røpke 2008). This is in contrast, not only to neoclassical, but also to much natural resource- and 'environmental' economics remaining concerned with estimation of monetary values and market contexts and principles.

In this respect, and in the eyes of this writer (see appendix A, ecological economics is a rather 'perfect match' to bridge the social and the natural sciences – and this is the reason why it is brought in here and analyzed for its potential to perhaps help along a common language, if not integration of disciplines as an overall objective, and with respect to the pedagogical challenge identified and experience by this writer in the context of the GEG course.

In this regard, the unique qualities of EE can be reflected in course (component) designs and, as in the case of an Aalborg University Campus Copenhagen course, featuring 'systems thinking' combining insight in thermodynamics and ecosystem services with material flows accounting and 'performativity' of economic theory - and thus different languages of valuation.

MSc programmes in Ecological Economics exist outside Denmark[15] and a number of universities have programmes offering degrees that include courses in EE. At the Aalborg University Campus Copenhagen, a recent initiative has established an EE course (see (AaU 2014)). Like the GEG course, AaUs EE take a point of departure in global (environmental and economic) interdependent crises. One aim is to increase students´ understanding of how (perspectives from different) disciplines can be integrated and how insights from one discipline may help question established ways of thinking in another (AaU 2014).

EE is 'programmatically open, pluralistic and transdisciplinary, so virtually unrelated contributions can appear as part of the field' (Røpke 2005). Consequently, EE has many 'surfaces' enabling a connect to or interphase with both the GD (as is), to GEG (as is), and to the natural sciences at Science. These interphases include typical EE themes like: social welfare, institutions, and governance; environmental sustainability; and resilience and evolution in socio-ecological systems.

## Conclusion

Global Development students will follow an education of excellence and yet risk leaving UCPH without significantly understanding biogeophysical realities, environmental service functions of the most basic global unit:

[15] University of Edinburgh, for instance, has an MSc programme in EE, at its school of geosciences. A search for 'Ecological Economics' at ku.kurser.dk on 28th July did not return any course featuring EE in the title.

earth, let alone the irreversibility and non-substitutability between its myriads of unique natural capitals. This paper pursued the question of whether and how the GD programme can strengthen its interdisciplinarity to further exploit its institutional (here also sensu organizational) location close to the bio-geo-physical disciplines at the UCPH Faculty of Science, and further strengthen its co-foundation at the Department of Food and Resource Economics (IFRO). A sub-question investigated was how a course in Ecological Economics (EE) can serve to strengthen the GD programme, as far as interdisciplinarity and the faculty of biogeophysical disciplines, is concerned. Given the fact that the GD programme is yet to launch, the existing UCPH course on Global Environmental Governance was used as a methodological 'proxy'.

Our analysis suggest that in the case of the GD programme a *potential* to *integrate* social and natural sciences sensu Unesco (2010) exist. One *implication* of this is a remaining potential for GD in due course to move further along in a continuum perhaps as far as towards transdisciplinarity or – to use UNESCO´s terminology (from above) – a *post disciplinary* integration between the natural and social sciences.

Epistemologically speaking there is no reason why the GD programme should not transcend from the current situation of limiting its interdisciplinary scope to other social sciences to become more inclusive towards [post positivist] natural science 'disciplines'. Experience from the GEG course, however, which embody an ambition of 'bridging' social sciences (on governance) with natural sciences (environmental themes and cases and students recruited from natural science backgrounds), indicates that the bridging can be challenging and calls for special attention to building students awareness of the imperative of integrating theories and methods from 'both ends'. By default, science bachelors will find it difficult to understand the social science terminology used at the course and vice versa social science bachelors will find it challenging to fully comprehend the ecological system dynamics and how these relate to socio-economic systems. The bridging of disciplines, in other words, can have implications in terms of accentuated didactical and pedagogical challenges. Continuous analyses of student capacities and development of special cases enabling multiple disciplinary perspectives, so that all students discover the value of and contributes to interdisciplinary cooperative learning to form new types of knowledge may be one way forward.

Based on the above mentioned 'lessons' from the GEG course (as a proxy for a GD which has started, but not yet come to pass), a first – incre-

mental - step in the direction of strengthening the levels of interdisciplinarity at GD in a way that would 'open up' GD to [Faculty of] Science, could be integrating the trans/non-disciplinary discipline of *ecological economics* into the GD programme.

A GD course component in Ecological Economics (EE) would serve to strengthen the GD programme – help create an ambition for the students (and therefore prospective decision-makers and future researchers) to reach out an draw also on science disciplines, including Biology, Chemistry, Geosciences, Food & Nutrition, Exercise & Sports, Plant and Enviromental Sciences, and Natural History – all the 'bio-geo-physical' disciplines which are major assets at the UCPH Faculty of Science.

Elsewhere EE has already created a strong tradition for - and demonstrated - interdisciplinary collaboration, allowing researchers of practically all kinds to come together in cooperative learning and pursuit of common language of sciences understanding both social and biogeophysical ecologies and processes.

GD exists within a university with a strong Science department and institutional location close to the bio-geo-physical disciplines at the UCPH Faculty of Science. As a component of the GD programme, the 'transdiscipline' of EE could act as a de-facto 'integrater' between disciplines which are so far only formally integrated. Science departments – such as IFRO – with an additional track record of performing commissioned studies for government agencies and the productive (including agricultural, food and forests) sectors, only adds options in this respect.

## A Endnotes

i In other words, it is not possible to have experience from a future course, so an existing course was used, to enable analysis by proxy.

ii In addition, interdisciplinary activities are facing the following professional, organizational and cultural obstacles, here according to Wikipedia: most participants in interdisciplinary ventures (studies) were trained in traditional disciplines. Disciplinary attitudes may hinder participants from realizing full potentials of [interdisciplinary] collaboration, for instance when quantitatively oriented colleagues are perceived as missing the broader dimensions of reality or vice versa. Interdisciplinary manuscripts – and grant applications – are often refereed by mono/intra-disciplinary reviewers. Insufficient autonomy can hamper an interdisciplinary programme where (representatives of) traditional/mono-disciplines make tenure decisions. Some budget practices (still) follow disciplines.

iii For the purpose of this paper we shall rely on the illustrations in figure 1. to help us distinguish what a recent report from the Norwegian research council (Norges-Forskningsråd 2006) coined as ´puslespill, basar og heksegryte´ - denoting different degrees of interdisciplinarity, and with 'heksegryte' perhaps equivalent of transdisciplinary.

iv One of the founders of GD, working as an economist in Vietnam, experienced and reflected upon a cultural dimension completely outside the field of economics and so rather impossible to meaningfully integrate into the economic discipline, despite the fact that such integration is assumed by policy-makers and other commissioners of economic analyses of (in casu) household economics in (casu) Vietnam. Reflecting on this experience, the economist found that unless both strengths and weaknesses of the different disciplines are truly acknowledged, disciplinary schauvenisme may result – and so it seemed important for him to support education ´across´ the disciplines. His vision with GD is that it will help to avoid stereotypes, such as anthropologists perhaps generally perceiving economists as 'neoliberal devils', and instead get to understand the background for economic concepts, and similarly perhaps help economists avoid ignoring 'externalities' or quantifying subject matters they really do not understand, but simply has 'power' to quantify in a certain way. This would also help balance a perceived tendency for Antropologists focusing on the 'loosers' in development processes and perceived tendency of economists looking for 'winners'

- and perhaps help Antropologists understand why economists are fond of markets and economist understand culture.

v Personally, I am one of the ecological economist with a ´double identity´ (Røpke 2005, pp. 286), in casu one in which my core identity is one of a development researcher (my Ph.d and Master degrees are in development studies), while my identity as an ecological economist is a matter of de-facto rather than de-jure.

All contributions to this volume can be found at:

http://www.ind.ku.dk/publikationer/up_projekter/2014-7/

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