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GeoCapabilities: Toward an International Framework for Researching the Purposes and Values of Geography Education

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Abstract

GeoCapabilities is a transatlantic collaborative project for researching the purposes and values of geography education through a "capabilities approach". Inspired by the writings of philosopher Amartya Sen and economist Martha Nussbaum, the capabilities approach provides a normative framework for understanding the broader aims of geography in education and how these aims may be shared internationally, irrespective of differences in the scope and sequencing of national geography standards. We posit a capabilities approach also offers significant practical benefits by clarifying for teachers the ways geography imparts a "powerful knowledge" and an essential perspective for life and citizenship in a highly interdependent world.

This article reports the outcomes of the first phase of research for GeoCapabilities. A content analysis was performed for the purpose of auditing the national geography standards in the United States, England and Finland for evidence of capabilities as intended educational aims for geography in schools, specifically with regard to the geo-capabilities of making personal choices for sustainability, being creative and productive in a global economy and culture, and achieving personal autonomy. This analysis is followed by a synthesis showing how the results of the three national case studies potentially provide a shared conceptual basis for geography curriculum making for human capability development across national boundaries. The article concludes with recommendations for expanding the research and enhancing curriculum making from a capabilities approach.

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Introduction

GeoCapabilities is a research project led by the Association of American Geographers (AAG) with funding from the U.S. National Science Foundation's Geography and Spatial Science program (Award # BCS-1155255). In its first phase (2012-2013), the project's aim is to develop a methodology for understanding the purposes and values of geography education through a transatlantic comparative analysis of national geography standards. The long-term goal is to establish a conceptual rationale and empirical basis for building transatlantic collaborations in geography education, eventually expanding to other world regions. This work is being pursued in partnership with the Institute of Education in London, the University of Helsinki, the Grosvenor Center for Geographic Education at Texas State University, the European Association of Geographers, and the UK Geographical Association.

The theoretical framework for this project is the "capabilities approach" for education as inspired by the ideas of economist Amartya Sen and philosopher Martha Nussbaum (Nussbaum & Sen 1993). In the context of education, the capabilities approach asks teachers, as curriculum leaders, to reflect on the role of education in affording people with intellectual, moral, and existential capabilities for lifelong learning, economic and social agency in citizenship, and the pursuit of personal well-being (Hinchcliff 2007; Hinchcliff 2009; Kuklys 2005; Saito 2003). Although questions and perspectives pertaining to the purposes and values of education are wide-ranging, many of the reforms and trends currently shaping educational policy and practice at all levels can be traced to neoliberal policies being advanced by national governments seeking to better compete internationally in the contemporary global economy. In this context, schools, colleges and universities are seen as vital components of a nation's capacity to generate human capital. Considerations of educational quality, in turn, tend to be driven primarily by assessing how well educational institutions are aligning curricula with the demands of the modern workforce and equipping students with "employable" sets of knowledge and skills, commonly referred to as competencies.

A capabilities approach to education stakes out different conceptual basis for thinking about the purposes and values of education. As a normative framework for understanding human welfare development, capabilities are defined as sets of human "functionings" that afford individuals, as autonomous agents, to acquire knowledge, skills and perspectives that enable them to pursue personal well-being. This is not to be confused with a therapeutic or emotional sense of well-being in the form of, say, happiness. It is more to do with the real opportunities the individual has to lead a valued life, or the freedoms he or she has to achieve the particular existence they have reason to value. According to Hinchliffe (2009), a key aspect of exercising such freedom is the mental act of deliberation, defined as the "critical assessment of ends and means in respect of well-being" (ibid p 404). As such, the capabilities approach is seen to offer a critical perspective from which to consider and evaluate what is of value in education

beyond a narrow focus on skills and competencies (Hart 2009; Hinchcliffe 2007; Kuklys 2005).

Sen's very broad idea about capabilities has been shaped by Nussbaum's identification of ten capabilities. Nussbaum's list ranges from capabilities for attaining bodily health (e.g., securing a nutritious diet and adequate shelter) and opportunities to experience a dignified lifespan, to items having more to do with interpersonal and cognitive functions, such as (Nussbaum and Sen 1993):

- *Senses, Imagination, and Thought:* Being able to use the senses, to imagine, think, and reason - and to do these things in a "truly human" way, a way informed and cultivated by an adequate education, including, but by no means limited to, literacy and basic mathematical and scientific training.
- *Practical Reason:* Being able to form a conception of the good and to engage in critical reflection about the planning of one's life.
- *Affiliation:* Being able to live with respect toward others, to recognize and show concern for other human beings, to engage in various forms of social interaction; to be able to imagine the situation of another.
- *Control over one's Environment* (in the broadest sense): Being able to participate effectively in political choices that govern one's life; having the personal right of political participation, protections of free speech and association.

As an initial exploration of the capabilities approach in geography education, GeoCapabilities focused on those capabilities in Nussbaum's list pertaining to human cognitive abilities and intellectual development, and then phrased in a manner that enables analysis of the curricular role of geography in helping young people think about their life in relation to themselves in the world and what may become of their communities as well as people, places, and environments around the world. As an initial exploration of this approach, we formulated a framework on how geography lessons might contribute to the development of young people's intellectual functioning in terms of three hypothetical "geo-capabilities" related to making choices for sustainability, being creative and productive in a global economy and culture, and achieving personal autonomy.

This paper presents the outcomes of the first phase of GeoCapabilities research. We begin with a brief synopsis of the theoretical and methodological literature informing GeoCapabilities. Next, we present an exploratory content analysis aimed at auditing the national geography standards in the United States, England and Finland for evidence of the three hypothetical geo-capabilities as intended educational aims for geography in schools. This analysis produced case studies illustrating how each country's educational system, expressed through its national standards; conceive the role of geography education in contributing to the development of three human geo-capabilities.

The resulting information was used to prepare a synthesis showing how the results of the three national case studies potentially provide a shared conceptual framework for geography curriculum making that develops human capabilities. The synthesis

framework illustrates how the broader aims of geography education for capability development are shared across national borders, irrespective of differences in the scope and sequencing of national standards. Following the presentation of the synthesis, we discuss the implications of our findings for teacher preparation in our respective countries. We conclude our article with recommendations for future research and curriculum making from a capabilities approach. Our premise is that the conceptual perspectives on geography education that teachers develop through the capabilities approach will enrich their understanding of geography subject matter and empower them to lead curricular reforms locally.

Background

A comparative understanding of the aims of geography in education

As a school subject and academic discipline, geography is concerned with social and environmental issues affecting people, places and environments worldwide. It is therefore ironic that there has been very little effort in the discipline to facilitate international dialogue among geography teachers on what the aims of geography education ought to be in a rapidly globalizing and increasingly interdependent world. Many assertions can be found in the U.S. and European national curriculum standards regarding the importance of geographic literacy for what we might refer to as "global citizenship" or "global learning" (Falk 1993; Gaudelli & Heilman 2009). At present, however, American and European teachers have few opportunities during their initial training and careers to engage the perspectives of peers and experts in different countries concerning the nature and impacts of environmental change, political conflict, resource consumption, migration, urban growth, natural disasters, and other issues they are expected to understand well enough to teach effectively. Consequently, students tend to learn the subject from the perspective of their local and national contexts without acquiring international perspectives providing critical insights on issues.

GeoCapabilities makes the explicit claim that the capabilities approach will enable and facilitate international communication about geography in education. To date this has been notoriously difficult because there are distinctive traditions and cultures of geography in the school curriculum. For example, geography in the U.S. is often taught as a social science. In the UK, the humanities have a relatively stronger presence in geography, whereas in Finland there are more explicit connections between biology and geography. The capabilities approach, by bridging curriculum content and broader educational aims, is a framework that allows for national differences in a manner that encourages dialogue across national jurisdictions. Such curriculum-focused dialogue, articulated through capabilities as a language that captures broad educational goals common to different nations, is a means of nurturing an internationalized curriculum for teacher leadership in schools across the U.S. and Europe.

GeoCapabilities therefore has broad implications for educational practice and policy, coming as it does at a time when reforms are dramatically changing the character of geography in schools and, in turn, how teachers are prepared and trained. In the U.S., teacher preparation in many states gives only cursory attention to geography even though geography is present in state standards. This situation owes to the lack of

geography courses offered on the campuses of many teacher education programs. Because of their inadequate preparation in geography, American teachers have long felt unprepared to teach the subject (Anderson & Leinhardt 2002; Chiodo 1993; Diem 1982; Reinfried 2006; Segall 2002; Segall & Helfenbein 2008).

European nations are also experiencing significant developments in their geography education systems (Lambert 2009a, 2009b, 2011a, 2011b). Leat and his colleagues point to the difficulty of national systems accommodating to what they describe as the "paradigm shift" required to introduce a competence-based curriculum, as it …

> *"... explodes conventional understandings of school learning which rely predominantly on the acquisition of knowledge and the development of understanding and skills, often completely disaggregated and decontextualized from real-life experience." (Leat et al 2012, 401)*

While Leat and his colleagues seek to demonstrate that "national politics have a habit of overwhelming EU policies" (ibid: 409), GeoCapabilities seeks a different approach: not to castigate national policies for failure of ambition, but to understand and harness different perspectives. This will be done with a language and conceptual apparatus, provided by the capabilities approach, that encourages productive international dialogue about subject content in the context of broader educational aims, centered on developing teachers' leadership capacities through building their curriculum understanding and practical curriculum-making skills.

Applying a capabilities approach in geography education

In their recent work *The Global Fourth Way: The Quest for Educational Excellence*, Andy Hargreaves and Dennis Shirley reflect on three decades of research on educational change in different countries. From their review they conclude that developing teachers as leaders is key to future educational innovation and effective schools:

> *"We need to establish platforms for teachers to initiate their own changes and make their own judgments on the frontline, to invest more in the change capacities of local districts and communities, and to pursue prudent rather than profligate approaches to testing." (Hargreaves and Shirley, quoted in Rubin 2013).*

Meta analyses of educational research by Marzano (2003) and Hattie (2009) also point to the key role of teachers regarding the effectiveness of schools.

A capabilities approach to geography education asks teachers to consider the role of geography in helping young people reach their full human potential. Geography does not tell us how to live; but thinking geographically and developing our innate geographical imaginations can provide the intellectual means for visioning ourselves on planet earth (Wadley 2008). This disciplinary knowledge base and perspective are components of what Michael Young (2008, 2011) refers to as "powerful knowledge," which he defines as the knowledge children and young people are unlikely to acquire at home or in their workplace, and knowledge they will need if they are to become active citizens and workers in the complex modern world.

We posit that the powerful knowledge offered by geography education consists of a deep descriptive 'world knowledge'; a theoretically-informed relational understanding of people and places in the world; and a propensity and disposition to think about alternative social, economic and environmental futures. In the context of GeoCapabilities, we are interested in determining the ways in which geography can be considered a powerful knowledge in the education of young people. For curriculum making, this implies thinking about the role of geographic knowledge, skills, perspectives and values in developing the capabilities of young people. It also implies thinking in terms of how young people may become deprived of certain capabilities when they lack access to the powerful knowledge provided by geography education.

Teachers who work in settings with weak traditions in subject specialist education, or who individually do not see themselves as confident or knowledgeable specialist teachers, may have difficulty providing their students with access to powerful knowledge through their pedagogical practices. These teachers in particular, but in truth all teachers who aspire to leadership roles, must find a means to "connect" or bridge their subject-specialist knowledge content (such as that identified in national geography standards) with broader educational aims, articulated in such a way that captures the spirit and purposes of powerful knowledge as defined above. In effect, we are arguing that an absence of high quality geography in a school deprives in specific ways the potential of that school's curriculum to develop human capability: students will have been deprived of certain epistemic access which will undermine their capabilities to think and act in a rapidly changing world.

Work on capabilities and education so far has been exploratory, and practical applications have covered a diverse range of educational issues, such as participating in class (Saito 2003), gender equality (Unterhalter 2003), learning about history (Conlin et al. 2010), being able to take part in discussions with other learners (Walker 2006), or being respected by teachers (Appadurai 2004). The link between education and other dimensions of social well-being, such as developing vocational skills and knowledge (Hollywood et al. 2012), numeracy (Freeman 2010), or general confidence (Tikly and Barrett 2011), has also been explored. In these ways, the capabilities approach provides an alternative to prevailing models of the university as a neoliberal enterprise focusing on human capital outcomes for competitive knowledge economies (Boni and Walker 2013). Although the relevance of the capabilities approach for teacher education and training has been pointed out, and specifically in geography education (Lambert 2011), it has not yet been applied to the professional development and support of teachers and initial training education.

Several decades of research have verified the critical need for secondary teachers to have a deep knowledge of their subject areas (Deleplace & Niclot 2005; Yager 2005; Metzler & Woessmann 2012). Beyond content knowledge, teachers must have pedagogical knowledge, pedagogical content knowledge, a knowledge of learners, knowledge of curriculum, and knowledge of instructional design and technologies (Shulman 1987; Harris, Mishra & Koehler 2009). Even though research has extensively explored these areas of teacher knowledge, there remains a problem of inadequately trained teachers in disciplines like geography, often at the level of leadership in helping

to define the aims and purposes that can be served by the subject (Lambert & Morgan 2010).

In sum, the theoretical and methodological basis of GeoCapabilities argues that a capabilities perspective on geography goes beyond a focus on competencies by describing a subject that can contribute in specific ways (and no matter how it is configured in national standards) to young people's powerful knowledge. Such learning will be achieved through teaching strategies that emphasize the application of geographical understanding in realistic decision-making contexts. This requires teachers, through principled curriculum making activity, to give young people opportunities to acquire, develop and apply a range of key geographical ideas and principles, and ultimately to make judgments about particular issues.

Delimiting the goals of GeoCapabilities

We also wish to make clear what the GeoCapabilities project is *not* about, both in terms of its aims and intended outcomes:

- *We are not defining a universal rationale and justification for geography education.* A capabilities approach does not imply a singular pedagogy for geography. Rather, it provides a language that teachers can use to communicate pedagogical ideas and potentially engage in curriculum making with their peers internationally. It equips teachers with concepts and an international perspective for understanding geography in education and for articulating the aims of their professional goals as teachers. Rather than being a "top-down" approach, capabilities as applied in geography education empowers teachers as leaders of curriculum making and gives them a voice in defining the goals of geography in education. The capabilities approach provides teachers, via international dialogue and exchanges, with diverse cross-cultural examples of geography in a global context and a means of shaping curriculum at the local level on the basis of that shared knowledge.

- *We are not proposing international standards for geography education*. Nations take varying approaches to geography teaching and learning in local jurisdictions. Differences in the scope and sequencing of geography curricula are a function and reflection of national policies and cultures. This means, for example, that the relative geographic literacy and proficiency of a typical 15 year old in the U.S., where standards are set at the state level, will differ from a peer in England and Finland, where there is a national curriculum. Each nation has different expectations for what youth should know about geography and be able to do geographically. Nonetheless, as our analyses indicate, there are shared concepts and perspectives across the three nations with regard to how geography can better prepare that 15 year old with a "capabilities set" for living autonomously, thinking freely, contributing as a citizen to the betterment of local and global communities, and understanding the implications of personal choices for the quality of life and environments in other parts of the world.

- *We are not advocating a universal approach to teacher preparation in geography*. The national case studies for the U.S., England, and Finland also demonstrate how teacher education systems are structured very differently. Teachers receive varying amounts of preparation in geography prior to entering the teaching workforce. While teachers will always need to understand the professional expectations set forth by local jurisdictions, we argue that the quality of their teaching can be enhanced further by engaging them in critical thinking about geography in the curriculum through applications of the capabilities approach. We believe that having teachers themselves learn geography through international collaborative approaches made possible by the capabilities approach will deepen their subject-matter knowledge and help them develop the capabilities of their students. This can be done in the wide variety of educational settings, and in complementary fashion with the wide variety of professional development methods in which teachers are prepared to teach geography.

Methodology and Findings

The first phase of GeoCapabilities research was concerned with exploring and clarifying the following questions:

1. In what ways do national geography standards in the U.S, England and Finland portray the subject as a "powerful knowledge" in relation to human capability development?
2. In what ways is the capabilities approach potentially helpful in shaping approaches to curriculum making and developing teachers as leaders in schools?

We proceeded to implement a two-stage methodology for analyzing national geography standards in the U.S., England, and Finland from a capabilities perspective. First, we compared and critically examined the key characteristics of the structure and organization of school geography curricula as presently expressed in the new and forthcoming U.S., England, and Finland national standards, along with the geography requirements set by education policies governing schools at the national level (in the cases of England and Finland) and at the state and local levels (in the case of the U.S.). From the ensuing discussions it was quickly determined that not only is there profound differences in geography curricula and requirements within the U.S. alone, but such differences become even more pronounced when comparisons are made among the three countries (Table 1).

In light of these findings, we next proceeded to focus the analysis of capabilities by performing a comparative analysis of the national standards at the level of curricular aims and goals. Each researcher independently performed a content analysis of their respective national documents presenting the standards and curriculum framework for geography. The text of the documents was coded for explicit and implicit evidence of how geography contributes to the three hypothetical geo-capabilities:

- Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason;

- Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability;
- Understanding one's potential as a creative and productive citizen in the context of the global economy and culture.

The coding, where possible, was performed on sections pertaining to the "purpose" or "significance" of geography education (i.e., why geography is important). This was at a broad-brush level and is inevitably somewhat subjective and tentative. It was not so much a strict content analysis of the standards, but an interpretation of the aims of geography as expressed in the national curriculum.

After the national standards were audited in each country, researchers pooled the coded data in relation to each geo-capability and sought areas of overlap and connection in the geographic content, skills, perspectives and values expressed in the text. The resulting synthesis outlines examples of how three geo-capabilities potentially provide a common ground for thinking internationally about the purposes and values of education in geography, irrespective of differences in the scope and sequencing of national geography standards (Table 2). Examples of shared goals for each geo-capability are presented in the second column. In turn, this information opens up avenues for potential collaborations in curriculum making, while engaging teachers in ideas about education and their professional aspirations and responsibilities as geography teachers. These examples are shown in the third column.

Table 1.
Comparison of national geography standards and requirements in the U.S., England, and Finland

	United States	England	Finland
Structure and organization of national standards/curriculum for geography	Geography for Life (2012): 18 standards organized into 6 essential elements. National standards are voluntary guidelines. States write their own standards, and local jurisdictions often are free to decide whether or not to require geography. At either the middle school (grades 6-8) or high school level (grades 9-12), geography may be present as a strand within social studies standards or as a separate set of standards (sometimes paired with history), often linked to a course.	The geography standards, expressed as the national curriculum programme of study (POS), has not been stable. Thus, the POS for primary (5-11 years) is the one written in 2000 (this being the third iteration since 1991); the key stage 3 POS (11-14 years) was reformed in 2008; *all* are being radically reformed for first teaching in 2014. Geography is optional after 14 years: approximately 30% of students choose to study for GCSE, a national externally assessed examination. Schools can choose from a list of seven different geography ‚specifications' offered under free market conditions by four commercial Awarding Bodies.	National Curriculum (2004) The aims and contents of each school subject are defined quite briefly in the national core curriculum. There are altogether only eleven pages describing the aims, contents, good performance at the end of the fourth and the sixth grades, as well as the final assessment criteria for the 9th grade for the subjects 'Environmental and Natural Studies', 'Biology and Geography'(5th and 6th grades), and Geography (7th-9th grades).
School geography requirements.	Elementary grades (K-5): Geography mostly integrated with social studies disciplines. Middle School (grades 6-8): 18 states either require or make optional a geography or geography/history course. 11 states have no geography requirement, while individual districts in 22 states may require geography. High School (grades 9-12): 27 states either require or make optional a geography or geography/history course. 7 states have no geography requirement, while individual districts in 17 states may require geography.	All state primary schools must teach geography by law. All state secondary schools must teach geography to 14 years. There is no requirement in law to *offer* geography after 14 (but only c 100 schools - from 4500 - do not offer the possibility to study geography to GCSE). There is no legislation to say that geography should be taught as a discrete subject: most primary schools (and some secondary schools) integrate geography – eg with science or history – or in themes such as environment. There is no legislation to lay down how much time should be devoted to geography – so long as the POS is covered.	Grades 1-4: Geography taught as a natural science in first four grades in Environmental and Natural Studies. Grades 5-6: Required geography and Biology course. Grades 7-9: Required stand-alone geography course.

Sources: Grosvenor Center for Geographic Education (2012); Heffron and Downs (2012); Finnish National Board of Education (2004); UK Department for Education (2013).

Table 2.

Examples of shared capabilities in geography education and their implications for collaborative approaches to teacher preparation and leadership in curriculum making

Geo-capabilities	Synthesis Findings (U.S., Finland, England)	Implications for Curriculum Making (Examples)
Promoting individual autonomy and freedom, and the ability to use one's imagination and to be able to think and reason.	A shared view in the standards is that geography education equips individuals with the ability to think and reason using diverse forms of locational data and knowledge of human and natural systems in different (and sometimes unique) place contexts. This contributes to the empowerment of individuals to think critically and creatively, whether independently or in collective decision-making and problem-solving contexts, about change and alternative futures.	Teachers in the U.S., Finland, and England participate in online projects and discussions to offer diverse examples of how their fellow citizens face decisions on where to live, what to build where, how and where to travel, how to conserve energy, how to wisely manage scarce resources, and how to cooperate or compete with others. On the basis of these exchanges, teachers work together to develop curriculum materials that engage students in geographic questions of this nature, and demonstrate the significance of context and perspective.
Identifying and exercising one's choices in how to live based on worthwhile distinctions with regard to citizenship and sustainability.	Reform of geography in all three countries is driven by greater attention to the idea of sustainability and mandates for environmental stewardship. Knowledge of human-environment relations is essential for understanding environmental and development issues at local, regional, national and international scales, and how individual and collective decisions about the future can be enhanced on the basis of this knowledge.	Teachers in the U.S., Finland, and England participate in online exchanges of data on energy consumption based on household energy logs. They interpret similarities and differences in localized decision-making using comparable data for developing regions, considering the relevance of urban vs. rural land use and energy choices, etc. This experience prepares them to create similar classroom activities for their students, and also to engage other teachers in thinking about environmental questions from a comparative perspective.
Understanding one's potential as a creative and productive citizen in the context of the global economy and culture.	Citizens require geographic knowledge and perspectives on economic processes and conditions in different regions to compete and cooperate effectively in a global market while being mindful of the impact of choices, the diversity of cultural approaches to business and economic decision-making, questions of how to act ethically, and the value of considering the greater good.	Teachers in the U.S., Finland, and England collect sales data on products manufactured under a variety of trade relationships between their nations and developing regions, considering and debating the costs and benefits to producers and consumers. They then co-develop a list of questions and have their students engage in online discussions about the relative merits of trading systems and how this knowledge might affect their future choices as consumers and business owners.

Discussion

We turn now to reflect on the implications of the synthesis findings in the context of a workshop held during the 2013 EUROGEO Conference in Bruges, Belgium, in which participants from a larger array of countries provided a critique of our methodology. We invited critiques from colleagues during a workshop held in Bruges, Belgium during the 2013 EUROGEO Conference. The workshop brought together the project evaluation team from Texas State University's Grosvenor Center for Geographic Education and 11 invited teachers and geography professors representing the U.S., England, Finland, Turkey, Greece, Germany, and the Netherlands. The workshop was designed to critique the methodology and findings of the exploratory GeoCapabilities analysis for the U.S., Finland, and England.

The workshop participants prepared for the workshop by performing a content analysis of their respective national geography standards using the same coding procedures conducted by the principal investigators. During the workshop the participants discussed their reviews and explored with the principal researchers the interpretive and definitional issues they discovered regarding how capabilities are understood. This process resulted in the following outcomes and critical observations, which will inform future phases of GeoCapabilities. As our work in GeoCapabilities evolves and matures, we will need to return to these issues and pursue them in much further detail.

First, the participants discussed the potential value of the content analysis protocol for expanding the project's research to include additional countries. On the one hand, the protocol was considered to be useful as an initial method for identifying language in national geography standards that relate in some manner to the hypothetical geo-capabilities. The participants largely agreed that the method of coding for capabilities was helpful for thinking about "softer" educational outcomes, each of which involves a full range of learning elements – that is of knowledge, understanding, skills and values. In turn, this information provides the bridge between broader educational aims (geo-capabilities) and the "powerful knowledge" offered by geography (i.e., deep descriptive 'world knowledge'; theoretically informed relational understanding of people and places in the world; and a propensity and disposition to think about alternative social, economic and environmental futures).

Where the methodology was found lacking for purposes of achieving a framework for international understanding was in its inherently subjective nature, as it deals with concepts that are oftentimes contextual, contested and lacking in universal meaning. Sustainability, for example, in some national standards is thought of in terms of social development (e.g., sustainable cities), whereas in others the idea refers to having a long-term perspective on the capacity of resources to be extracted from nature (e.g., logging forests while protecting wildlife habitat). What it means to be a "citizen", have "personal autonomy" and being able to "use one's imagination" implies a range of human functionings in different countries, and direct translations can be elusive. In Germany, for example, citizenship is a term rarely used when defining educational aims, while "developing a personality" is the closest equivalent to personal autonomy as understood in the American/British context.

In light of the linguistic and translational issues of this nature, it was argued that initiating an analysis of national geography standards on the basis of a pre-defined list of geo-capabilities is likely to be insufficient if the goal is to identify the shared common concepts underpinning the goals of geography education internationally. To improve upon the methodology, the workshop participants proposed that the analysis also include an examination of national standards for statements of educational aims without *a priori* notions of coding for capabilities. Once the aims are identified in this manner – without prejudice as to their meaning in capabilities terms -- researchers could subsequently engage in international dialogue as to the relationships of those aims with human capabilities. In this alternative "bottom up" approach, the goal would be for researchers to interact first with the 'authorized text' for geography in various jurisdictions, and then reach shared understandings and definitions of those aims in terms of geo-capabilities. It was felt that this complementary methodology would better accommodate variance in aims and meanings among a larger array of national standards than was analysed in the first phase of GeoCapabilities.

The work presented in this article should be viewed as a prelude to a next stage that will further develop and extend the GeoCapabilities research. The synthesis and subsequent critique of the U.S., Finland, and England analysis provides the foundation upon which future studies of national geography standards may be undertaken from a capabilities approach. The long-term goal is to develop awareness and support the application of these capabilities concepts in cross-cultural curriculum making, led by teachers who participate in future training workshops sponsored by the project.

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