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The global space of international students in 2010

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ABSTRACT
International students have become an increasingly important research object – not only on the basis of the overall expansion and importance of international students in higher education and in national economic policies, but also since they constitute a strategic research object for understanding the global landscape of higher education. By using correspondence analysis on a data set on countries of destination and regions of origin, the global space of international students is depicted. The analysis reveals a structure with three main poles, a Pacific pole, a Central European one and a French/Iberian one. The three poles correspond to three different logics of recruitment: a market logic, a proximity logic and a colonial logic. The three poles and logics are also related to linguistic structures. The Pacific/Market pole is dominated by English, while the Central European pole has German and Slavic languages as a common denominator, and the French and Iberian pole has French, Spanish and Portuguese in common with their former colonies. It is argued that the Pacific/Market pole is the dominating pole in the space due to the high concentration of resources of different sorts, including economic, political, educational, scientific and not least, linguistic assets.

KEYWORDS
International students; higher education; space; correspondence analysis; Bourdieu

Introduction

During the last decade, we have seen an increasing interest in international students. An obvious reason is that international students today are regarded as a key asset in the globalised knowledge economy. Many countries put emphasis on attracting the best and the brightest students on a global scale, and on making them contribute to the national economy (Abella 2006; Kuptsch 2006). Such goals are apparent in the migration policy launched in, for example, Australia (Ziguras and Law 2006) and the U.K. (Findlay 2011) where previous studies in the country increase one’s chances of obtaining a work permit. A further reason is the direct economic value that international students represent (Kritz 2006, 15). While tuition fees from foreign students compensate for the decreasing public funding of British higher education institutions (Bruch and Barty 1998), higher education has become one of the most important export industries in Australia (Adams 2007, 411) and New Zealand (Lewis 2011). The growing attention given to international students is reflected in an increased production of easily accessed statistics on global flows
of student migration. Organisations such as OECD, UNESCO and IIE are collecting data on international student flows and make them available on the web. In addition, many national statistical organisations provide data on nation-specific flows. Moreover, international students have become an important indicator of quality in higher education, used, for example, as a measure in higher education rankings.1

Although the importance attributed to international students does not lie in their share of the overall number of students (according to UNESCO (2009, 37) global outbound mobility ratio was below 2% in 1999 and 2007), the overall size of the international student population is today significant. In 2010, there were between 3.6 million (UNESCO 2012, 133) and 4.1 million students (OECD 2012, 360), around 10 times the total number of students in countries like Belgium, Hungary or Sweden and at least a million more than the number of students in major higher education countries such as France, Germany or the U.K. The number has more than doubled in 12 years; according to UNESCO, it has risen from 1.6 million in 1998 to 3.6 million in 2010. Representing a substantial economic value on the education market, international students are overrepresented in the most dominant countries in education, such as the U.S., the U.K., Germany and France. Here, they are they are particularly well represented at higher levels of the educational system (UNESCO 2009, 44), in areas of special importance for the ability to compete on the global knowledge economy such as science and technology (Brown, Lauder, and Ashton 2011, 36–40), and at the most prestigious institutions, for example, the Ivy League universities in the U.S., Oxbridge in the U.K. (Findlay 2011, 176) and some of the grandes écoles in France2).

Considering the growing importance of international students and their crucial function in the global knowledge economy, it has become an increasingly central research object (Kehm and Teichler 2007; King and Raghuram 2013, 129; Bilecen and Van Mol 2017). However, the existing body of literature tends to be rather dispersed, depending on different conceptualisations of the object. King and Raghuram (2013, 127) highlight three broad strands. First, international students are often primarily regarded as a form of migration and thus related to the existing research literature on this subject. Furthermore, they are analysed as part of globalisation in general and of higher education in particular. Finally, they are constituted as students in a particular learning situation, that is, in a purely pedagogical perspective. We can add that international students can also be perceived as consumers of education on a global market and analysed according to their economic value in terms of revenue from tuition fees and further spending in the country of destination, their contribution to the labour market and, more broadly, to the national economy. How international students are understood is clearly related to academic disciplines. While economists tend to focus on the financial aspects of the international flows of students, sociologists emphasise strategies of social mobility, geographers highlight migration patterns and pedagogues put interest into learning situations, and so on.

The present study departs from the conviction that international students constitute a strategic research object for understanding the global landscape of higher education. Indeed, available data on flows of students from one country to another serve very well for getting an overall picture of this landscape, its basic structure, hierarchies and transformations. This picture provides an account of the ‘trade balance’ between national systems of higher education. The study of international students thus opens up for a relational analysis of national systems. What I am referring to is not the kind of single-country
analyses of incoming and outgoing students that are staple goods (each national statistical agency produces such tables and charts; see Gürüz (2008) for an ambitious compilation and analyses of a wide range of countries). Rather, the aim is a synthetic analysis that depicts the whole web of relations between countries, a lacuna in the literature on international students. This article will attempt to provide such a synthetic analysis.

**Theoretical framework**

What is proposed is a sociological analysis of international student migration drawing on the power relations expressed by the flows of students between countries. In order to capture these relations, I will make use of the notion of space in the sense of the French sociologist Pierre Bourdieu. That is, as a tool for depicting social structures in a multidimensional fashion with polarities, oppositions and hierarchies. Bourdieu (1979, 139–144) primarily used the notion in his analysis of French society, where the individuals were distributed in a multidimensional social space according to their possession of capitals, especially economic, cultural and social capitals. In this space, the first axis was constituted by the overall volume of capital, the second of the composition of capital and the balance between cultural and economic capitals, and the third of their development over time.

A social space does share a number of properties with social fields, yet another key concept in Bourdieu’s sociology, but is less strictly defined. Although the field notion in its most basic sense can be defined as ‘a system of objective relations between positions’ (Bourdieu 2013, 12), it also requires field-specific capital, specialised institutions, a doxa (common set of beliefs) and illusio (a willingness to play the game) (Bourdieu 1994), that are not necessary for a social space. Given that the focus here is on the relations between nation states on basis of the flows of international students between them social space seems most appropriate to use.

Both the notions of ‘field’ and of ‘space’ have, in Bourdieu’s own oeuvre, mainly been used in a national context. Here, I am interested in applying ‘space’ on a global scale. However, as Sapiro (2013, 71) notes, Bourdieu never stated that fields had to be restricted to a national framework. There is also a growing body of literature using the notions in a global or transnational context. For instance, Yves Dezalay and Bryant Garth have investigated the internationalisation of law and the emergence of transnational legal fields (Dezalay and Garth 1996, 2002) and Gisèle Sapiro, Johan Heilbron, Yves Gingras and colleagues have conducted research on global publishing, translation and literary fields (Heilbron and Sapiro 2002; Sapiro 2008), the internationalisation of scientific fields (Gingras 2002; Heilbron 2014) and the intellectual space in Europe (Sapiro 2009).

In addition, there are propositions to understand education as a global field. For instance, Marginson (2008) uses the notion of ‘fields of power’ for analysing global higher education. However, it seems like he has juxtaposed ‘fields of power’, which has a special function in Bourdieu’s sociology as a meta-field (Bourdieu 1989, 375–385), with ‘fields of cultural production’, which is what he actually discusses, identifying the sub-fields of elite research universities and of commercial vocational institutions within a larger global field of higher education (Marginson 2008, 305–307). Also here, I think it is most appropriate to speak of a global space of higher education institutions, where the major bulk of institutions are acting in a national context and only a few actually competing on a global level.
Such a space of institutions, in turn, can be seen as part of a larger global space of higher education, which is highly complex. This larger space contains nation states and national systems of higher education with their institutions (i.e. higher education institutions of a large variety ranging from local polytechnics to world-class universities). It further comprises national organisations (ministries of education, agencies of higher education), as well as international and transnational ones (associations of higher education institutions, accreditation associations, federations of students and teachers) and, finally, large numbers of individuals (students, teachers, researchers, administrators) who populate the space. To this, we may also add supranational stakeholders such as EU, the World Bank, UNESCO, OECD and private companies depending on higher education for the provision of labour force, as well as various professional groups based on educational credentials.

I will, however, only analyse one aspect of this space, the sub-space of international students, using one set of actors, the nation states, as analytical entities. It could be argued that this is a serious limitation for an analysis of the current global higher education landscape, since, here, institutions tend to be the prime actor, as, for example, indicated by the numerous and influential rankings of universities or the ongoing restructuring of national systems aiming at enhancing the autonomy of the higher education institutions (Estermann and Nokkala 2009). However, much evidence suggests that in the process of globalisation of higher education, as with globalisation in general (Sassen 2006), the nation states still form the most crucial object of analysis. They continue to provide the predominant framework for higher education; the legislation is national and so is also most of the funding and student recruitment (Teichler 2004, 21; Marginson and van der Wende 2009, 25–26; Brooks and Waters 2013, 36–42).

An alternative to ‘space’ is ‘market’, which is commonly used in policy-oriented contexts. For example, Marginson and van der Wende (2009), in a chapter in an OECD report on globalisation of higher education, refer to ‘the global degree markets’ (18), ‘global university market’ (20) and ‘global market of research-intensive universities’ (35). The reason for avoiding the term ‘market’ in the present analysis is that the term represents a political ambition that is very much at stake in the global context of international students. The notion of ‘space’ does not have such normative connotations. Furthermore, some nation states are clearly more market-oriented than others and the degree of market-penetration is highly adequate to use as a variable in the analysis of the positions of nation states in the global space of international student migration.

Yet another notion that would be reasonable to use is ‘world system’, construed by Immanuel Wallerstein (1991) to designate the global economic landscape and identifying a centre, a semi-periphery and a periphery. This approach has been applied to international student flows by Chen and Barnett (2000), who argue that Western countries constitute the centre, Eastern Europe and Asia a semi-periphery, and Africa and the Middle East a periphery (see also Barnett and Wu 1995). While there is certainly something to such an analysis, I prefer the notion of space since it does not presuppose that there actually exists only one coherent system. System in this sense of ‘world system’ is also problematic since there are actual national and international educational systems. A space, on the other hand, can contain different national and regional educational systems. Furthermore, much of what is going on in higher education does not necessarily have to be integrated into a ‘system’, neither regional nor global, although it sometimes is
the case, as in Europe with the Bologna process aiming at creating a common system of higher education.

To sum up: I have argued that ‘space’ in the sense of Pierre Bourdieu, that is, as a multi-dimensional structure of relations between positions that are structured according to resources, provides the best tool for understanding the relationships between nation states on ground of international student flows. A space has a more loose structure than social fields that presuppose existence of, for instance, field-specific capital and illusio. Furthermore, using the notion of space instead of market enables us to make the latter a variable that is possible to examine the diffusion of within the space. As will be shown, the logic of the market is not pertinent to the whole global space. The same argument can be applied to ‘world system’, the degree of systematisation can be analysed within the context of a space. Finally, I would like to highlight the statement by Bigo and Madsen (2011, 221): ‘One of the goals of a Bourdieusian encounter with the international is therefore to map the international, that is, to provide an empirical visualization of the international.’ One such empirical visualisation of the international will be provided in this article.

Method and data

Data set and coding

The data used for analysing the global space of international students are retrieved from UNESCO’s online databases, www.unesco.org, which are the most exhaustive with regard to both countries of origin and countries of destination. International students are defined as ‘students who have crossed a national or territorial border for the purpose of education and are now enrolled outside their country of origin’ (UNESCO 2012, 80). According to UNESCO, international students are ‘commonly categorised by two operational definitions: (i) a student’s country of permanent or usual residence; or (ii) their country of prior education’ (UNESCO 2012, 80). Furthermore, some countries (Austria, Cameroon, Chile, the Czech Republic, Finland, France, Greece, Hungary, India, Indonesia, Italy, Japan, Jordan, Kuwait, Madagascar, Malaysia, Malta, Oman, the Philippines, Poland, Qatar, the Republic of Korea, Romania, the Russian Federation, Saudi Arabia, South Africa, the former Yugoslav Republic of Macedonia, Turkey) use foreign citizenship to indicate international students (UNESCO 2012, 83). This implies that, for these countries, the population of international students, according to the definition above, is overestimated since the data contain individuals who have immigrated for other purposes than studies (OECD 2012, 371). It is thus important to be cautious when interpreting national comparisons of international students. However, the problems of comparison should not be exaggerated. There are clear differences between the countries in terms of the number of international students, and in order to increase one’s position substantially, a doubling or more is required. For the correspondence analysis, the results tend to be robust, and changes of 10–20% for single countries are unlikely to change the overall structure of the analysis.

The UNESCO statistics only includes students aiming at degrees in the foreign country (degree mobility); short-term studies (less than a year) including exchange students (credit mobility) are excluded. This can be seen as an advantage, since the logic of exchange studies – built on a one-to-one relationship between the higher education institutions
and functioning as an *addition* to the domestic degree pursued – and the logic of degree studies – not restricted by a one-to-one relationship and functioning as an *alternative* to a domestic degree – are not confused in the data (Börjesson and Broady 2006, 97–98).

Information on all countries of destination and all countries of origin for international students was selected for the year 2010. For a few countries, there were missing data for this year and data from the preceding year, when available, were used instead. For the descriptive analyses, the individual countries are used as the basic analytical entity. For the correspondence analysis, the countries of origin have been regrouped in larger geographical regions (see below).

**Correspondence analysis – a relational approach**

For the purpose of displaying a structure in the global space of international students, correspondence analysis is used. Correspondence analysis is a statistical method that efficiently reduces the complexity of a contingency table (UNESCO 1999, chapter 6.5), thus enabling a condensed analysis of the complex data that the relations between a large set of countries of destination and fairly many regions of origin constitute. The method is the leading case of the paradigm of Geometric Data Analysis (GDA), which is defined as ‘the approach of Multivariate Statistics that represent multivariate data sets as *clouds of points* and bases the interpretation of data in these clouds’ (Le Roux and Rouanet 2010, 1). The clouds of points are distributed in a multidimensional space, and, as Le Roux and Rouanet (2004, 15) state, ‘the work of Bourdieu is exemplary of the “elective affinities” between the spatial concept of social space and GDA representations’ (see also Bourdieu 1973, 1991; Lebaron 2012; Rouanet, Ackermann, and Le Roux 2000). Bourdieu has used different versions of correspondence analysis for analysing, for example, the French social space (1979), the field of humanities and social sciences (1984), the field of higher education institutions (1989) and publishing houses (1999).

More precisely, correspondence analysis produces two clouds of points, one for the rows of the table and one for the columns. This fits very well with the logic of the global space of international students, where there are large differences between the countries of destination and the countries of origin, which will be presented as two different clouds (although projected in the same space). We can thus study the structure of the countries of destination separately from the countries (or regions) of origin and examine the relation between the two sets. This implies that we can join the two main strands of analysis of international students, the one on the demand side and the one on the supply side (Findlay 2011), in one and the same analysis.

**Background: the flows of international students**

This background section presents the most general statistics, the distribution of international students on countries of destination and origin. I will focus on the situation in 2010.

**Countries of destination: domination of a few, wealthy, Anglophone countries**

The global flows of international students are concentrated towards a handful of countries. In 2010, the US was the most important destination, hosting 685,000 international
students, or 19% of the whole population, followed by the U.K. with 390,000 international students (11%) and Australia with 271,000 (8%) (Figure 1). The top three countries thus equal 38% of the whole population. By adding the fourth and the fifth country, France (260,000 and 7%) and Germany (201,000 and 6%), more than half of the international student population is represented (51%). Adding an additional five countries (Japan, Russia, Canada, China and Italy) gives a share of 65%, the top 20 account for 80% and the top 30 for 88%. Among the 30 most important destinations, European countries represent 40% of the international students, America 23%, Asia 14%, Oceania 9% and Africa 3%. Language-wise, English dominates strongly with 46% among the top 30, while no other language reaches over 10% (French 8.9%, German 8.0%, Arabic 4.7%, Japanese 4.0% and Russian 3.6%).

**Countries of origin: large geographic, linguistic and economic diversity**

The international students’ countries of origin differ in many respects from their countries of destination. First, they are not as concentrated as the countries of destination. While the top 5 of the countries of destination have more than 200,000 international students, only two countries of origin, China and India, reach over that figure (Figure 2). The top 5 of the countries of origin represent only 33% of the total number of international students, as compared to the 51% for the countries of destination; for the top 10, the relation is 41% versus 65% and for the top 30, 63% against 88%. This implies that the international students although concentrated to a small number of countries of destination are coming from a larger number of countries of origin. The demand for higher education is global, but the offer is concentrated to the larger and more economically powerful countries.

![Figure 1. The 30 largest countries of destination, 2010. Sorted decreasing by number of incoming international students. Source: UNESCO. Remark: The asterisk signifies country using foreign citizenship as indicator.](image-url)
The list of the largest countries of origin differs in certain respects from the list of the largest countries of origin. There is a large dominance of Asian countries. The first three countries are Asian: China 564,000 and 18%, India 203,000 and 6% and South Korea 127,000 and 4%, and represent almost one out of three international students (28%). Among the top 10 countries, there are 5 Asian (representing 31% of all international students) and among the top 30, there are 13 Asian (40%). The second largest region, Europe, is far from Asia counting 4 countries among the top 10, representing 8% of all international students and 11 countries in the top 30 (15%).

While the countries of destination are dominated by Anglophone countries, these countries occupy less important positions among the countries of origin. The top 10 only includes one such country, the US, with 53,000 international students sent out, representing 1.7%, which can be compared to the 685,000 incoming students, representing 19%. The U.K., the second largest country of destination, is found at position 37 with 24,000 international students (0.7%) and Australia, the third largest country of destination, is number 73 with 10,000 international students (0.3%). The modest positions of the Anglophone countries can be contrasted to both Germany and France that are positioned as numbers 4 and 5 with 104,000 (3.3%) and 55,000 (1.7%) students abroad. The countries of origin are characterised not only by the weak position of the Anglophone countries, but also by the great variety of the languages spoken. Among the top 30, we can count 21 different official languages that have a share of at least 1%. Beside Chinese with 19% and Hindi with 6%, no other language has more than 5%.

**Exporters and importers – a relation of domination**

By studying the overall numbers of international students by countries of origin and of destination, it is obvious that the flows follow certain patterns. The international students

![Figure 2. The 30 largest countries of origin, 2010. Sorted decreasing by number of outgoing international students. Source: UNESCO.](image)
originate from a large number of countries, especially Asian ones, and gravitate towards a few, wealthy and mostly English-speaking countries. We can interpret this basic structure in terms of domination and power, with the Western countries constituting a centre of gravity. The western countries at the core have a disproportionately large share of the total number of international students. They also represent scientific powers, as indicated by their high share of universities in rankings of higher education institutions. Furthermore, these countries are traditional global economic and political powers (Marginson and van der Wende 2009).

The degree of centrality of a country in the global space of higher education is dependent not only on the inflow of students, but also on the outflow as well as the relation between the two. In a study of translations as a world system, Heilbron (2000) notes that the more central a language is in the system, measured as the proportion of the source language in translations, the less it translates from other languages. English holds a hyper-central position in the system, while around 40% of all translations in the world are from English, translations only account for 5% of all publications in the U.K. and the U.S. Similar patterns can be found for exporters and importers of international student. Among the 20 largest countries of destination, the first three countries, the U.S., the U.K. and Australia, all host a considerably larger share of all international students than they send out (Figure 3). For the U.S., the relation is 1 outgoing to 13 incoming, for the U.K. 1–17 and for Australia 1–27. The only other countries with such extreme relations are South Africa, 1–11, and New Zealand, 1–8 – two countries that are also Anglophone. The central position of English-speaking countries has to be understood in relation to the dominant position of English in the world, being the largest language and the lingua franca for economy and science (Crystal 2003). These extreme relations can be compared with the fourth and the fifth countries, France and Germany, whose figures are 1–5 and 1–2. Among the 20 largest countries, only two have a larger number of outgoing than incoming students, China and South Korea. For China, the figure is almost as extreme as for the English-speaking countries, although in a reversed sense, 8 outgoing per incoming, while the relation for South Korea is 2 to 1. The overall pattern of more incoming than outgoing students, most pertinent for the most important countries of destination, underlines the basic structure of dominance, where the countries of destination dominate over the countries of origin.

The global space of international students

In this section, I will analyse the specific recruitment patterns for the countries of destination by using Correspondence Analysis and outline the structure of the countries of destination and of the countries of origin. The original cross table of 205 times 205 countries (in total 42,025 cells) contains 30,917 empty cells (there is no information on international students for 96 countries of destination) and needed to be radically condensed. Since the international students are concentrated towards a few countries of destination and spread over a large number of countries of origin, the strategy has been to focus on the countries of destination. Out of the 109 countries with information on international students for the year 2010, 28 have been chosen that meet the following criteria: (1) substantial numbers of students (more than 10,000), (2) good information on the origin on the international students and (3) no extreme distribution of international students on countries of
origin. The 28 selected countries recruit 83% of all international students (90% of the students with specified countries of origin). The countries of origin have been grouped in 13 larger geographical regions (see Table A3 in Appendix). All international students recruited by any of the 28 countries of destination active in the analysis are included in the total of 13 categories of countries and regions of origin. Thus, 83% of all international students are accounted for in the analysis.

The correspondence analysis results in a cloud of points with 12 dimensions (see Table A1 in Appendix), where the first axis accounts for the largest part of the variance, 36.3%, the second axis the next largest part of the variance, 17.2%, the third 11.9%, the fourth 10.7% and the fifth 7.4%. I have chosen to interpret and discuss the first two axes, which together represent 53.5% of the total variance. For the interpretation of each axis, I look at the contribution exceeding the average contribution of the countries of destination (100/28 = 3.6%) and of the regions of origin (100/13 = 7.7%).

A two-dimensional space

Axis 1: Europe vs. the pacific region
The first and most important axis (see Figure 4 and Tables A2 and A3 in the Appendix) separates European countries of destination (left in the figure) from countries of destination located in the Pacific Region (right side of the figure). The highest contributions are associated with Austria, the Czech Republic and Germany on the left side and Australia, Japan and the US on the right side. For the regions of destinations, we find corresponding opposition between Central and Eastern Europe and Western Europe (to the left) and different Asian regions, East Asia including China being by far the most important (to the right). Notably is also that North America, Western Asian Arab States, and Latin America and the Caribbean are positioned at the centre of the first axis.
Axis 2: France and Spain and vs. the rest of Europe
Among the countries of destination, the second axis (see Figure 4 above and Tables A2 and A3 in the Appendix) sets especially France but also Spain and to some extent Portugal (at the bottom of the figure) in opposition to the rest of the European countries, with the Czech Republic and Austria having the highest contributions to the axis, and some Asian countries (at the top of the figure). This corresponds to an opposition among the regions of origin with first and foremost Africa but also Latin America and the Caribbean associated with France, Spain and Portugal, and Central and Eastern Europe at the European pole.

A three-polar structure
The correspondence analysis reveals that the global space of international students has a basic three-polar structure as displayed in the plane of the first two axes (see Figure 4 above). To the right, we find the Pacific pole, with both the country of destination...
hosting most international students, the US and the country of origin sending most students abroad, China (which is dominating the East Asian region of origin). Along with the US, also Australia, Japan and South Korea occupy positions as important countries of destination, attracting students from Asian countries. In the space, the Pacific pole is distinct from two European poles to the left in the figure. The first one, which we can label the Central European pole, is situated at the upper left quadrant and comprises Central and Western European countries drawing their international students predominantly from neighbouring countries. The second pole is located at the bottom of the figure and contains three countries of destination, France, Spain and Portugal, and two regions of origin, Africa and Latin America and the Caribbean. With respect to the countries of destination, this pole can be labelled the French–Iberian pole.

**Market, colonial and proximity logics**

It can be argued that the three poles represent three different logics of recruitment in the global space of international student flows. Among the countries of destination that constitute the Pacific group, we find the countries that most clearly organise their higher educational systems according to a market logic, that is the US, the U.K., Australia and New Zealand. A main characteristic of these countries is that international students (as well as national students) are subject to (often substantial) tuition fees, making international students an important revenue for higher education institutions, and in the case of Australia, for the whole country (in the vast literature on the marketisation of higher education, see, for example, Bok 2003; OECD 2004; Gürüz 2008; Robertson 2010). Within this group, the geographical distances are quite large. The countries of destination extend over the whole globe, from the U.S. and Canada in North America, the U.K., Ireland, Cyprus, and Sweden in Europe, to South Korea and Japan in Asia, and Australia and New Zealand in Oceania. Even though the countries of origin are somewhat less global, covering Asia and Oceania, it is reasonable to associate this large global spread to the market logic that characterises this pole.

Along the first axis, the market pole is opposed to a Central European pole, the most distinctive mark of which is a proximity logic. The countries constituting this pole are fairly close to each other geographically. They position themselves according to their geographical location in the Euclidean space: the Eastern European countries are grouped together in the upper left quadrant, while the Western European countries are situated more centrally in the space. This geographical logic of proximity is also expressed in the Bologna process, launched by a vast majority of European countries with the aim of creating a European area of higher education by standardising the national systems according to a supra-national model. A particularly important condition for promoting extensive intra-mobility within this region is that EU citizens are not charged any extra tuition fees, and that – internationally compared – many countries have very low fees or no fees at all. This stands in clear contrast to the market logic of the countries at the opposing end of the first axis. However, many European countries are introducing substantial tuition fees for non-EU citizens, creating a dual system were non-EU citizens are recruited according to a market logic while EU citizens are not.

At the third pole, the French/Iberian, defined by France, Spain and Portugal as countries of destination and African, Latin American and Caribbean countries as
regions of origin, a colonial logic is expressed. Here, former colonial powers still attract large numbers of students from their ex-colonies. This logic differs from the market logic in several respects. While a strict market logic does not take into consideration the national origin of the students as long as they are qualified to be admitted and have sufficient economic means to pay the tuition fees, national links are given particular importance in the colonial logic. Former colonies and the colonial power are closely related to each other in an asymmetrical power relation. While the higher educational system in the country of origin is often modelled on the system of the colonial power, as in the case of the less prestigious replicas of France’s grandes écoles found in former French colonies, national elites have historically sent their offspring to the universities of the metropolis. Furthermore, economic mechanisms are not the same. While the market logic is based on paying customers, the colonial logic often regards tuition fees as an obstacle which is replaced by different systems of financial aid aimed at strengthening the ties with the former colonies (Åkerlund 2012).

Language patterns

The understanding of the global space of international student migration needs to include the aspect of language. Obviously, the language spoken in the countries of destination and countries of origin, respectively, has a large impact on the relation between the two sets of countries. This is apparent in the three poles that are identified. The countries of destination in the Pacific pole are to a large extent Anglophone. All countries where English is the national language are located at this pole (the U.K., the U.S., Ireland, Australia and New Zealand) and 41% of all international students are studying in the countries using English as the primary language of instruction that defines the Pacific pole. However, English is not the national language in the predominately Asian countries of origin associated with the Pacific pole, which indicates that most of the international students have English as a second language at the best. At the Central European pole, Germanic and Slavic languages are most common, both among the countries of destination and origin. Countries with German as language of instruction assemble the largest number of international students and dominate the pole language-wise, comprising 8% of all international students. The French/Iberian pole is defined by the languages of the countries of destination, that is, French, Spanish and Portuguese, languages that were, at the time, the colonial languages and still are important in the country of origin. At the pole, French is most spread language (7%).

We can also conclude that the languages are closely related to the different logics operating in the global space of international students. The market logic is strongly associated with English as a language of instruction. Being the largest language in the world, and according to Crystal (2003) constituting the first global language, English has also become the lingua franca of the academic world. Offering education in English thus opens up for the vastest public and a truly global recruitment. If English is also the main language of the country of destination, as is the case for the U.S., the U.K. and Australia, it is possible to offer to international students a perfect environment for the acquisition of English as a second language. This is one reason why the U.S., the U.K. and Australia are the most important countries of destination. In 2010, these three countries hosted 1.3 million international students, or 38% of the total international student
The position of the U.K. and the U.S. as countries at the centre of the space indicates the particular global recruitment pattern of these two countries: they attract students from all over the world. Obviously, language is a key issue also in what is named a colonial logic. The language of the colonial power was most often both the administrative language and the language of instruction in the educational system of the colony. Consequently, French, Spanish and Portuguese define the language of instruction of the French–Iberian colonial pole. The influence of the colonial power is not limited to the question of the language. As previously noted, the whole educational system has often been shaped after the model of the colonial power and follows a similar curriculum. In this sense, the educational system of the former colony can be said to partly function as a subsystem to the educational system of the colonial power. For the Central European pole, finally, languages are equally important, but follow the proximity logic of being close and overlapping: While Germany, Austria and Switzerland have German as a common denominator, Dutch is spoken in the Netherlands and Belgium, and the Scandinavian countries all more or less understand each other’s languages.

**Conclusion**

I have argued that international students have become an increasingly important research object – not only on the basis of the overall expansion and importance of international students in higher education and in national economic policies, but also since they constitute a strategic research object for understanding the global landscape of higher education and especially for grasping the relations between nation states and their demand for and supply of higher education. A standard analysis of the flows of international students exposes a clearly asymmetric structure. Some countries, especially China and India, are primarily exporting countries, and others, most notably the U.S., the U.K., Germany, France and Australia, are importing countries. To take the analysis one step further and display the total set of relations between countries of destination and regions of origin, a correspondence analysis was performed. The analysis reveals a structure with three main poles, one Pacific pole, one Central European and one French/Iberian. The three poles correspond to three different logics of recruitment that can roughly be labelled a market logic, a proximity logic and a colonial logic. The three poles and logics are also related to linguistic structures. The Pacific/Market pole is primarily constituted by Anglophone countries of destination with English as language of instruction, while the Central European pole with its proximity logic have German and Slavic languages as a common denominator, and the French and Iberian pole have French, Spanish and Portuguese in common with their former colonies.

To take the interpretation of the space yet another step further, it is necessary to integrate the basic analysis of the total volume of international students and the exposed asymmetry between the countries of destination and the countries of origin, in which the former dominate the latter, with the multidimensional analysis the space of international student flows produced by the correspondence analysis. The latter analysis reveals the structure of the relations between countries of destination and regions of origin, but the power relations between the two categories of countries and within each category is not immediately given by the output of the analysis. Adding the dimension of power relations to the structure of the space of international students, it is arguable that the Pacific/market
pole is the dominating position in the space. There are several indications of dominance. First, at the Pacific/market pole, we find the most important countries of destination, the U.S. and the U.K., which together gather three out of 10 international students, paired with the two largest regions of origin, East Asia, including China, and South Asia, comprising India, which taken together represent four out of 10 international students. Second, the U.S. and the U.K. are also dominant with regard to their positions in academic rankings. Among the 100 highest ranked universities according to the Shanghai ranking in 2010, the U.S. has the highest number with 54 followed by the U.K. with 11, more than the double number of the third place, Germany and Japan with 5 each. Third, the dominating position of the U.S. and the U.K. is furthermore underlined by the advantage of having English as a primary language and language of instruction, as English today, according to Crystal (2003), functions as the only truly global language, and as the only hyper-central language in the World system of languages in the terminology of Abram de Swaan (1993). Fourth, both the U.S. and especially the U.K. can draw on multiple logics in their recruitment of international students. Both countries have highly market-oriented educational systems, well adapted to meet demands of a global demand for higher education. The U.K. also has a wide range of colonial ties extending across the whole globe and the U.S. has far-reaching geopolitical connections. In addition, the U.K. holds the advantage of being positioned in Europe, giving a proximity to flows of international students from more than 50 European countries.

The dominant position of the U.S. and the U.K. can thus not be reduced to one factor, but is only comprehensible from the perspective of the multidimensional space where a number of assets, such as economic, political, educational, scientific and linguistics, coincide and reinforce each other to produce the dominant position. The two other identified poles in the space (the Central European and the French/Iberian) are defined in relation to the dominant pole and do not possess a matching accumulation of assets. They have smaller amounts of economic, political, educational and scientific resources and language-wise, they are dependent upon languages that are widely spoken, but not global, thus restricting the recruitment possibilities in comparison with Anglophone countries.

Finally, I would like to argue that drawing on a combination of basic descriptive statistics and the multidimensional method of correspondence analysis on data of international student flows has been productive for representing a particular aspect of the global space of higher education, namely the relations between national educational systems. It has been possible to both display the structure of these relations and analyse them in terms of power and assets. Still, much remains to be done. The presented analyses all focus on the state of the space in 2010. It is clear that the space is a product of history, where traditional ties between countries are important for establishing the structure. At the same time, the space is constantly restructured, new powers arise, and old diminish, which calls for additional analysis of former states of the space and time series analysis of its transformations.

Notes

1. Two examples are the Times Higher Education World University Rankings, http://www.timeshighereducation.co.uk/world-university-rankings/2012-13/world-ranking/methodology,
and the US News and Reports World University Rankings, http://www.iu.qs.com/university-rankings/world-university-rankings/. See also discussion in Kauppi and Erkkila (2011).

2. At the universities, international students comprise 15% of the population (Ministère de l’Enseignement supérieur et de la Recherche 2012, 4), while there is 18% at the Grandes écoles (Conférence des grandes écoles 2011, 40), and up to 42% at a leading Grande école as École central (http://www.letudiant.fr/).

3. For Canada, no data are available for 2010 and the data for 2009 have been used.

4. This disqualifies countries such as China, Singapore, Egypt and Lebanon, where no information on countries of origin exists.

5. This is applicable to, for example, South Africa, where all of the total 48,000 international students come from Africa, and Russia, where 56,000 come from Central Asia and 39,000 from Central and Eastern Europe out of a total of 130,000 international students. The correspondence analysis is sensitive to extreme values and gives large weight to such particular recruitment pattern, which hides the overall structure.

6. Spanish only comprises 1.6% and Portuguese 0.3%. French is also spoken in Canada associated with the Pacific pole and in Belgium and Switzerland at the Central European pole, but in all three cases, French is spoken by a minority, and the countries’ position in the space is more in line with the logic of the largest languages (English, Dutch and German).

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No potential conflict of interest was reported by the author.

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## Appendix

### Table A1. Eigenvalues, percentages and cumulated percentages for Axes 1–12.

| Axes | Eigenvalue | Percentages | Cumulated percentages |
|------|------------|-------------|-----------------------|
| 1    | 0.376      | 36.3        |                       |
| 2    | 0.179      | 17.2        | 53.5                  |
| 3    | 0.132      | 12.8        | 66.3                  |
| 4    | 0.113      | 10.9        | 77.1                  |
| 5    | 0.079      | 7.6         | 84.7                  |
| 6    | 0.062      | 5.9         | 90.7                  |
| 7    | 0.041      | 3.9         | 94.6                  |
| 8    | 0.026      | 2.5         | 97.1                  |
| 9    | 0.016      | 1.5         | 98.6                  |
| 10   | 0.008      | 0.8         | 99.4                  |
| 11   | 0.004      | 0.4         | 99.8                  |
| 12   | 0.002      | 0.2         | 100.0                 |

### Table A2. Coordinates and contribution of countries of destination to the Axes 1–4.

| Country         | Axis 1 | Coord. | Ctr. | Country         | Axis 4 | Coord. | Ctr. |
|-----------------|--------|--------|------|-----------------|--------|--------|------|
| Austria         | −1.07  | 8.3    | Czech Republic | −1.08  | 8.9    | Czech Republic | −1.17  | 14.3 France | −0.48  | 19.6 |
| Czech Republic  | −1.50  | 8.2    | Austria       | −0.55  | 4.6    | Italy         | −0.58  | 6.1 Australia | −0.15  | 1.9  |
| Germany         | −0.64  | 7.8    | Japan         | −0.28  | 2.4    | France        | −0.23  | 3.9 United   | −0.11  | 1.8  |
| Italy           | −0.94  | 5.7    | Poland        | −0.78  | 2.4    | Germany       | −0.23  | 2.8 Japan    | −0.18  | 1.6  |
| France          | −0.45  | 5.1    | Germany       | −0.24  | 2.2    | Japan         | −0.24  | 2.4 Netherlands | −0.34  | 1.1  |
| Greece          | −1.26  | 4.3    | Denmark       | −0.77  | 2.2    | Poland        | −0.63  | 2.1 South Korea | −0.20  | 0.8  |
| Switzerland     | −0.82  | 2.6    | Australia     | −0.18  | 1.8    | Greece        | −0.49  | 1.9 Belgium   | −0.34  | 0.7  |
| Hungary         | −1.11  | 2.0    | Hungary       | −0.70  | 1.7    | South Korea   | −0.30  | 1.6 Switzerland | −0.14  | 0.3  |
| Poland          | −1.02  | 1.9    | Greece        | −0.46  | 1.2    | Romania       | −0.57  | 1.3 Austria   | −0.10  | 0.3  |
| Netherlands     | −0.78  | 1.8    | South Korea   | −0.30  | 1.1    | Bulgaria      | −0.50  | 0.7 Finland   | −0.17  | 0.1  |
| Romania         | −1.11  | 1.7    | Netherlands   | −0.37  | 0.8    | Australia     | −0.07  | 0.4 Norway    | −0.18  | 0.1  |
| Bulgaria        | −1.26  | 1.7    | Bulgaria      | −0.53  | 0.6    | Hungary       | −0.26  | 0.3 Ireland   | −0.18  | 0.1  |
| Spain           | −0.50  | 1.4    | Italy         | −0.21  | 0.6    | Finland       | −0.27  | 0.3 Denmark   | −0.15  | 0.1  |
| Denmark         | −0.76  | 1.0    | New Zealand   | −0.24  | 0.5    | Denmark       | −0.02  | 0.0 Romania   | −0.13  | 0.1  |
| Belgium         | −0.72  | 1.0    | Switzerland   | −0.18  | 0.3    | Portugal      | −0.01  | 0.0 New Zealand | −0.05  | 0.0  |
| Norway          | −0.60  | 0.5    | Norway        | −0.30  | 0.3    | Hungary       | −0.05  | 0.0          |       |     |
| Portugal        | −0.59  | 0.4    | United        | −0.05  | 0.2    | Norway        | 0.00   | 0.0 Poland    | −0.03  | 0.0  |
| United Kingdom  | −0.09  | 0.3    | Romania       | −0.22  | 0.1    | Cyprus        | 0.06   | 0.0 Sweden    | −0.01  | 0.0  |
| Finland         | −0.40  | 0.2    | Sweden        | −0.14  | 0.1    | Sweden        | 0.10   | 0.1          |       |     |
| Ireland         | −0.20  | 0.0    | Ireland       | −0.11  | 0.0    | United States | 0.03   | 0.1 Canada    | 0.00   | 0.0  |
| Sweden          | −0.03  | 0.0    | Cyprus        | −0.08  | 0.0    | Canada        | 0.10   | 0.3 Germany   | 0.03   | 0.1  |
| Cyprus          | 0.23   | 0.1    | Finland       | −0.01  | 0.0    | New Zealand   | 0.17   | 0.3 Cyprus    | 0.21   | 0.2  |
| Canada          | 0.28   | 0.7    | Ireland       | 0.56   | 1.1    | Bulgaria      | 0.27   | 0.3          |       |     |
| New Zealand     | 0.64   | 1.6    | United States | 0.04   | 0.2    | United        | 0.20   | 4.8 Greece    | 0.21   | 0.4  |

Bold text: Contributions above average.
Table A3. Coordinates and contribution of regions of origin to the Axes 1–4.

|                  | Axis 1  |                  | Axis 2  |                  | Axis 3  |                  | Axis 4  |
|------------------|---------|------------------|---------|------------------|---------|------------------|---------|
|                  | Coord.  | Ctr.            | Coord.  | Ctr.            | Coord.  | Ctr.            | Coord.  | Ctr.            |
| Central &        | −1.09   | 32.7            | −0.55   | 17.6            | −0.55   | 23.1            | −0.46   | 19.5            |
| Eastern Europe   |         |                 |         |                 |         |                 |         |                 |
| Mediterranean    | −0.70   | 9.4             | −0.14   | 2.9             | −0.22   | 3.7             | −0.19   | 3.1             |
| Western Europe   | −0.59   | 9.1             | −0.52   | 2.5             | −0.12   | 3.0             | −0.16   | 1.4             |
| Africa           | −0.41   | 4.6             | −0.17   | 1.6             | −0.38   | 1.2             | −0.07   | 1.3             |
| Nordic Countries | −0.42   | 0.8             | −0.30   | 0.6             | −0.05   | 0.1             | −0.15   | 0.3             |
| Central Asia     | −0.20   | 0.1             | −0.12   | 0.5             |         |                 | −0.06   | 0.1             |
| Latin America    | −0.08   | 0.1             | −0.08   | 0.4             | 0.00    | 0.0             | −0.06   | 0.0             |
| & Caribbean      |         |                 |         |                 |         |                 |         |                 |
| Oceania          | 0.02    | 0.0             | −0.06   | 0.2             | 0.01    | 0.0             | −0.04   | 0.0             |
| Western Asian    |         |                 |         |                 |         |                 |         |                 |
| Arab States      | 0.19    | 0.3             | 0.00    | 0.0             | 0.15    | 0.1             | 0.01    | 0.0             |
| North America    | 0.62    | 0.8             |         |                 | 0.08    | 0.3             | 0.07    | 0.4             |
| Oceania          |         |                 |         |                 |         |                 |         |                 |
| South East Asia  | 0.55    | 5.0             | 0.09    | 0.2             | 0.12    | 0.4             | 0.13    | 1.1             |
| Latin America &  |         |                 |         |                 |         |                 |         |                 |
| Caribbean        | 0.43    | 5.2             | 0.09    | 0.2             | 0.12    | 0.4             | 0.13    | 1.4             |
| East Asia        | 0.65    | 32.0            | 1.02    | 58.9            | 0.95    | 66.6            | 1.14    | 70.5            |

**Bold text:** Contributions above average.