Treballs de la Societat Catalana de Geografia, núm. 96, desembre 2023, p. 131-152
ISSN: 1133-2190 (format imprès); 2014-0037 (format digital)
URL: https://revistes.iec.cat/index.php/TSCG
Data de recepció: 11/08/2023 – Data d'acceptació: 30/11/2023 – Data de publicació: 22/12/2023
DOI: 10.2436/20.3002.01.244

A Neoliberal and Uneven Landscape: The Challenges and Coping Strategies of Geography Departments in the US Educational System[1]

Grant Saff
Global Studies and Geography Department
Hofstra University
grant.saff@hofstra.edu

Antònia Casellas*
Departament de Geografia
Universitat Autònoma de Barcelona
antonia.casellas@uab.cat
https://orcid.org/0000-0002-5252-1399

Abstract

Geography Departments in the US are facing challenging times. In this article we address a twofold question. First, we explore the academic difficulties facing US universities and identify some of the coping strategies they have adopted to overcome these challenges. We then focus on the challenges of geography education at different levels as well as some of the strategies that university departments' chairs and program directors in the US have adopted to overcome these constraints. To address the question, we analyze literature on undergraduate and graduate education programs in the US in general, and of geography education, in particular. We further build our analysis based on the personal experience of one of the authors: in his role as the Chair of a US Geography Department for more than 15 years, including the knowledge he acquired in leading positions in US regional and national Geography Associations, as well as his role in conducting external reviews of Geography Program and related programs.

Key words: Geography, Education, University governance, Interdisciplinary programs, Neoliberalism.

1. Acknowledgements: This research project was supported by the Next Generation EU grant (*).
The authors thank two anonymous referees for their helpful comments that improved the quality of the manuscript.

Resum: ***Un paisatge neoliberal i desigual: els desafiaments i les estratègies dels departaments de geografia dins del sistema educatiu dels Estats Units***

Els departaments de geografia dels Estats Units s'enfronten a temps difícils. En aquest article abordem una doble qüestió. En primer lloc, explorem les dificultats acadèmiques que enfronten les universitats nordamericanes i identifiquem algunes de les estratègies que han adoptat per superar aquests reptes. A continuació, ens centrem en els desafiaments de l'educació en geografia en diferents nivells, així com en algunes de les estratègies que l'administració de les universitats i els/les directors/es dels departaments han adoptat per superar aquestes limitacions. Per abordar aquest punt, analitzem la bibliografia sobre programes d'educació de grau i postgrau als Estats Units en general, i de educació en geografia, en particular. A més, l'anàlisi es recolza en l'experiència personal d'un dels autors en qualitat de director de departament de geografia d'una universitat dels Estats Units durant més de quinze anys, i el coneixement adquirit a llocs de lideratge en associacions de geografia nacionals i regionals dels Estats Units, i també en el seu paper com a avaluador extern del programa de geografia i altres programes afins.

Paraules clau: geografia, educació, governança universitària, programes interdisciplinaris, neoliberalisme.

Resumen: ***Un paisaje neoliberal y desigual: los desafíos y las estrategias de los departamentos de geografía dentro del sistema educativo de los Estados Unidos***

Los departamentos de geografía de los Estados Unidos se enfrentan a tiempos difíciles. En este artículo abordamos una doble cuestión. Primero, exploramos las dificultades académicas que enfrentan las universidades estadounidenses e identificamos algunas de las estrategias que han adoptado para superar estos desafíos. A continuación, nos centramos en los desafíos de la educación en geografía en sus diferentes niveles, así como en algunas de las estrategias que la administración y los/as directores/as de departamentos universitarios han adoptado para superar estas limitaciones. Para abordar este punto, analizamos la bibliografía sobre programas de educación de grado y postgrado en los Estados Unidos en general, y de educación en geografía, en particular. Además, el análisis se apoya en la experiencia personal de uno de los autores en su papel en calidad de director de departamento de geografía de una universidad de los Estados Unidos durante más de 15 años, incluido el conocimiento adquirido en puestos de liderazgo en asociaciones de geografía nacionales y regionales de los Estados Unidos, así como su papel como evaluador externo del programa de geografía y otros programas afines.

Palabras clave: geografía, educación, gobernanza universitaria, programas interdisciplinarios, neoliberalismo.

* * *

1. Introduction

In an article published in 2022 in the journal *Progress in Human Geography*, Puttick (2022) emphasizes the relevance of geography education asserting that "complex global challenges, rapid shifts in the mediation and distribution of information, rising inequalities and a toxic milieu of low-quality public reasoning make geography education more important than ever" (p. 898). Similarly, in a study of middle-school and high-school geography curriculums in the US and China evaluating the value of geography education in promoting sustainability, Miao *et. al.* (2002), conclude that despite existing challenges, geography education plays an important role in cultivating students' sustainable development literacy. Recent academic literature also emphasizes the contributions that the understanding of situated spatial dynamics has in advancing an understanding of sustainability (De Vito *et. al.*, 2022; Granados-Sánchez, 2022; Nesterova, 2022), and climate change (Beray-Armond, 2022; Susca, 2022). Moreover, there has also been a long-standing concern in geographic research on addressing inequality (Wellens *et al.*, 2006), and including needed social concerns into the research undertaken within the discipline, mainly by the work done by woman geographers (Monk, 2004).

Despite the relevance of a geographic education, geography in the USA faces a diverse group of challenges. To begin with, there are significant differences between the US and the UK. In the UK, geography is a well-established and separate discipline within the British higher education system (Sidaway and Johnston, 2007). It enjoys a high reputation as a discipline, which is illustrated by the fact Former Prime Ministers such as Theresa May had a degree in Geography (in her case from Oxford University) and, more recently, the heir to the throne, Prince Williams received a Scottish Master of Arts degree in geography at the University of St Andrews. In the USA, however, even though postgraduate geography education grew at the turn of the century (Foote *et al.*, 2012), by the 2020s, the only Ivy League University that has a Geography Department is Dartmouth University. The recent closing and amalgamation of geography departments into inter-disciplinary programs under non-geography monikers has occurred despite growing environmental, economic and social global challenges, and the expanded use of geospatial technology, including Geographical Information Systems and Remote Sensing. Historically linked to the geography discipline, these studies with growing demand are now often situated in other departments such as urban planning, geology and sustainability, environmental studies, urban ecology and so forth.

In this paper we focus on the challenges and coping strategies of Geography Departments in the USA, a system that has a sphere of influence beyond its territorial boundaries, generating trends and providing, or erasing, the legitimacy of certain disciplines (Ramirez, 2010; Barret *et.al.*, 2020). To address its challenges, the paper is structured in three main sections. In the first section,

we pay attention to how neoliberal globalization trends have changed the US academic context and the unequal landscape that have been generated among universities and programs. We then address the challenges faced by the liberal arts and sciences disciplines such as geography. Lastly, we critically discuss the strategies that departments have embarked on to overcome current enrollment and budgetary constraints.

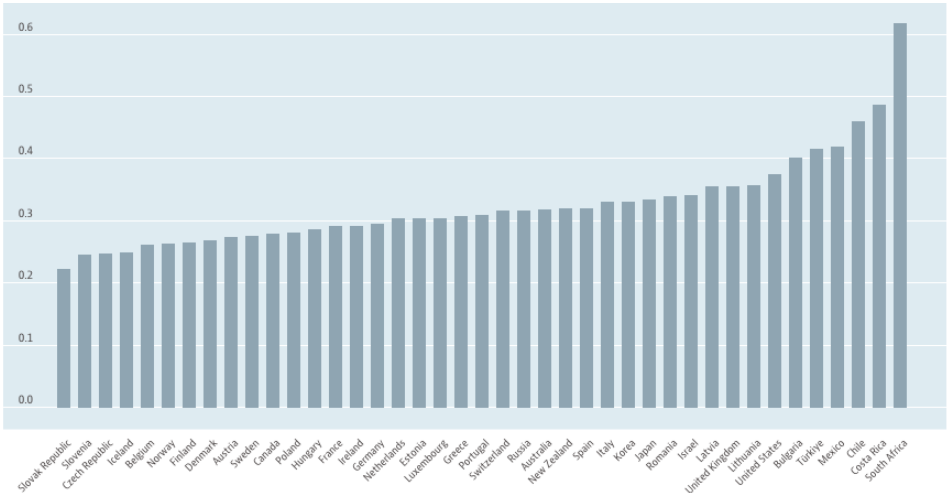
2. The Unequal Landscape of the US University System

To place geography as a discipline in the US academic system, we should consider the complex and fragmented academic landscape of US universities as well as the differences in economic resources among universities. Compared to other countries, the academic landscape in the USA is highly fragmented. This fragmentation is relevant because if affects the coping strategies adopted by these institutions in the face of fiscal and enrollment challenges. What we could qualify as "the US university industrial complex" includes diverse and not always clearly distinguishable categories of higher education institutions, each with a set of specific peculiarities and needs, this ranges from Tier One Research Public Universities such as Berkeley, Rutgers, Penn State, to Tier One Private Institutions such as Harvard, MIT, Stanford, to private and public teaching universities of various tiers, to community colleges, and then private for profit institutions including MOOCs such Coursera (which partner with many of the most prestigious non-profit institutions). While the elite institutions such as Harvard, Yale, Columbia, and Princeton are shielded due to the very large endowments from "market realities" most of other institutions, particularly the less selective private schools rely on tuition (and thus enrollments) for their survival.

The economic unevenness that characterizes globalization regarding income distribution and inequality also resonates in the US university system. In the US, the income gaps between upper-income and middle- and lower-income households have been rising since the 1970s, while the share held by middle-income households has been falling. Further, even though growing economic inequalities have been a general trend worldwide, inequality has increased more rapidly in the USA than in Europe (fig. 1). This implies that the top 10 % have an increasing share of wealth. Also, the attainment of the "American dream" has been linked to attending university which has often saddled families and students with unsustainable debt loads due to borrowing large sums for attending university (see for example Hochschild and Scovronick, 2003; Erisman and Looney, 2007; Keenes, 2008; Mettler, 2014; Hume, 2022).

The increasing wealth inequality within American society has also been replicated within the academic institutional system, where there is an increasing divide between institutions in prestige, revenues, and resources. By the early

Figure 1. Income Inequality as a Gini Coefficient in 2020



Source: OECD (2022), Income inequality (indicator).

2020s, the average annual cost of tuition at a public 4-year college was 37 times higher than tuition in 1963. After adjusting for inflation, college tuition has increased 747.8 % since 1963 (Hanson, 2022a).

Since the financial crisis of 2008, the education budget of most State Universities has been subjected to austerity measures to the degree that average State allocations have fallen from covering about 60 or 70 percent of a school's annual budget to about 20 or 30 percent (Baldwin, 2021). To cope with these cuts in public funding, State supported universities have raised in-state tuition. Between 2010 and 2020, the cost of tuition at public 4-year institutions increased 31.4 % (Hanson, 2022a). While highly selective private colleges, with very large endowments, such as Harvard, Stanford or MIT are economically thriving, large state universities such as Rutgers University or Penn State University, although assisted by their large enrollments, are experiencing recurrent cuts in State support. This increase in tuition has pushed many students and their families into debt. According to a Department of Education analysis, the typical undergraduate student with loans now graduates with nearly $25,000 in debt. More dramatically is the fact that nearly one-third of borrowers have debt but do not finish their degree (Hanson, 2022b).

The continuing effects of the 2008 economic crisis, coupled with the fallout from COVID has shrunken the pool of potential students able to pay for college without loans. Additionally, a significantly smaller pool of high school students, resulting from a double demographic cliff in the mid-2020s, is expected to further exacerbate enrollment pressures for many US universities. Education experts expect that, due to the decline in birth rate beginning in 2025, prospective students will drop as much as 15 %. This decline was already being felt prior to COVID where enrollment at all types of institutions went down 1 percent — from 19

million to 18.8 million — from fall 2016 to fall 2017 (National Student Clearinghouse Research Center, 2018). Covid also had an immediate effect, as enrollments fell 6.5 % between the beginning of Covid in 2020 and Fall 2021. These impacts have, however, been uneven distributed between different types of schools, with the most prestigious schools seeing no falloff in applicants (in fact the opposite), while community colleges and second tier and below private schools have been forced to work much harder to find students (in the latter case, often discounting tuition to unsustainable levels to attract students).

Paralleling broader economic inequality, we have seen the noted increase in the marketability of the "global brands" such as Harvard, Stanford and Yale which are seen by many as the gatekeepers to the riches of global society. As the 2019 college admissions scandal shows, it is not surprising that rich parents would try to game the system by using agents that bribed college admissions representatives to admit their children to elite colleges (see *https://www.justice.gov/usao-ma/investigations-college-admissions-and-testing-bribery-scheme* [accessed 01/08/2023]). An important source of revenue to support teaching, research, and university services in the US is endowments. Harvard University has the largest endowment among the US colleges and universities made which in 2021 was $51.9 billion. In a context of economic stress for many universities, Harvard's endowment grew 27.9 % from 2020 to 2021 (from 40.6 to $51.9 billion) (Givens *et al.*, 2022). To exemplify the importance of this endowment, Harvard's 2021 endowment represents an equivalent to $2.3 million for every full-time student at the University.

The inequality among universities is also manifested by the different network opportunities that universities offer to their students (Tholen, 2013; Miller *et al.*, 2015), and the job recruitment opportunities they provide (Jones *et.al.*, 2017). The elite university has become a hub of networking connections which enables their students to create/control the new hubs of connectivity within our society (for example, the next Facebook, Twitter, Coursera or a hedge fund). Increasingly, access to networking opportunities at these institutions is reserved for the few who can scale their high barriers to entry (less so for legacy admissions and those within the global 1 % who have much greater chances of gaining entry). For example, a report by Chetty *et al.*, (2023) notes,

> "Children from families in the top 1 % are twice as likely to attend an Ivy-Plus college (Ivy League, Stanford, MIT, Duke, and Chicago) as those from middle-class families with comparable SAT/ACT scores. Two-thirds of this gap is due to higher admissions rates for students with comparable test scores from high-income families; the remaining third is due to differences in rates of application and matriculation. In contrast, children from high-income families have no admissions advantage at flagship public colleges. The high-income admissions advantage at private colleges is driven by three factors: (1) preferences for children of alumni, (2) weight placed on non-academic ratings, which tend to be higher for students applying from private high schools that have affluent student bodies, and (3) recruitment of athletes, who tend to come from higher-income families."

The increasing neo-liberal administrative environment places additional stress on faculty at all career stages to obtain regular grants, face performance reviews, and manage heavy workloads (Jones, 2023). A recent unpaid university job offer at a Tier One institution illustrates the high degree of inequality among university employees, and the value that the system places on networking. On March 4, 2022, an advertisement was placed on the UCLA recruitment website for a position that specified that: "The Department of Chemistry and Biochemistry at UCLA seeks applications for an Assistant Adjunct Professor on a without salary basis. Applicants must understand there will be no compensation for this position". The add further described what the person hired could expect:

> "[T]eaching according to the instructional needs of the department. Qualified candidates will have a Ph.D. in chemistry, biochemistry, or equivalent discipline and have significant experience and strong record in teaching chemistry or biochemistry at the college level. The University of California, Los Angeles and the Department of Chemistry and Biochemistry are interested in candidates who are committed to the highest standards of scholarship and professional activities, and to the development of a campus climate that supports equality and diversity."
> (*https://recruit.apo.ucla.edu/apply* [accessed 03/ 2022 – removed]).

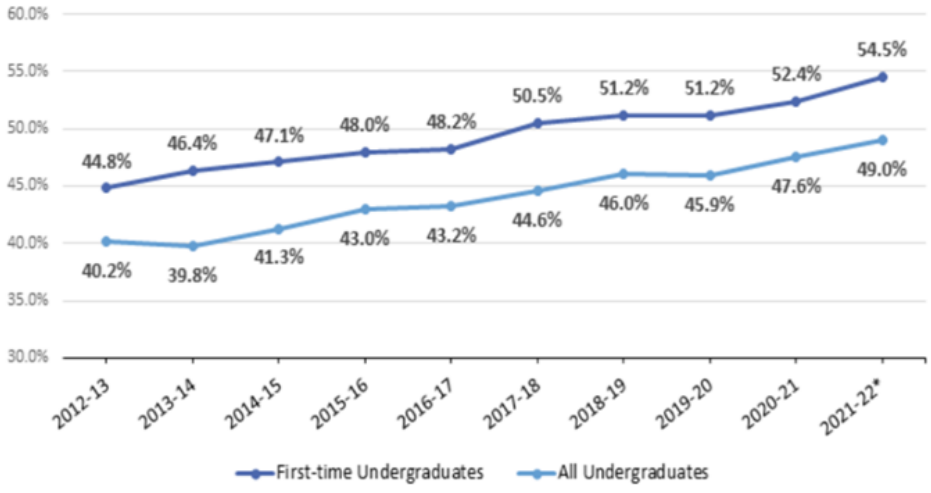
Additionally, the candidate for this non-paid job needed to submit a CV, cover letter, a statement of teaching, an optional statement of research, and three to five letters of reference (Adam, 2022). The above illustrates that a prestigious school such as UCLA expected to attract candidates solely for the prestige and networking opportunities that this would afford the job candidate. The ad attracted broad media interest and drew harsh criticism from mass media and academicians (Jachik, 2002). By the end of the week, the job posting had disappeared, while a UCLA spokesman communicated that the original posting "contained errors". The growing number of highly paid administrators compared to most professors and employees has also exacerbated the divide within institutions and contributed to higher tuition costs. As Shepard (2013) notes,

> "Salary and wage inequalities (defended on the basis of labor market trends) are increasing—between the "stars" and others within a discipline and department, between disciplines, and between executives and employees. The salary of The Ohio State University's president exceeds that of his lowest earning employees by the order of 100:1[...]. Part-time academic labor is substituted for full time professors, reducing universities' wage and benefits costs while enhancing flexibility. Students are thought of as customers to be satisfied, rather than minds to be challenged. The business sector is cultivated, as both a research partner and a customer for those who graduate. The faculty increasingly is assessed for their entrepreneurial acumen: [...] This neoliberalization [...] is pervasive."
> (*http://www.aag.org/cs/news_detail?pressrelease.id=2330* [accessed 01/08/2023]).

3. Coping Strategies Employed by US Universities

To face the crises in enrollment, US universities' administration have turned to a diverse range of strategies to attract students. One increasingly popular strategy has been the growth of the discount rate of tuition fees. According to the 2014 National Association of College and University Business Officers (NACUBO), for the 2012-13 academic year, the average discount rate (defined as institutional grant dollars as a percentage of gross tuition and fee revenue) was estimated to have reached almost 44.8 percent for freshmen (first year university students) and 42.2 percent for all undergraduates. By the academic year 2020-21, the percentages had increased to 52.4 percent for all undergraduates and 47.6 % for freshmen, with a new estimated increase for the academic year 2021-2022 to 54.4 % and 49 % respectively (fig. 2). This trend reveals that, since the mid-2010s, with discount rates on the rise each year since, growth in net tuition revenue has slowed significantly. In this sense, we could argue that gross tuition price increases have been largely offset by increased grant aid to students.

Figure 2. Average institutional tuition discount rate, by student category



Source: NABUCO, Tuition Discount Study, 2022.
Note: * 2022 estimated.

Another strategy employed by the public state universities to increase revenues has been to attract an increasing number of students from out-of-state as well as international students, as both groups pay significant higher tuition than the students from in-state (and even in cases where they pay at an in-state rate, the university can offset this via the students staying in the university dorms and enrolling in the university food plans). In fact, international recruitment has

long been a growing trend in US universities in order to improve enrollment as well as revenues (fig. 3). By the earlier 2020s, nearly one-third of international students were from China, representing 60 % of the foreign-student growth in past 10 years. As expected, Covid badly affected universities' internationalization (as did a shift in US policies beginning during the Trump Administration). From the 2019/20 to 2020/21 academic year, US universities suffered a 15 % reduction of international students. In this respect, a study undertaken by Whatley and Castiello-Gutiérrez (2022) showed that public and private universities followed a different approach towards international students. With a dataset comprised of 723 public institutions and 1,245 private not-for-profit institutions, their study showed that leaders at private not-for-profit institutions were significantly more likely to shift instructional strategies to include more in-person instruction, thus allowing more international students to enroll than the public institutions could do. In their assessment, this disparity showed the extent which the US universities have become financially dependent on international students' tuition—not only State not-for-profit public institutions, but also private not-for-profit ones.

Figure 3. International students enrollment trends

Academic Year	Enrolled Int'l Students	OPT	Total Int'l Students	Total U.S. Enroliment	% Int'l
2021/22	763,760	184,759	948,519	20,327,000	4.7
2020/21	710,210	203,885	914,095	19,744,000	4.6
2019/20	851,957	223,539	1,075,496	19,720,000	5.5
2018/19	872,214	223,085	1,095,299	19,828,000	5.5
2017/18	891,330	203,462	1,094,792	19,831,000	5.5
2016/17	903,127	175,695	1,078,822	20,185,000	5.3
2015/16	896,341	147,498	1,043,839	20,264,000	5.2
2014/15	854,639	120,287	974,926	20,300,000	4.8
2013/14	780,055	105,997	886,052	21,216,000	4.2

Source: *https://opendoorsdata.org/data/international-students/enrollment-trends/* (accessed 01/08/2023).

The enrollment and financial crisis have been even more difficult for second tier and lower colleges, which have turned to the strategy of discounting tuition as well as cutting costs as they compete for a smaller pool of potential recruits. Some State colleges have even stepped-up out-of-state recruitment, sometimes offering in-state tuition to out-of-state students (e.g. University of Maine for students from New Jersey). Adding MOOCs, contingent faculty,

and new "desirable" interdisciplinary degrees such as global studies, sustainability studies, environmental studies and logistics have also been undertaken with different degrees of success.

In this context, the social sciences and liberal arts disciplines have suffered the most from the increasing financial pressures and an uncertain labor market, seeing decreasing in their programs. STEM degrees (science, technology, engineering, and mathematics) on the other hand have seen growing enrollments. For example, from fall 2016 to fall 2017, enrollments in STEM majors went up 2.2 percent. Enrollments in majors related to computer and information sciences grew by 24,919 students and biological and biomedical majors grew by 14,374 students (Bogardus Cortez, 2018). As a result, university administrations have been cutting or amalgamating social science and humanities departments and majors.

In a highly competitive and dynamic system, the most recent strategies adopted by US universities include: 1) the turn to online education, for instance, Georgia Institute of Technology, began offering a Master of Science (MS) in computer science for $6,600 tuition for online versus the $45,000 on campus; 2) sharing the costs with corporations for agreements on specific curriculum and training, for example: online courses by Udacity and the telecommunications provider ATT; 3) establishing international "branch" campuses, such as New York University has with a campus in Florence (Italy) or Duke University in Kunshan, China; and 4) forming partnerships with overseas institutions.

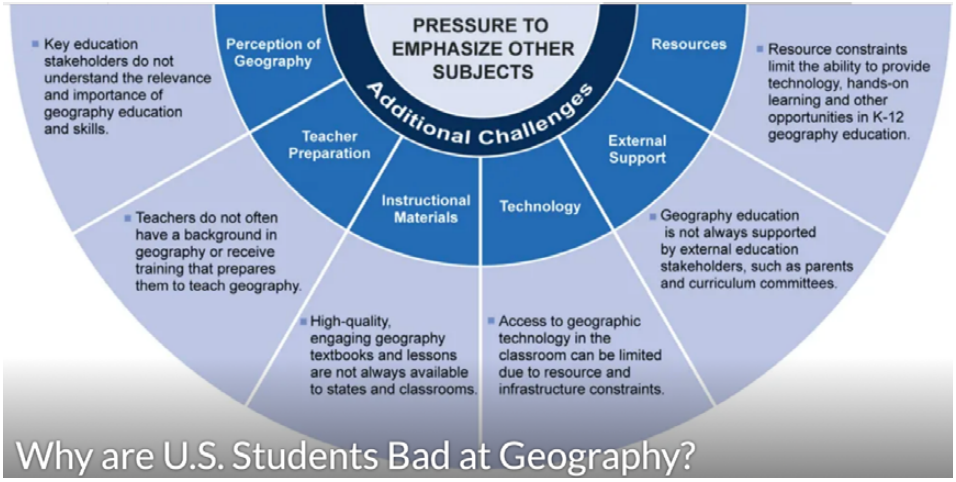
All these strategies have a clear neoliberal imprint on higher education. In the case of Georgia Tech's training for private firms, the aim is for the university to provide the content and professors, and be compensated with 60 percent of the revenue, while Udacity offers the computer platform and provides course assistants, receiving the other 40 percent. The projected budget for the test run in 2014 was $3.1 million — including $2 million donated by AT&T, which used the program to train employees (*New York Times*, 2013). As of 2022, Georgia Tech offers 10 online Master of Science degrees (*https://pe.gatech.edu/degrees* [accessed 01/08/2023]).

Finally, it should be considered that the dominant neoliberal narrative which establishes that State funding needs to be for the "public good" also affects universities negatively. This idea of "public good" points to the need to prioritize funding programs that are "relevant" for employment i.e. train graduates for work. Graduates in the social sciences and humanities are often classified as having higher percentage of unemployment or being underemployed. The Humanity Indicators of the American Academy of Arts and Sciences established that in 2018, 3.6 % of terminal bachelor degree holders in the humanities were unemployed, compared to 2.9 % of college graduates generally, and had annual median earnings of $58,000, while the median for all workers with a terminal bachelor's degree was $63,000 (American Academy of Arts and Sciences, 2020).

4. Challenges and Strategies of Geography Studies in the US

Geography education remains a challenging terrain in the US. In 2010, the National Assessment Governing Board acknowledged the failure of American geography education from primary to high school courses. When evaluating grades four, eight and twelve they argued that "for more than a generation, geography has been badly neglected in American schools. The consequence is widespread ignorance of our own country and of its place in the world" (p. v). In 2014, a Washington Post survey of 2,066 respondents found that only one in six Americans knew where Ukraine was on a world map. Although younger Americans' answers were more accurate than that of older Americans, 77 % of college graduates could not correctly identify the country's location. In 2018, a report by the National Assessment Governing Board saw no progress in 8th graders geographical knowledge compared to the 2010 report.

Figure 4. Reported challenges in providing High School* Geography Instruction



Source: GAO (2015). Note: Data refers to K-12 grade.

According to the GAO report, due to several factors, students are not proficient in geography when they finish high school. First, geography is not a required subject in most states; second, education is increasingly focusing on other subjects such as reading, math, and science; and third, when geography instruction is provided, it is incorporated into social study classes and teachers report spending only around 10 % of their time teaching geography, while history, economics, government, and civics are prioritized. Fig. 4 captures the importance of the pressure to emphasize other subjects, while summarizing the additional challenges.

Regarding university education, while in 1900, nearly all major American colleges and universities had geography departments, by 2022 Dartmouth

College is the only Ivy League institution that has a geography department (the Ivey League comprises: Brown, Columbia, Cornell, Dartmouth, Harvard, Princeton, University of Pennsylvania, and Yale). The geography program at Harvard University had already been terminated in 1948. As Neil Smith (1984) asserts:

> "It [the termination] was a severe blow to the discipline, not only because of Harvard's position in American education but because in the course of the closure the President of Harvard University suggested that geography was not an appropriate university subject." (Smith, 1984, p. 155).

Questioning why geography came to be so vulnerable at Harvard in the first place, Smith argues:

> "We can assess the vulnerability of geography under two headings: first there is the institutional weakness of geography, which is closely bound up with the lack of a clear intellectual terrain and set of goals; second is the alleged low caliber of geographical scholarship at Harvard." (Smith, 1984, p. 167).

Geography in the US emerged in the late nineteenth century as an extension of geology — as a result, the discipline was in a weak position to begin with. In this context, Smith argues that in the US, the primary rationale to justify the discipline was to highlight its capability of synthesizing human and physical elements. As a second strategy, and with a less intellectual than pragmatic approach, US geographers emphasized the practical utility of the discipline. As a result:

> "[I]n the Ivy League particularly, geography came more and more to be seen, and to justify its own existence, in terms of its service function. At Columbia and the University of Pennsylvania particularly, geography serviced the Business Schools, whereas at Harvard this «sternly practical science» […] was more environmental and military in its focus in the early twentieth century . [...] If the uniqueness of geography lied in the character of its synthesis, a question remained regarding its uniqueness. The answer continually reiterated was that in the act of synthesis the geographer brought a particular geographical perspective to the task. The 1949 committee was perplexed by [the] inability to extract a clear definition of the subject, to grasp the substance of geography, or to determine its boundaries with other disciplines. To the end the committee saw the field as hopelessly amporphous." (Smith, 1984, pp. 168-169).

In the 1980s, the decline of geography programs and students gained the attention of scholars. In an article titled "The Crisis in American Geography" published in *Area*, Haigh and Freeman (1982) highlights that in the USA, geography is a non-traditional small discipline in contraction, considered marginal to the American Academic system, and threatened by the closure of leading departments. While the rise of GIS (and related fields) increased enrollments from the 1980s, much of the growth happened in merged departments (such as geology/geography) or in geography departments (such as urban and regional planning).

Nowadays, apart from the fact that prominent universities and many other colleges do not have geography programs, when they exist, they are generally smaller than those of neighboring disciplines. Even large universities have a relatively few undergraduate majors, drawing most of their reputation from the quality of their graduate programs. Additionally, there is a general lack of understanding regarding what geography is as a discipline. This is unfortunately not a unique to the USA. As the feminist economic geographer Katherine Gibson points out, referring to her experience in the USA and Australia, few people know what geographers do and fewer still know what geography is (Casellas, 2022).

Apart from these structural issues, at the present, it is possible to identify several other reasons for the relative decline in geography education in the USA. First, as pointed out above, in high school educational programs, social studies replaced geography, and as a result, many students have never encountered geography at school. This implies that relatively few students enter college with the aim of pursuing a geography degree. Second, there is the contradictory effect that Advanced Placement (AP) in High Schools generates for geography. AP works by allowing incoming high school students (students entering university studies) to count AP courses for college credits at many universities. AP Human Geography courses, which were offered for the first time in 2001, are available in over half of US high schools. According to Kaplan (2019), AP Human Geography is the fastest growing AP course, increasing five-fold over the past 10 years. It is one of the 10 highest enrolled of all AP subjects (in 2020, 218,300 students took the exam). In this context, Kaplan (2019) identifies two important questions that need to be studied. Firstly, he considers that it is necessary to research if the AP Human Geography curriculum is as rigorous as the same course in college; secondly, in his opinion it needs to be explored if AP Human Geography effectively cannibalizes university geography courses. Indeed, many high school students see AP Geography as one of the easier AP credits and thus take it early (long prior to graduation) as practice for the "harder" AP credits. Most of these students receive the equivalent geography credit at universities without going on to take additional geography courses. At Hofstra University, for example, students who completed the AP Human Geography course (and attain a score of at least 4 on a 5-point scale) are given credit for Human Geography (GEOG 002) which is a required course for geography majors and minors. Yet relatively few of the geography majors and minors in the department have previously completed AP Human Geography indicating that this is not currently feeding high-school students into the geography program.

Alec Murphy (2007), a past president of the American Association of Geographers (AAG), identifies another set of complementary reasons for the relative decline in Geography education in the USA. First, he notes out to the early twentieth-century trend toward American isolationism, and the post-war

emergence of an internationalism premised on the idea that American-style capitalism would render place differences increasingly irrelevant. Second, he blames the marginalization of geography in primary and secondary schools for the rise of a history-dominated social studies curriculum and the sense that geography had little to offer beyond the cataloging of Earth facts or problematic generalizations about environment-human relations. Third, he indicates that the growing institutional division between the physical and social sciences makes it difficult for geography, which includes human and physical studies, to fit in. And fourth, he calls the attention towards the growing prestige of the sciences and the privileging of those social sciences that treat spatial differences as "noise" in their model-building efforts (for example, economics).

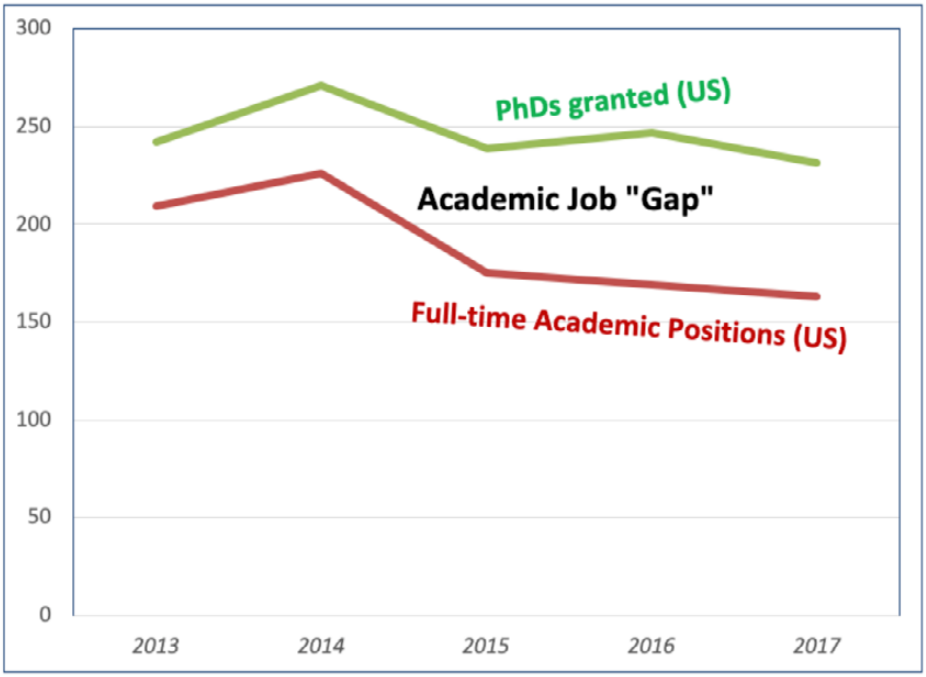
Traditionally few undergraduates enter college to study geography, with most students transferring into the major once they are already at college. This means that undergraduate programs often struggle to attract students to their departments. Additionally, most students entering geography classes take them to fulfill a university requirement (such as the need for a certain number of liberal arts credits) and have consequently little idea of what geography is or any interest in pursuing the major. Consequently, most students only decide to major or minor in geography after taking a class to fulfill a university requirement, and then discovering an affinity for the material and/or the instructor.

As most tier one geography programs gain their academic reputation from their graduate programs, they have often neglected the need to build strong undergraduate programs or focusing on recruiting undergraduate students. A frequent observation of Grant Saff encountered while serving on the executive of the American Association of Geographers (2013-15) was how few students and professors from large research institutions attended the regional geography conferences of the AAG, where most attendees were from smaller "less prestigious" schools. Compared to the struggles of undergraduate programs, the Ph.D. geography programs have been relatively more successful in attracting students. However, a problem that the graduate programs have faced is the gap that exists between available academic jobs and the number of Ph.D.'s granted (see fig. 5). This is despite the number of students that finish the Ph.D. program each year being relatively small.

A recent study by Coomes et al (2022) drawing on AAG data looks at how the 2007–2009 recession affected hiring of geography Ph.D. They found that the academic job market in geography is tightly linked to the business cycle and highly vulnerable to recessions and concluded that the 2007–2009 recession negatively impacted the hiring of geography Ph.D. graduates for at least ten years. As a result, they conclude that the recession dampened the likelihood of securing a tenure-track position in U.S. geography more so than any recession over the past fifty years. They estimated that the arrival of COVID-19 and the accompanying contraction of gross domestic product were likely to further adversely affect the hiring of new geography faculty. More generally, we have

seen a contraction in the availability of tenure track jobs across academia and the rise of contingent faculty. Colby (2023) notes that about 24 % of faculty members in US colleges and universities held full-time tenured appointments in fall 2021, compared with about 39 % in fall 1987, while over two-thirds (68 %) of faculty members in US colleges and universities held contingent appointments in fall 2021, compared with about 47 % in fall 1987.

Figure 5. Academic job gap for Geography Ph.D. granted in the US



Source: *https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1931-0846.2014.12045.x* (accessed 01/08/2023)

Faced with these challenges, some of the specific strategies that the Geography Departments' Chairs have undertaken to increase enrollments include: 1) rebranding Geography Departments/Programs; and 2) rebranding courses. Over the last two decades rebranding Geography Departments has been a general and increasing trend. Based on the AAG's Guide to Programs in Geography, in 2010-11 there were 209 listed Geography Programs. Of these, 110 programs were listed as solely Geography programs (52 %). However, 69 programs were already listed as interdisciplinary joint programs. Of these only 33 % had kept geography in the name of their departments or programs, and 21 programs (10 % of the total) had no references to geography in their titles. By 2014-15, the number of listed Geography Programs had decreased to 184 programs, and of these only 74 were listed as such (40.2 %), while 77 (41.8 %) were listed as interdisciplinary joint departments with geography in their titles, and 33 (17.93 %) made no reference to geography at all.

Figure 6. Universities and Interdisciplinary joint programs titles

Arizona State	Geographical Studies and Urban Planning
Florida International University	Global and Sociocultural Studies
Hofstra University	Global Studies and Geography
University of Miami	Geography and Regional Studies
University of West Florida	Environmental Studies
Temple University	Geography and Urban Studies
Hawaii Pacific University	International Studies
University of Arizona	Geography and Development
Utah State University	Environment and Society

Source: AAG Guide to Programs in Geography, 2010-11.

In a study on renaming US and Canadian Geography Departments, Frazier and Wikle (2017) explored the forces driving name changes. They found that the most common reasons for undertaking a name change were to attract undergraduate majors and to enhance a department's prestige on campus. They considered that both factors were of critical importance in competing for on-campus funding or other resources.

More recently, Stoler *et al.* (2021) conducted a survey of 4,388 undergraduates across four US universities and identified that undergraduates overwhelmingly and consistently preferred simple, thematic types of terms for course names to those that sounded technical or science oriented. In the study, the word geography was rated significantly lower than words or phrases containing the words environment and sustainability. Forms of geography that included the word science were rated particularly low. It is worth noting that student ratings varied by gender. While females rated the following terms the highest: culture, human rights, social media, crime, and society; males rated terms included terms such as technology, digital, crime and environment highest.

In response to students' preferences, rebranding courses has become another strategy that departments have undertaken to attract more undergraduate students. In December 2020, the AAG Department Chairs Listserv had a prolonged discussion on rebranding that looked at the need to "modernize" and adapt curriculums to be more attractive to potential students. During the discussion, several new course names that departments had adopted were shared, among them were: Global Health and Diseases (formerly "Geography of Health and Disease"), Place and the American South (formerly "Geography of the American South"), Mediterranean Empires and Globalization (formerly "Spain and North Africa"), Political Geography and Society (formerly "Political Geography"), and Food Justice: Geographic Perspectives (formerly "Geography of Food").

Additionally, Environmental Geography courses were rebranded as: Earth from Above, Our Global Environment, Earth Environments and Global Change. What is consistent with the above is the dropping of geography from the names of these courses. In response to these trends, the Geography Department at Hofstra renamed many of the required introductory geography courses. For example, "Human Geography" was renamed, "People, Place and Power", while the "Introduction to Regional Geography" was renamed, "Global Environments and Cultures." In the two years since these changes were made, the department noted that it made little to no change to enrollments which seem more dependent on the popularity of the time slot when the courses are scheduled and the student perceptions of the instructor.

Another strategy to increase enrollments has been to try to have GIS and physical geography programs categorized as part of the STEM curriculum (Science, Technology, Engineering and Mathematics). The US authorities have assessed STEM as being critical to the future growth of the economy and essential for the nation's global competitiveness and security. The Fiscal Year 2020 Industrial Capabilities Report, released in 2021 by the Pentagon as the annual report on the state of the US defense and manufacturing industrial base, concluded that the USA risks losing its competitive advantage if it fails to equip its workforce with the education and skills needed to develop complex, cutting-edge emerging technologies like artificial intelligence, autonomous systems, machine learning, and hypersonics. These are skills that has been identified as areas in which American students are not excelling. As a result, funding has been increased for STEM (*https://www.ed.gov/stem* [accessed 01/08/2023]), often at the cost of support for other subject areas. Unsurprisingly, many programs have introduced new Bachelor of Science programs in geography (anchored by a combination of physical geography and GIS).

The above concerns are also taking place in other western countries, as illustrated by the article of Caldis and Kleeman (2019) who argue that Geography has the potential to play an important role in advancing the objectives of STEM in the Australian educational context. These ongoing debates, opens relevant questions, among others, what is Geography, how it is positioned within the university curriculum, how this effect departments balance, and how this classification could affect the discipline's status within the social sciences and humanities.

Finally, it is important to mention that some departments adopting a strategy to focus on specializations in GIS and remote sensing sometimes are causing geography departments to split with the physical geographers joining geology or similar departments, while the human geographers either remain in a dedicated department of human geography or move into other social science departments. This reflects market trends where employment has grown for graduates familiar with GIS while being stagnant for those without these skills (see, for example, Brown 2004).

5. Concluding Observations

The COVID pandemic has accentuated processes that were already underway, and which include the increase in competition between departments of the same university to attract students to their discipline, the growing dependence on international students (with special emphasis on attracting students from Asian countries), continued increases in tuition costs, and growing student debt that forces universities to offer tuition discounts. Additionally, there has persisted continuing challenges generated by the competition from online degree programs in expanding the offer and flexibility for students, and the stratification of the academic landscape between universities with large endowments and those dependent on tuition to cover their operating costs.

Murphey (2007, p. 128 apud Saff, 2010) notes many programs have been attracting greater numbers of students by paying attention to undergraduate education, developing effective mentoring and advising programs for students, working closely with administrators, creating effective websites, collaborating with programs sharing similar goals and subject-matter concerns, encouraging faculty to participate actively in the larger campus community, and aligning the department's mission with that of the larger university. We argue that in addition to the above, that faculty should be involved in program building, mentoring and advisement, which takes a much greater level of commitment than many faculty members have been used to in the past. To ensure that these efforts are rewarded these efforts should ideally be incorporated into the department's standards for promotion and tenure (perhaps as offsets for a certain number of required publications).

The increasing stress on the "usefulness" of education as job training and budget cuts that hinder the viability of public universities is challenging the viability of many geography programs in the US. The discipline has responded by attempting continuous reinvention with the latest examples being rebranding of programs, stressing the importance of GIS, trying to have geography added to the STEM offerings, and repositioning geography as part of interdisciplinary programs. One must, however, question the long-term strategy of simultaneously trying to promote the relevancy of a geography education while increasingly dropping the name "geography" from the titles of courses and departments. This seems both contradictory and counter intuitive. If geography is to survive as an independent discipline, we consider that there is a need to embrace the nomenclature and do everything possible to make it too essential for students and policy makers to ignore. This means promoting the programs, engaging with other departments, actively recruiting undergraduate students, and focusing on undergraduate education, making the university administrators aware of what geographers do and the importance of geography programs, while fighting for more geographic education at a school level. This will not be easy, but it worth doing if we want geography departments to survive.

References

American Academy of Arts and Sciences (2020). Humanities Indicators. *https://www.amacad.org/humanities-indicators/workforce/employment-status-humanities-majors* (accessed 12/11/2022).

Adam, Ruben (2022). "A University Teaching Job «Without Salary»? No Thanks". *Science*. *https://www.science.org/content/article/university-teaching-job-without-salary-no-thanks* (accessed 10/12/2022).

Barrett, Beverly; Frank Fernandez; Elsa M. Gonzalez (2020). "Why Universities Voluntarily Pursue US Accreditation: The Case of Mexico". *Higher Education*, Vol. 79, pp. 619-635.

BerayArmond, Núbia (2022). "A Call for a Critical Urban Climatology: Lessons from Critical Physical Geography". *Wiley Interdisciplinary Reviews: Climate Change*, Vol. 13, Issue 4, No. e773. DOI: *https://doi.org/10.1002/wcc.773*

Bogardus Cortez, Meghan (2018). STEM Enrollment Is on the Rise. *https://edtechmagazine.com/higher/article/2018/01/stem-enrollment-rise* (accessed 26/11/2022).

Brown, Krystyna (2004). "Employability of Geography Graduates in the GIS and GI-related fields". *Planet*, Vol. 13, Issue 1, pp. 18-19. DOI: *https://doi.org/10.11120/plan.2004.00130018*

Caldis, Susan; Grant Kleeman (2019). "Geography and STEM". *Geographical Education*, Vol. 32, pp. 5-10.

Casellas, Antònia [ed.] (2022). *J.K. Gibson-Graham. Hacia una economía postcapitalista o cómo retomar el control de lo cotidiano*. Barcelona: Icaria.

Chetty, Raj; David J. Deming; John Friedman (2023). Diversifying Society's Leaders? The Determinants and Causal Effects of Admission to Highly Selective Private Colleges. *https://opportunityinsights.org/paper/collegeadmissions/* (accessed 01/08/2023).

Coenen, Lars; Berhard Truffer (2012). "Places and Spaces of Sustainability Transitions: Geographical Contributions to an Emerging Research and Policy Field". *European Planning Studies*, Vol. 20, Issue 3, pp. 367-374. DOI: *https://doi.org/10.1080/09654313.2012.651802*

Colby, Glenn (2023). Data Snapshot: Tenure and Contingency in US Higher Education Federal Figures on Faculty Appointments and Graduate Student Employment in US Higher Education. *https://www.aaup.org/article/data-snapshot-tenure-and-contingency-us-higher-education#.ZC7GVXvMKUl* (accessed 01/08/2023).

Coomes, Oliver T.; Christian Abizaid; Sébastian Breau; Tim R. Moore (2022). "The Academic Job Market in U.S. Geography and the Business Cycle: The Long Shadow of the 2007–2009 Recession". *The Professional Geographer*, Vol. 74, Issue 4, pp. 602-619. DOI: *https://doi.org/10.1080/00330124.2022.2069137*

De Vito, Laura; Chad Staddon; Adriana A. ZunigaTeran; Andrea K. Gerlak; Yolandi Schoeman; Aimee Hart; Giles Booth (2022). "Aligning Green Infrastructure to Sustainable Development: A Geographical Contribution to an Ongoing Debate". *Area*, Vol. 54, Issue2, pp. 242-251. DOI: *https://doi.org/10.1111/area.12764*

Erisman, Wendy; Shannon Looney (2007). *Opening the Door to the American Dream: Increasing Higher Education Access and Success for Immigrants*. Washington: Institute for Higher Education Policy.

Frazier, Amy E.; Thomas A. Wikle (2017). "Renaming and Rebranding within U.S. and Canadian Geography Departments, 1990–2014". *The Professional Geographer*, Vol. 69, Issue 1, pp. 12-21. DOI: *https://doi.org/10.1080/00330124.2015.1135404*

Foote Kenneth; Sarah Bednarz; Janice Monk; Michael Solem; Joseph Stoltman (2012). "Rethinking Postgraduate Geography Education in the USA: Issues and Concerns". *Journal of Geography in Higher Education*, Vol. 36(1), pp. 57-64. DOI: *https://doi.org/10.1080/03098265.2011.641113*

GAO (2015). Report to the Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies. *https://www.gao.gov/assets/gao-16-7.pdf* (accessed 24/11/2022).

Givens, Aine; AdmissionSight (2022). US Colleges and Universities with the Biggest Endowments. *https://admissionsight.com/us-colleges-and-universities-biggest-endowments/* (accessed 10/11/2022).

Granados-Sánchez, Jesús (2022). "Levels of Transformation in Sustainable Curricula: The Case of Geography Education". *Sustainability*, Vol. 14(8), No. 4481. DOI: *https://doi.org/10.3390/su14084481*

Haigh, Martin J.; T. W. Freeman (1982). "The Crisis in American Geography". *Area*, Vol. 14, No. 3, pp. 185-190.

Hanson, Melanie (2022a). "College Tuition Inflation Rate" *https://educationdata.org/college-tuition-inflation-rate* (accessed 24/12/2022).

—(2022b). "College Dropout Rates". *https://educationdata.org/college-dropout-rates* (accessed 28/12/2022).

Hochschild, Jennifer L.; Nathan Scovronick (2003). *American Dream and Public Schools.* Oxford: Oxford University Press.

Hume, Kathryn (2022). *American Dream, American Nightmare: Fiction Since 1960*. Champaign: University of Illinois Press.

Jachik, Scott (2022). "UCLA Pummeled Over Adjunct Job Without Pay". *https://www.insidehighered.com/news/2022/03/21/ucla-criticized-advertising-adjunct-job-without-pay* (accessed 06/12/2022).

Jones, Michael; Cindi Baldi; Carl Phillips; Avinash Waikar (2017). "The Hard Truth About Soft Skills: What Recruiters Look for in Business Graduates". *College Student Journal*, Vol. 50, No. 3, pp. 422-428.

Jones, Roy (2023). "Objectivity, Subjectivity and Contextuality: Approaches to the Study of Rural Change in Western Australia and Elsewhere". *Treballs de la Societat Catalana de Geografia.* No. 95, pp. 57-73. DOI: *https://doi.org/10.2436/20.3002.01.235*

Keene, Sara E. (2008). "Higher Education and the «American Dream»: Why the Status Quo Won't Get Us There". *Change: The Magazine of Higher Learning,* Vol. 40, No. 6, pp. 65-68.

Lache, Nubia M. (2011). "Geography Education: Outcomes, Trends and Challenges About Geography Didactics". *Problems of Education in the 21st Century*, Vol. 27, pp. 75-82.

Masterson, Daniel (2022). "University of California PhD Pay is Among the Lowest in the US After Accounting for Cost of Living". *SocArXiv Papers.* DOI: *https://doi.org/10.31235/osf.io/83wfm*

Mettler, Suzanne (2014). *Degrees of Inequality: How the Politics of Higher Education Sabotaged the American Dream*. Nova YorK: Basic Books.

Miao, Sheng; Michael E. Meadows; Yushan Duan; Fengtao Guo (2022). "How Does the Geography Curriculum Contribute to Education for Sustainable Development? Lessons from China and the USA". *Sustainability,* Vol. 14(17), No. 10637. DOI: *https://doi.org/10.3390/su141710637*

Miller, Danny; Xiaowei Xu; Vikas Mehrotra (2015). "When is Human Capital a Valuable Resource? The Performance Effects of Ivy League Selection Among Celebrated CEOs". *Strategic Management Journal*, Vol. 36, Issue 6, pp. 930-944.

Monk, Janice (2004). "Women, Gender, and the Histories of American Geography". *Annals of the Association of American Geographers*, Vol. 94, No. 1, pp. 1-22.

Murphy, Alexander B. (2007). "Geography's Place in Higher Education in the United States". *Journal of Geography in Higher Education*, Vol. 31, Issue 1, pp. 121-141. DOI: *https://doi.org/10.1080/03098260601033068*

NABUCO (2022). Tuition Discount Rates at Private Colleges and Universities Hit All-Time Highs. *https://www.nacubo.org/Press-Releases/2022/Tuition-Discount-Rates-at-Private-Colleges-and-Universities-Hit-All-Time-Highs* (accessed 18/11/2022).

National Assessment of Educational Progress Governing Board (2010). Geography Assessment Framework for the 2010 National Assessment of Educational Progress. *https://www.nagb.gov/content/dam/nagb/en/documents/publications/frameworks/geography/2010-geography-framework.pdf* (accessed 24/11/2022).

—(2018). Geography Assessment Framework for the 2018 National Assessment of Educational Progress. *https://www.nagb.gov/content/dam/nagb/en/documents/publications/frameworks/geography/2018-geography-framework.pdf* (accessed 24/11/2022).

National Student Clearinghouse Research Center (2018). Term Enrollment. *https://edtechmagazine.com/higher/article/2018/01/stem-enrollment-rise* (accessed 20/12/2022).

Nesterova, Iana (2022). "Business of Deep Transformations: How Can Geography Contribute to Understanding Degrowth Business?". *Geography and Sustainability*, Vol. 3, Issue 2, pp. 105-113. DOI: *https://doi.org/10.1016/j.geosus.2022.03.004*

OECD (2022). Income inequality (indicator). DOI: *https://doi.org/10.1787/459aa7f1-en*

Pentagon, The (2021). US Defense Industrial Base Industrial Capabilities Report January 2021. *https://media.defense.gov/2021/Jan/14/2002565311/-1/-1/0/FY20-INDUSTRIAL-CAPABILITIES-REPORT.PDF* (accessed 09/12/2022).

Puttick, Steven (2022). "Geographical Education I: Fields, Interactions and Relationships". *Progress in Human Geography*, Vol. 46, Issue 3, pp. 898-906. DOI: *https://doi.org/10.1177/03091325221080251*

Ramirez, Francisco O. (2010). "Accounting for Excellence: Transforming Universities into Organizational Actors", in: Laura M. Portnoi; Val D. Rust; Sylvia S. Bagley [eds.]. *Higher Education, Policy, and the Global Competition Phenomenon. International and Development Education.* New York: Palgrave Macmillan, pp. 43-58.
DOI: *https://doi.org/10.1057/9780230106130_4*

Saff, Grant (2010). "The Challenges of Sustaining an Undergraduate Geography Program: Teaching Geography at Hofstra University". *Middle States Geographer*, Vol. 43, pp. 26-34.

Schroeder, Ray (2021). A Second Demographic Cliff Adds to Urgency for Change. *https://www.insidehighered.com/digital-learning/blogs/online-trending-now/second-demographic-cliff-adds-urgency-change* (accessed 11/11/2022).

Sidaway James D.; Ron J. Johnston (2007). "Geography in Higher Education in the UK". *Journal of Geography in Higher Education*, Vol. 31, Issue 1, pp. 57-80. DOI: *https://doi.org/10.1080/03098260601033027*

Smith, Neil (1987). "«Academic War over the Field of Geography»: The Elimination of Geography at Harvard, 1947-1951". *Annals of the Association of American Geographers*, Vol. 77, No. 2, pp. 155-172.

Stoler, Justin; Diana Ter-Ghazaryan; Ira Sheskin; Amber L. Pearson; Gary Schnakenberg; Dominique Cagalanan; Kate Swanson; Piort Jankowski (2021). "What's in a Name? Undergraduate Student Perceptions of Geography, Environment, and Sustainability Key Words and Program Names". *Annals of the American Association of Geographers*, Vol. 111, No. 2, pp. 317-342. DOI: *https://doi.org/10.1080/24694452.2020.1766412*

Susca, Tiziana (2022). "Nature-Based Solutions Applied to the Built Environment to Alleviate Climate Change: Benefits, Co-benefits, and Trade-offs in a Geographical Multi-scale Perspective", in Maximilian Lackner; Baharak Sajjadi; Wei-Yin Chen [eds.]. *Handbook of Climate Change Mitigation and Adaptation*. Cham: Springer, pp. 2117-2167.

The New York Times (2013). Master's Degree Is New Frontier of Study Online. *http://www.nytimes.com/2013/08/18/education/masters-degree-is-new-fronti* (accessed 20/11/2022).

Tholen, Gerbrand; Phillip Brown; Sally Power; Annabelle Allouch (2013). "The Role of Networks and Connections in Educational Elites' Labour Market Entrance". *Research in Social Stratification and Mobility*, Vol. 34, pp. 142-154.
DOI: *https://doi.org/10.1016/j.rssm.2013.10.003*

Wellens, Jane; Andrea Berardi; Brian Chalkley; Bill Chambers; Rurth Healey; Janice Monk; Jodi Vender (2006). "Teaching Geography for Social Transformation". *Journal of Geography in Higher Education*, Vol. 30, Issue 1, pp. 117-131. DOI: *https://doi.org/10.1080/03098260500499717*

Whatley, Melissa; Santiago Castiello-Gutiérrez (2022). "Balancing Finances, Politics, and Public Health: International Student Enrollment and Reopening Plans at US Higher Education Institutions Amid the COVID-19 Pandemic". *Higher Education*, Vol. 84(2), pp. 299-320. DOI: *https://doi.org/10.1007/s10734-021-00768-7*