



PhD-FHSE-2021-13
The Faculty of Humanities, Education and Social Sciences

DISSERTATION

Defence held on 27/04/2021 in Esch-sur-Alzette
to obtain the degree of

DOCTEUR DE L'UNIVERSITÉ DU LUXEMBOURG

EN SOCIOLOGIE

by

Christina HAAS

Born on 3 June 1986 in Wittlich (Germany)

HIGHER EDUCATION TRAJECTORIES AND SOCIAL ORIGIN IN GERMANY AND THE UNITED STATES: A COMPARATIVE SEQUENCE-ANALYTICAL APPROACH

Dissertation defence committee

Dr Andreas Hadjar, dissertation supervisor
Professor, Université du Luxembourg

Dr Justin Powell
Professor, Université du Luxembourg

Dr Marita Jacob
Professor, Universität zu Köln

Dr Sandra Buchholz
Professor, Leibniz Universität Hannover & Deutsches Zentrum für Hochschul- & Wissenschaftsforschung

Dr Robin Samuel, chairman
Professor, Université du Luxembourg

Abstract

Students' higher education trajectories as holistic educational processes are an underresearched aspect, particularly in the German context. This cumulative thesis fills this gap by investigating students' trajectories through bachelor's degree courses in German and US higher education. In terms of methodology, it is based on a sequence-analytical approach using two student panel data sets (the German National Educational Panel Study (NEPS) and the US Beginning Postsecondary Students Longitudinal Study (BPS)) and comprises a literature review and three empirical research articles, each providing a different theoretical and conceptual angle.

Higher education is a non-compulsory educational phase, implying students are granted more autonomy and more choice but also require more personal responsibility to plan a path through higher education. As such, it is assumed that parents' cultural resources – defined here as higher education-specific knowledge – and economic resources shape students' trajectories to enable them to proceed through their studies in a more continuous or linear way and prevent students from experiencing complex trajectories, such as delays, interruptions or detours.

To begin with, the literature review, constructed as a narrative review with systematic elements, captured the state of research on higher education trajectories by reviewing peer-reviewed journal articles from a wide range of mainly higher education research journals. It revealed that this research area is rather heterogeneous and dominated by studies focusing on the United States.

Research articles one and two employ similar research strategies – sequence analyses followed by cluster analyses. Stressing the relationship between parents' resources and students' trajectories, the first article concentrates exclusively on students in German research universities, whereas the second also considers students at universities of applied sciences. Overall, these studies reveal that

the trajectories of students at the universities of applied sciences are more often linear, while the opposite applies to students at research universities and students of low social origin, pointing towards the hypothesised effect of parental resources. Furthermore, students of low social origin are more likely to follow a linear standard trajectory when studying at a university of applied sciences compared to at a research university.

In the third paper, based on the premise that trajectories are systematically shaped by the institutional context of the higher education system, students' trajectories in German and US higher education are compared, allowing to simultaneously a view on system-level characteristics and national idiosyncrasies.

US higher education provides almost universal access, is very marketised and highly differentiated, thereby accommodating diverse demands and heterogeneous student groups. By contrast, German higher education, based on public funding and regulation, early ability tracking and low permeability, restricts access and provides an overall much less diversified study offering. Consequently, research article three revealed that students' trajectories are overall less standardised in US higher education – but this differs greatly by higher education sector, whereas the trajectories of students in the (selective) research universities are overall more standardized. Furthermore, the social origin differences were quite pronounced in the United States, whereas the social origin effect was almost nonexistent for students in German higher education in this study (based on a different sequence-analytical approach). Remarkable, though, remains the finding that students' trajectories are less linear at German research universities compared to the universities of applied sciences – even more so among students of low social origin – while US research universities facilitate linear trajectories. Overall, this dissertation provides an important

contribution to the state of research on link between social origin, students' trajectories and how this link is mediated by the institutional context of the respective higher education system.

Zusammenfassung

Studierende sind während ihrem Studium mit einer Reihe von Entscheidungen konfrontiert, z.B. bezüglich ihrer inhaltlichen Schwerpunktsetzung, wie sie Erwerbstätigkeit und Studium kombinieren möchten oder ob und wann sie einen Auslandsaufenthalt durchführen möchten. Der Fokus der bisherigen Forschung zu diesen Bildungsentscheidungen und den daraus resultierenden Verläufen lag dabei vor allem auf der Untersuchung singulärer Ereignisse und Übergänge, wie zum Beispiel Transitionen von einer Bildungsetappe in die nächste oder Studienabbrüchen. Im Gegensatz dazu sind Studienverläufe als ganzheitlicher Bildungsprozess im deutschen Hochschulkontext bisher wenig erforscht.

Daher ergänzt diese kumulative Dissertation den Forschungsstand um eine holistische Perspektive auf Studienverläufe (einschließlich Studienabbrüchen, -unterbrechungen, -dauer und Fachwechseln). Dazu wurden die Studienverläufe von Bachelorstudierenden im deutschen und amerikanischen Hochschulsystem auf Basis zweier Längsschnittstudien, der Studierendenkohorte des deutschen Nationalen Bildungspanels (NEPS) und der amerikanischen *Beginning Postsecondary Students* (BPS) Panelstudie, mittels Sequenzanalyse rekonstruiert.

Insgesamt besteht die Dissertation aus vier Forschungsartikeln und einem Rahmentext. Ein bereits veröffentlichter Artikel liefert einen systematischen Überblick über den internationalen Stand der Forschung zu Studienverläufen, während sich drei empirische Studien mit dem Zusammenhang von sozialer Herkunft, Hochschulkontext und Studienverläufen befassen. Dabei unterscheiden sich Studienverläufe grundsätzlich von vorherigen Bildungsprozessen: ein Hochschulstudium ist eine nicht obligatorische und weniger regulierte Bildungsphase als vorherige; Studierende können ihr Studium zu einem gewissen Grad individuell zu gestalten. Dies erfordert zum einen mehr Eigeninitiative und proaktive Planung, aber auch Ressourcen – sowohl ökonomische als auch im

Sinne von Wissen und Information. Je nach Hochschulkontext unterscheidet sich jedoch der Grad der individuellen Gestaltungsfreiräume – und somit auch die Bedeutung der individuellen Ressourcenausstattung.

Der erste empirische Artikel konzentriert sich daher auf die Mikro-Ebene der Studierenden an deutschen Forschungsuniversitäten und untersucht, wie die mit der sozialen Herkunft einhergehenden kulturellen und ökonomischen Ressourcen Studienverläufe prägen. Eingebettet in die historische Entwicklung einzelner Organisationstypen im deutschen Hochschulsystem befasst sich die zweite empirische Studie mit der Frage nach systematischen Unterschieden in Studienverläufen und deren Ursachen an deutschen Forschungsuniversitäten und (Fach-)Hochschulen. Die dritte empirische Studie vergleicht Studienverläufe im deutschen und amerikanischen Hochschulsystem mit einem Schwerpunkt auf sozialer Ungleichheit und der „vermittelnden“ Funktion des institutionellen Hochschulkontexts.

Insgesamt zeigt sich, dass Studierende an deutschen (Fach-)Hochschulen häufiger lineare Studienverläufe aufweisen als Studierende an deutschen Forschungsuniversitäten – und dies gilt insbesondere für Studierende niedriger sozialer Herkunft. Der deutsch-amerikanische Vergleich ergab, dass Studienverläufe im deutschen Hochschulkontext insgesamt standardisierter sind als im ressourcen-intensiveren, differenzierten amerikanischen Kontext. Einerseits verfügen Studierende in den USA über mehr Möglichkeiten zur individuellen Gestaltung ihres Studienverlaufs, andererseits prägt die soziale Herkunft Studienverläufe jedoch wesentlich stärker als im deutschen Hochschulsystem.

Zusammengefasst liefert diese Dissertation zum einen eine theoretisch-konzeptionelle Annäherung an Bildungsentscheidungen im Hochschulkontext jenseits der ‚großen‘ institutionellen Übergänge und betrachtet Studienverläufe im Kontext von unterschiedlichen

Ausgangslagen und institutionellen Strukturen. Zum anderen ergänzt sie die Hochschul- und Studierendenforschung methodisch um die sequenzanalytische Rekonstruktion von Studienverläufen.

Table of Contents

Part I: State of Research and Conceptual Framework

Chapter 1	Introducing the thesis theme: Relevance and research question.	2
1.1	Aims and major research questions	4
1.2	Relevance and research gaps	7
1.3	Conceptual approach: Comparing higher education trajectories in two countries	10
1.4	Outlook and structure of the thesis	11
Chapter 2	Students' trajectories through higher education: A review of quantitative research.....	13
2.1	Review strategy	16
2.2	Overview of the literature review sample.....	17
2.3	Review results: An overview of the state of research on students' trajectories in higher education	19
	Definitions and conceptions: What are trajectories in higher education?	19
	Theories: Which conceptual approaches are employed to theorise trajectories?	20
	Research designs: How are higher education trajectories analysed?	26
	Empirical findings: Who follows which trajectory and why?.....	32
2.4	Conclusions and implications.....	37
Chapter 3	Theorising higher education trajectories: On students, educational institutions and social origin.....	44
3.1	Defining and conceptualising higher education trajectories.....	44
3.2	Students as trajectory-shaping agents.....	46
3.3	Higher education trajectories as institutionally embedded educational processes	52
	Higher education as a life course passage	52
	How the institutional and organisational context shapes higher education trajectories ..	57
3.4	Interim conclusion.....	59
3.5	Parents' cultural and economic resources and higher education trajectories	60
3.6	Institutional structures as the intermediating link between social origin and higher education trajectories	66
3.7	Concluding remarks.....	68

Chapter 4	Higher education in Germany and the United States.....	71
4.1	Overview of German and US higher education: Major developments, commonalities and differences	71
4.2	Funding and control: The role of states and markets.....	76
4.3	The German and US higher education landscapes	79
	University types in US higher education.....	80
	University types in German higher education.....	83
4.4	Academic degree course types and curricula	86
4.5	The students: Who enrolls in German and US higher education?.....	92
4.6	Summary	95

Part II: Research Design and Methods

Chapter 5	Comparative research strategy and design.....	98
5.1	Case selection strategy	98
5.2	Establishing functional equivalence: How to compare apples and oranges to <i>Äpfel und Birnen</i>	104
5.3	Summary	108
Chapter 6	From survey data to sequences of higher education enrolment: Data sources and methodological approach	109
6.1	Sequence analysis in the social sciences: An introduction.....	110
6.2	Introducing the micro-level data: The National Educational Panel Study Student Cohort and the Beginning Postsecondary Students Panel Study.....	115
	The NEPS Starting Cohort 5 – First-Year Students (NEPS).....	116
	Beginning Postsecondary Students Longitudinal Study (BPS).....	121
	Comparing students' higher education trajectories using NEPS and BPS data: Potential and limitations	124
6.3	The reconstruction higher education trajectories: From survey data to sequences	127
6.4	Operationalisation of variables.....	134
6.5	Summary	145

Part III: Empirical Studies

Chapter 7	Higher education trajectories in Germany and the United States: A descriptive overview	147
7.1	Bachelor's students' trajectories in German higher education.....	147
7.2	Bachelor's students' trajectories in US higher education.....	153
7.3	Summary	158
Chapter 8	Social origin and students' trajectory patterns at German universities: A sequence-analytical approach	159
8.1	Introduction	159
8.2	The state of research: Social origin and higher education trajectories	162
8.3	Theoretical considerations: How social origin shapes students' trajectories	166
8.4	Data and methods	173
8.5	Results	180
	Results of the sequence analysis: Six higher education trajectory clusters.....	180
	Linking social origin and higher education trajectories: Results of the multinomial logistic regressions	183
8.6	Conclusion.....	195
Chapter 9	Not only enrolment and retention: Comparing students' trajectories through higher education at research universities and universities of applied sciences in Germany.....	200
9.1	Introduction	200
9.2	From vertical to horizontal differentiation: The changing relationship between German RUs and UAS	202
9.3	Theoretical considerations: Why should the trajectories of UAS students differ from RU students?	204
9.4	Data, methods and research strategy	209
9.5	Results	213
	Results of the sequence analysis: Five trajectory clusters.....	213
	Multivariate analysis predicting trajectory cluster: Results of the multinomial logistic regressions.....	215
9.6	Conclusion.....	223

Chapter 10	Social inequalities in higher education trajectories: Comparing Germany and the United States	228
10.1	Introduction	228
10.2	Conceptual framework and hypotheses.....	231
10.3	Data and methods	240
10.4	Results	246
	Higher education trajectories in Germany and the United States.....	246
	Results of the linear regression models.....	246
10.5	Conclusion.....	253

Part IV: Conclusion

Chapter 11	Conclusion.....	258
References	272
List of figures and tables	i
Appendix	iii
Tables	iii
Data acknowledgment.....		viii
Acknowledgement/Danksagung		ix