

PHD CAREERS & COMPETENCES

**A QUALITATIVE ANALYSIS OF PHD GRADUATES
FROM THE SOCIAL SCIENCES AND
HUMANITIES AT AALBORG UNIVERSITY**

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JUNE
2017



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FORORD

Danske universiteter har gennem de seneste 10 år øget optaget af ph.d.-studerende markant, ikke mindst som et resultat af Globaliseringsaftalen fra 2006. Den ambitiøse satsning kan betragtes som et væsentligt bidrag til omstillingen til videnssamfundet med henblik på at sikre højt kvalificeret arbejdskraft til universiteter såvel som private og offentlige organisationer. I 2017 udgav Uddannelses- og Forskningsministeriet en rapport, som evaluerer ph.d.-satsningen, og hovedresultaterne viser blandt andet, at kvaliteten af danske ph.d.-afhandlinger fortsat er på et højt internationalt niveau, at de ph.d.-studerende i langt overvejende grad er tilfredse med deres uddannelse, og at der er tæt på fuld beskæftigelse blandt ph.d.-dimittenderne (<http://ufm.dk/publikationer/2017/phd-uddannelsens-kvalitet-og-relevans>).

Netop beskæftigelse og karriereveje blandt ph.d.-dimittender er fokus for nærværende rapport, idet de Humanistiske og Samfundsvidenskabelige Ph.d.-skoler ved Aalborg Universitet har valgt at arbejde med ph.d.-dimittendernes karriereprofiler som et strategisk satsningsområde i 2016-17. Satsningen består af tre hovedbestande: (1) en registerbaseret kortlægning af de særlige karriereprofiler, som kendetegner ph.d.-dimittender fra humaniora og samfundsvidenskab på Aalborg Universitet ([http://www.phd.hum.aau.dk/digitalAssets/229/229086_146444_where-do-they-](http://www.phd.hum.aau.dk/digitalAssets/229/229086_146444_where-do-they-go.pdf)

[go.pdf](http://www.phd.hum.aau.dk/digitalAssets/229/229086_146444_where-do-they-go.pdf)); (2) nærværende undersøgelse, som, på baggrund af interviews med ph.d.-dimittenter og arbejdsgivere, giver indblik i dimittenternes valg og karriereforløb og i arbejdsgivernes erfaringer med ph.d.-dimittenternes kompetencer (3) og en karrierekonference, som blev afholdt d. 27.-28. februar 2017 i samarbejde med AAU Karriere, hvor bl.a. disse to undersøgelser blev fremlagt for og diskuteret af ph.d.-studerende, - dimittender og arbejdsgivere (<http://www.careers.aau.dk/phdconference>).

I denne rapport udfoldes detaljerede analyser af ph.d.-dimittenders karrierestrategier, hvordan de oplever at kunne anvende deres tillegnede kompetencer, og hvilken status de har uden for akademien. Refleksioner fra arbejdsgivere over ph.d.-dimittendernes særlige kompetencer er ligeledes en integreret del af rapporten.

Vi vil gerne takke Annette Ramussen og Karen E. Andreasen, Institut for Læring og Filosofi, Aalborg Universitet for det gedigne analysearbejde, de har leveret og de interessante konklusioner, de kommer frem til. Til sammen giver den kvalitative og den kvantitative analyse et grundigt indblik i ph.d.-dimittenders karriereveje, som vil være værdifuldt for de to ph.d.-skolers fremtidige arbejde med kvalitetsudvikling af ph.d.-uddannelsen.

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PREFACE

Over the past 10 years, the intake of PhD students has increased significantly in Denmark as well as in other countries considered as a significant contribution to the knowledge economy with private and public organizations gaining wider access to highly qualified researchers. In 2017, The Ministry of Higher Education and Science published an analysis of the quality and relevance of the Danish PhD programme during and after the increased intake of PhD students. The main conclusions of the analysis are that Danish PhD theses meet high international quality standards, the PhD students are satisfied with the PhD programme, and the employment rates of PhD graduates continue to be high and close to full employment (<http://ufm.dk/publikationer/2017/ph-d-uddannelsens-kvalitet-og-relevans>).

Employment and career paths of PhD graduates are the focus points of the present report. At the Doctoral Schools of Humanities and Social Sciences at Aalborg University, PhD graduates' employment and career paths have been a strategic focus area in 2016-17. The strategic focus has resulted in the following three initiatives: (1) a register-based analysis of the career profiles of PhD graduates from the Humanities and Social Sciences at Aalborg University

(http://www.phd.hum.aau.dk/digitalAssets/229/229086_146444_where-do-they-go.pdf); (2) the present report which is based on qualitative interviews with PhD graduates and employers and provides insight into the career paths and career strategies of PhD graduates as well as employers' perspectives on the competencies of employees with a PhD degree; (3) a career conference in February 2017 organized in collaboration with AAU Career, where, among others, the two reports were presented (<http://www.careers.aau.dk/phdconference>).

The present report unfolds analyses of PhD graduates' career strategies, the applicability of competencies acquired during the PhD study, and the status of PhD competencies outside academia. Employer's perspectives are an integrated part of the report. We would like to thank Annette Rasmussen and Karen E. Andreasen, Department of Learning and Philosophy for their solid analytical work and interesting conclusions. Altogether, the qualitative and the quantitative analyses provide valuable insights into the career paths of PhD graduates and form a basis for future quality enhancement of the PhD programme.

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*The analysis is conducted on behalf of the
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RESUMÉ

Der har gennem de seneste år været en markant stigning i antallet af ph.d.-dimittender i både Danmark og internationalt. I årene fra 2003 til 2010 skete der som følge af Globaliseringsaftalen fra 2006 en årlig fordobling af ph.d.-optaget, som et bredt flertal i Folketinget stod bag. Det øgede optag var udtryk for et ønske om at øge investeringerne i forskning og udvikling med henblik på at styrke væksten og innovationsevnen, som uddannelse og ansættelse af flere ph.d.er skulle være med til at sikre.

Stigningen i antallet af ph.d.er gælder generelt og på tværs af fagområder, selvom den er betydeligt mindre på de humanistiske og samfundsvidenskabelige end på de tekniske og sundhedsvidenskabelige områder (Danmarks Statistik, 2014). Udviklingen har givet anledning til spørgsmål om, hvorvidt der findes et arbejdsmarked for humanistiske og samfundsvidenskabelige ph.d.er uden for universiteterne, hvad der får ph.d.erne til at følge de valgte karriereveje, og hvordan de inden for de valgte beskæftigelsesområder anvender og anerkendes for de kompetencer, de har erhvervet gennem ph.d.en.

Disse spørgsmål er omdrejningspunkter for to undersøgelser iværksat af Den samfundsvidenskabelige og Den humanistiske ph.d.-skole ved Aalborg Universitet (AAU). Den første undersøgelse er baseret på kvantitative registerbaserede data og kortlægges i rapporten *Where Do They Go?* (Drejer m.fl. 2016) ph.d.ernes karriereveje og hovedområder af beskæftigelse. Den anden er en interviewbaseret kvalitativ undersøgelse, som går i dybden med ph.d.ernes karrierestrategier, hvordan de oplever at kunne anvende deres tilegnede kompetencer, og hvilken status de har uden for academia. Det er denne kvalitative undersøgelse, som bliver udfoldet nærmere i det følgende.

Den kvalitative undersøgelse følger således op på den kvantitatives kortlægning, der tegner konturerne af et begrænset men meget differentieret beskæftigelsesmarked uden for universitetet. Kortlægningen viser generelt god beskæftigelse for de humanistiske og samfundsvidenskabelige ph.d.er fra AAU, og at

universitetet for disse udgør en relativt større beskæftigelsesmulighed end for tilsvarende grupper af dimittender fra andre danske universiteter. Men den viser også, at andelen, der finder beskæftigelse på universitetet, er faldende i forhold til de andele, der finder andre former for beskæftigelse.

METODE

Den kvalitative undersøgelse består af to typer primære data. For det første er der gennemført tre fokusgruppintervjuer med ansatte inden for de beskæftigelsesområder, der er identificeret som primære for de humanistiske og samfundsvidenskabelige ph.d.er. De hovedbeskæftigelsesområder, som undersøgelsen dækker, er således 1) universitetet, 2) undervisning (uden for universitetet) og 3) andre typer af beskæftigelse uden for universitetet, herunder offentlig administration og forretningservice og finansvirksomhed.

For det andet er der gennemført individuelle interviews med bl.a. udvalgte ph.d.er. Det var med henblik på at få belyst ansættelsesområder og -steder (fx ministerier og forskningsinstitutioner i København), som var vanskelige at få dækket ind gennem fokusgrupperne, samt for at muliggøre mere dybtgående analyser af de enkelte dimittenders strategier og kompetenceområder. Derudover indgår der interviews med arbejdsgivere for ansatte ph.d.er, som repræsenterer ansættelsesområder uden for universitetet.

KARRIERESTRATEGIER

Med afsæt i en forståelse af strategi som afspejlet i karriereveje (Bourdieu, 1997) viser analysen tre hovedstrategier bag ph.d.ernes karriereveje, en 'forblive i forskning'-strategi, en 'mix'-strategi og en 'exit'-strategi. 'Forblive i forskning'-strategien omfatter de ph.d.er, der forbliver på universitetet og fortsætter deres karrierer her. 'Mix'-strategien gælder de ph.d.er, der

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er beskæftiget med undervisning uden for universitetet, typisk på et University College. 'Exit'-strategien omfatter ph.d.erne, der har fundet beskæftigelse inden for områder som offentlig administration eller forretningsservice og finansiell virksomhed og udtrykker et fravalg af academia.

De universitetsansatte udgør i fokusgruppen en relativt homogen gruppe af ansatte, når det gælder den enkeltes position og status. Der er enten tale om en tidsbegrænset postdoc/ad-junktstilling eller en fast lektorstilling, hvilket for den enkelte interviewede selvfølgelig udgør en væsentlig forskel i forhold til oplevelsen af muligheder. Det er et gennemgående tema i gruppen af universitetsansatte, at de oplever det som vanskeligt at balancere mellem arbejdslivet og hensynet til familie- og fritidslivet. Omvendt er det i udgangspunktet de fleksible arbejdsbetingelser og muligheden for fortsat fordybelse i et interesseområde, der har fået dem til at vælge en universitetskarriere. De har valgt at forblive på universitetet og dermed en 'forblive i forskning'-strategi.

Undervisning uden for universitetet vedrører særligt gruppen af ansatte på University Colleges (UC'er). Vejene ind i et ph.d. forløb er for de ansatte på UC'erne forskellige, men rummer også visse fælles træk. Forskellene angår dels de uddannelsesmæssige baggrunde og erhvervs erfaringer, dels finansieringen af selve forløbet.

Efter afsluttet ph.d. forløb er de ph.d.ere, der allerede forud for forløbet, var ansat på et UC, typisk fortsat i andre stillingstyper eller jobfunktioner på ansættelsesstedet, således at der er tale om et avancement i en eller anden form. Der kan f.eks. være tale om stillinger oprettet specifikt til dem, i nogle tilfælde på baggrund af ph.d. afhandlingens emne. Eller det kan være stillingstyper af ledelsesmæssig karakter, f.eks. inden for forskningsledelse. De UC-ansatte, der vender tilbage til samme ansættelsessted, får i vid udstrækning lov til at designe deres jobområde selv. I nogle tilfælde giver det dem mulighed og rum for forskning, men det er meget op til den enkelte at sørge for, at

dette sker. De har valgt en karriere med elementer af både undervisning og forskning, hvilket udtrykker sig som en 'mix'-strategi.

Andre typer af beskæftigelse uden for universitetet omfatter som nævnt hovedområderne offentlig administration samt forretningsservice og den finansielle sektor. Inden for disse hovedområder omfatter den stillingstyper som HR-konsulent, områdechef, chefkonsulent, selvstændig erhvervspsykolog, udviklingskonsulent, direktionsassistent, executive team trainer, seniorforsker og erhvervs-postdoc. Positioner, funktioner og ansvarsområder er på den baggrund ligeså vidtspændende, hvilket også gælder ph.d.ernes veje ind i disse stillinger.

Der er tale om 'exit'-strategier, fordi ph.d.erne i denne gruppe aktivt har fravalgt universitetet. De vælger det fra, fordi de oplever universitetsarbejdet som f.eks. ensomt og kedeligt og ikke bryder sig om at bruge fritiden på at læse fagbøger eller lave reviews på andres artikler. De foretrækker at få et 'rigtigt arbejde' med bedre muligheder for et socialt fællesskab og med opgaver, der er afgrænsede og ikke også overtager en stor del af fritiden. Nogle inden for denne gruppe har prøvet at være ansat på universitetet efter at være dimitteret som ph.d. Men de har oplevet det som utilfredsstillende, hvorefter de har søgt nye veje. I disse tilfælde nævnes det ensomme liv som forsker som hovedårsagen til, at denne vej ikke opleves som tilfredsstillende. De var drevet af et behov for at have 'et rigtigt arbejde', hvor de møder og ser deres kolleger hver dag.

ANVENDELSE AF VIDEN OG KOMPETENCER

Kompetencebegrebet har i sin moderne form baggrund i organisationspsykologien og management-tænkningen og anvendes her som udtryk for den enkeltes evne og beredskab til at klare arbejdets skiftende udfordringer. Dets udgangspunkt er således på det personlige plan, men det omfatter både noget alment og noget konkret (Bernstein, 2000).

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For ph.d.erne sondres der overordnet mellem fagspecifikke og generelle kompetencer. De fagspecifikke kompetencer vedrører det faglige område og genstandsfelt, som ph.d.-studiet har handlet om. Det vil sige faglig indsigt i den viden og de metoder, som vedrører studiet af en bestemt faglig disciplin. De generelle kompetencer omfatter, som udtrykket indikerer, det generelle og almene som ikke blot vedrører det enkelte fag. De er personlige og kan overføres til andre fag- og beskæftigelsesområder, hvorfor de også sommetider benævnes generiske kompetencer (OECD, 2012).

De universitetsansatte ph.d.er bygger i deres karriere videre på den fagspecifikke viden, de har udviklet gennem ph.d.-studiet. Det gælder særligt fagets metoder og teorier, men det er som regel ikke det helt specifikke forskningsfelt. Derudover har de særligt brug for kompetencer inden for formidling og projektstyring. De ph.d.-ansatte inden for undervisning, herunder især på university colleges, gør brug af både deres fagspecifikke viden, forskningskompetence og deres generelle kompetencer. Specifikke forskningsmetoder og kritisk undersøgelsesarbejde nævnes således som særligt væsentlige elementer inden for universiteterne og forskningsverdenen, herunder university colleges og andre forskningsinstitutioner end universiteterne. Men for ansatte inden for disse hovedbeskæftigelsesområder udgør kommunikative og formidlingsmæssige kompetencer også væsentlige elementer fra ph.d.-studiet, som de trækker på i deres nuværende virke.

Ph.d.-ansatte inden for andre områder – offentlig administration og forretningsservice og finansvirksomhed – anser først og



fremmest de generelle kompetencer som vigtige for deres opgaver. Personlige relationer, personlige kompetencer og udvikling, projektledelse og styring, kritisk dømmekraft samt pragmatiske evner til at balancere i forhold til praktiske omstændigheder og ressourcer nævnes som væsentlige egenskaber inden for disse typer af beskæftigelse. Det er sådanne generiske kompetencer, som informanterne fremhæver som helt centrale i deres aktuelle virke, og som de oplever at kunne overføre fra ph.d.en til deres nuværende arbejdsområder.

De personlige og generiske kompetencer ser ud til at spille en særlig vigtig rolle for de ph.d.er, der er beskæftiget inden for konsulent og ledelsesområdet. De specifikt faglige kompetencer virker tilsvarende mere underordnede i sådanne sammenhænge, selvom det inden for fagområder som f.eks. kommunikation og psykologi kan være vanskeligt at skelne mellem den fagspecifikke og den personlige viden.

ANERKENDELSE OG STATUS UDEN FOR AKADEMIA

Hvilken status, der inden for de forskellige ansættelser er forbundet med at have en ph.d., viser sig tæt forbundet med, om en ph.d.-grad som udgangspunkt er nødvendig for at få den pågældende stilling. Hvis ikke det i udgangspunktet er påkrævet at have en ph.d., er der flere eksempler på, at ph.d.erne skal 'bevise deres værdi' i mere praktisk henseende for at opnå anerkendelse for deres kvalifikationer.

De interviewede arbejdsgivere uden for universitetet ser ph.d.erne som en stor ressource, hvad angår forskning. Ikke mindst på UC'erne efterspørges flere ph.d.er. Det er dog

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ph.d.erne generelle kompetencer, som arbejdsgiverne anser for vigtigst. Der er bred enighed blandt de interviewede arbejdsgivere fra både UC-området og fra forretningsservice og finansområdet om, at de generelle kompetencer er vigtigere end de fagspecifikke kompetencer.

I visse sammenhænge er en ph.d. forbundet med og giver en særlig markedsværdi, idet den kan bruges til at markedsføre en viden eller én selv som ekspert på et særligt område. Der gælder særligt beskæftigede inden for konsulentbranchen. Der er også en særlig status forbundet med ph.d.en for dem, der arbejder inden for undervisning. Det skyldes, at en ph.d. forbindes med teorier og abstraktionsevne, som er velanset inden for de fleste undervisningsmæssige sammenhænge. Dette ser ud til at gælde for alle typer af undervisning, som ph.d.erne indgår i uanset niveau. Men som regel handler det også om undervisning på et højt niveau, professionsuddannelser, hvor der er behov for deres teoretiske kompetencer.

Uden for universitetet oplever de ph.d.-ansatte i vid udstrækning anerkendelse for deres kompetencer. Dog er det forskelligt, i hvilket omfang de i deres ansættelser får mulighed for at forske. Ud fra arbejdsgivernes perspektiver er det særligt ph.d.ernes generelle kompetencer, som de har brug for i beskæftigelsesområder uden for universitetet.

Kompetencemæssigt giver de fleste ph.d.er udtryk for, at de oplever et godt match mellem de kompetencer, de har tilegnet sig gennem deres ph.d. og har brug for i deres ansættelse. De har som hovedregel ikke oplevet det som vanskeligt at finde beskæftigelse uden for universitetet. Tværtimod har ph.d.-graden åbnet døre og muligheder, endda nogle, som ph.d.erne ikke på forhånd havde været opmærksomme på. Det er i særlig grad de generiske kompetencer, som giver dem en oplevelse af at kunne overføre viden og færdigheder fra ph.d.-forløbet til beskæftigelsesområder uden for universitetet.

1. INTRODUCTION

From 2003 to 2013, the supply of PhD graduates from Danish universities increased by 91 per cent across all disciplines. PhD graduates from the technical and health sciences account for more than half, and the humanities and social sciences account for 18.7 per cent (Statistics Denmark, 2014). The increased supply was the objective of a growing investment in research and development, stated in the Globalisation Agreement from 2006, which was broadly supported by a majority in Parliament.

This development is based on the premise that public and private firms will demand and hire PhDs as part of an increased orientation towards research and development. This presupposes that the universities make sure that the PhDs achieve more general competences during their PhD study and are prepared for both university and non-university employment (Golovushkina and Milligan, 2013; Brown et al. 2003). The OECD addresses these considerations as follows:

- The formation and careers of researchers are important policy issues and training for transferable skills – skills that apply in a broad variety of work situations – is a challenge that attracts increasing policy interest. [...] Researchers today need skills relating to communication, problem-solving, team-working and networking, and business and management know-how. These give them workplace competencies that are relevant for a broad job market, although the skills they need may vary in different sectors. (OECD, 2012, p. 8)

A recent report from The Ministry of Higher Education and Science (2017) with reference to the Globalisation Agreement from 2006 also describes the aim of increasing the number of PhDs to ensure the supply of highly qualified employees to the public as well as the private sector (Uddannelses- og Forskningsministeriet, 2017, p. 15). Thus, the increased supply has been accompanied by expectations that PhD graduates to an increasing extent find employment outside the university sector.

In 2009-2015, there was a general increase in the number of job advertisements requesting PhDs in the private sector (Ibid, p. 18). However, for PhD graduates from the humanities and social sciences, compared to other disciplines, the frequencies of employment in non-university sectors are relatively lower. This raises questions about whether there is a non-academic labour market for PhD graduates from these faculties; what makes the PhDs choose different career paths; how they use their PhD competences; and how are they considered useful on the labour market?

Such questions have led the Doctoral Schools at the Faculties of Social Sciences and Humanities at Aalborg University to initiate analyses of the career paths of their PhD graduates. The first question was addressed in a quantitative survey, which was completed and reported in 'Where Do They Go?' (Drejer et al. 2016). The next three questions are addressed in a qualitative study, which is the focus of this report and is designed as a follow-up on the quantitative survey findings.

According to the survey, universities remain the largest sector of employment for PhD graduates from the humanities and social sciences. PhD graduates from Aalborg University were even more likely to find employment at a university than PhD graduates from the other universities. The second-largest sector of employment for both groups is teaching. Other main – though much smaller – sectors of employment include public sector



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administration and business services and finance. It appears, however, that fewer PhD graduates find university employment, not necessarily because the number of university positions is decreasing, but maybe because the PhDs to an increasing degree look and apply for jobs elsewhere.

On this background, it is relevant to further question why the PhD graduates find employment where they do and how they use their PhD competences in their jobs. To illuminate these areas, more in-depth knowledge on the career opportunities and choices as well as on the demand and use of the special competences acquired during the PhD study is required. Therefore, the qualitative study asks the following research questions.

1. What are the strategies behind the different career paths of PhD graduates from humanities and social sciences at Aalborg University?

- a. How do they find employment?
- b. What reasons do they have for their choice of career paths?
- c. Which backgrounds (age, discipline, experience, family etc.) feature in the different careers?

2. How do the PhD graduates apply competences acquired during their PhD study in present jobs?

- a. What types of competences have they developed during their PhD study?
- b. How do they draw on PhD competences in their jobs?

3. What is the status of the PhD in different areas of employment?

- a. How do the employers value the competences of the PhDs?
- b. How do the PhD graduates experience the value of their PhD?

The three main questions are open, qualitative and descriptive. They examine from the perspective of the PhD graduates what strategies of career paths they have followed and how they use their competences. The third question about the status of the PhD in different areas of employment is analysed both from the perspective of the PhD graduates and the employers.

Research design and methods

The first part of the data collection was to carry out focus group interviews with PhD graduates from the major sectors of employment. The interviews addressed all the research questions from an insider perspective to provide preliminary insights into the PhD graduates' experiences in the different sectors of employment and the application of their competences. They further included a dynamic perspective – the mutual inspiration of the focus group members – to bring up new and unforeseen themes. Informants for three focus groups covered the following main sectors of employment:

1. Universities
2. Teaching (not university)
3. Others; including public sector administration and business services and finance

The groups consisted of four to six persons – PhD graduates now working and living in Denmark – who had graduated within the last 3–6 years from Aalborg University. They were strategically selected to represent the variety of disciplines at the faculties of Humanities and Social Sciences, to represent the above-mentioned main sectors of employment and a variety of job functions and titles, different regions of residence, and men and women of different ages.

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The participants were found by consulting the PhD Manager system for PhDs graduating from Aalborg University. They were contacted from May 2016 and until October 2016, when the last interview took place. The focus group interview sessions were carried out during the months of August (two of them) and October (the last one) and took place at Aalborg University. All focus groups were video recorded and fully transcribed. The total number of participants in the focus groups counted 16 persons. The individual interviews were considered necessary to obtain a deeper understanding of the background experiences and context in relation to competences and preferences behind the particular career path. It was also a way to assure a broader representation of people in the 'Others' sector of employment, as it was particularly difficult to recruit informants (only four had been recruited) for this focus group. The interviews were conducted in September-October 2016, audio recorded, and transcribed in full. Six PhD graduates were interviewed individually at their job location.

To supplement the insider views of the PhD graduates, five employers from some of the main sectors of employment were interviewed. Three of them also had a PhD. The interviews were either video or audio recorded and partly transcribed.



SELECTION OF INFORMANTS

The ambition was to cover the major sectors of employment and to have a fairly equal representation of graduates from both faculties of Social Sciences (S) and Humanities (H), of men and women, of different ages, and different regions of the country, including North Jutland, Mid Jutland and Copenhagen. Recruiting people for the focus groups was somewhat difficult, and the number of focus groups was reduced from four to three, each group was smaller than planned, and the variety of PhD disciplines was not covered completely (e.g. law was not included). Likewise, it was hard to recruit employers for interviews, so not all sectors of employment are represented.

Names of persons are deleted, and the PhD informants are referred to by gender (F or M), age (year of birth), job position, and faculty belonging. The PhD employers are referred to by means of position and organisation of employment. This is to assure the informants' anonymity in the report so that the personal information given cannot be traced directly back to any named person.

The informants – interviewed in focus groups or individually – are listed in the following tables. PhD informants in table 1; employer informants in table 2.

PHD CAREERS AND COMPETENCES

Table 1. PhD informants

Faculty	Department	Job title	Gender	Age	Region
S	Sociology	Postdoc	M	1982	North Jutland
H	Learning	Associate professor	F	1968	North Jutland
H	Communication	Associate professor	F	1974	North Jutland
H	Communication	Assistant professor	M	1983	North Jutland
S	Sociology	Assistant professor	F	1975	North Jutland
S	Pol. Science	Associate professor	M	1981	North Jutland
H	Learning	UC Associate professor	F	1966	North Jutland
S	Learning	UC Associate professor	M	1955	North Jutland
S	Pol. science	UC Assistant professor	M	1959	Mid Jutland
T ¹	Planning	UC Associate professor	M	1959	Mid Jutland
H	Communication	Folk high school teacher	M	1974	North Jutland
H	Communication	Independent consultant	M	1979	North Jutland
S	Business	Industrial postdoc	F	1979	Mid Jutland
S	Learning	Human resource consultant	F	1965	North Jutland
S	Culture	Development consultant	F	1979	North Jutland
S	Political Science	Principal in ministry	M	1979	Copenhagen
S	Learning	Executive assistant	M	1982	Mid Jutland
H	Communication	Executive team trainer	M	1976	Mid Jutland
S	Sociology	Human resource consultant	F	1984	Mid Jutland
S	Sociology	Head of department	F	1967	Copenhagen
S	Political Science	Evaluation consultant	M	1984	Copenhagen

Table 2. Employer informants

Faculty	Organisation	Gender	Region
Head of Analysis and Research	National research institute/a	F	Copenhagen
Head of Division	National research institute/b	M	Copenhagen
Head of Department	Region	M	North Jutland
Head of Social Work Training	University college	F	Mid Jutland
Head of Research	University college	M	North Jutland

The interview quotations have been edited in the process of translating from spoken to written language to condensate the meaning and to facilitate the reading and understanding of the interview expressions as a written text. For example, incomplete

words or sentences and repetitions have in some cases been omitted because they disturbed more than clarified the meaning of the quotes.

¹ The department of planning belongs to the Technical Faculty, but the PhD project was located in social sciences.

OUTLINE OF THE REPORT

Analyses and discussion of our findings are reported in the three following chapters.

Chapter 2 focuses on the first question about the strategies behind the PhD graduates' career paths, as to their application and recruitment for their present position. The narratives focus on examining from the PhD graduates' points of view the reasons for and routes to their positions of employment.

Chapter 3 examines the PhD knowledge and competences that characterise the different careers; what types of knowledge did the PhD graduates develop in their PhDs; and what competences and relations do they draw on – in and outside of university – in their PhD and continued career. Thus, we deal with PhD competences in practice and discuss the various types of knowledge and competences which are at play.

Chapter 4 examines what functions and status the employers ascribe to the PhD holders in their organisation. Second, it takes on the perspective of the PhD graduates as to advantages and disadvantages of being a PhD in present job.

Chapter 5 sums up the findings and concludes on the research questions.



2. CAREER PATHS AND STRATEGIES

As appears from the recent numbers in 'Where do they go?', 60 per cent of the PhD graduates from the social sciences and humanities at Aalborg University find employment at a university (Drejer et al. 2016, p. 45). The other major sectors of employment include teaching at other institutions than universities (social sciences: 15 per cent, humanities: 11 per cent); public sector administration (social sciences: 10 percent, humanities: 4 per cent); and business services and finance (social sciences: 4 per cent). Thus, it has already been investigated at a more general level and in measurable details which numbers and proportions of the PhD graduates go where.

But what are their reasons and circumstances for going to these sectors of employment? This question frames the content of the following chapter and the concept of strategy, which equals positioning. Strategy depends on practices that result from a habitus objectively fitted to the objective structures by which it is produced. In other words, it refers to the socialised subjectivity of acquired schemes of perception and taste, which dispositions agents differently according to their possession of capital in all its forms for following different career paths (Bourdieu, 1997). Thus, how people find employment is a complex question which must be seen in relation to the more specific circumstances related to the person, discipline and social context. Accordingly, we provide answers from the different positions, starting with the main industries of employment of universities and university colleges and moving on to the minor industries of employment of public sector administration and business services and finance. The structure of the chapter follows the logic of two sequences. First, the PhD narratives describe the paths from graduation to employment. Second, we identify background features across the examples, including questions of mobility, work-life balance, and job satisfaction and community. On the basis of our findings and the above-mentioned concept of strategy, we construct a typology of PhD career strategies.

CAREER PATHS INTO UNIVERSITY

The doctoral degree in principle opens the door to a continued university career for anyone interested. But whether the dreams of a university career come true also depends on other circumstances – both internal and external – at the university. That is, if the PhD graduate after graduation still wishes to pursue this type of career.

In the following, we outline the process into continued university employment from the perspective of two PhD graduates who differ in terms of gender, age and faculty belonging.

One of the PhDs tells us that the employment decision was fairly straightforward,

- There was a position advertised for me. But then we had this freeze on appointments three years ago. So suddenly, when I had only half a year to go before my PhD defence, it was taken off again. And then I had to hurry up and write some postdoc applications and find some funding. Well, that really was a new situation which wasn't ... But it was a planned continuity, which I suppose it is in most cases (M, 1982, Postdoc, Soc.)

The PhD quoted here takes it almost for granted that PhDs want a career as researcher. But his career path was not without obstacles; there was a freeze on appointments at university, which meant that an expected vacancy was not announced. This made him briefly reconsider his choice of career and apply for an alternative position at a university college. But even though he was invited for a job interview he did not get it. Then he was doing some critical reflections on following a university career path and if he really wanted this, asking himself

- Do I really feel like staying here? That is, do I feel like staying for another three years and then again wait for ...; will there be an associate professor position or not? That's what I find extremely frustrating (M, 1982, Postdoc, Soc.)

PHD CAREERS AND COMPETENCES

He had such considerations just before he received the grant which paved the way for his present postdoc position. But in spite of frustrations and uncertainties about obtaining university tenure, he had no doubts about going into a postdoc,

- ... Well I had known all along. It wasn't an orientation/about finding a way, I knew where I wanted to go, that is. The PhD formed part of becoming a researcher. (M, 1982, Postdoc, Soc.)

The PhD was part of a large research project about masculinities, safety, and work-related accidents. It was based on a qualitative study which he had been encouraged to apply for. He found great inspiration in his PhD fieldwork, which he later used to adopt a slightly different perspective, formulating a new research project, applying for, and obtaining a postdoc grant. Thus, the PhD was a first important step in getting a research position at university, and he had known all along that this was where he wanted to go.

The other PhD graduate, who has earlier been following another career track, finds that the career tracks at university lack transparency. She has just qualified for a position as an associate professor, which she is now entering. She describes the process of qualification as complex,

- I find the path from the PhD to where I am today problematic, because it's actually quite unclear to me what it takes to get there. At least it's my experience, what does it take to get on? Quite precisely, how many publications are needed? How do I prove my field of research to become an associate professor? (...) (F, 1968, Associate Professor, Hum.)

It appears to be a complex interplay of different tasks and weighing them up against each other, in addition to strategic and practical interests, which decide whether you will obtain employment at university. To her it is quite obscure what you can do to ensure continued employment.

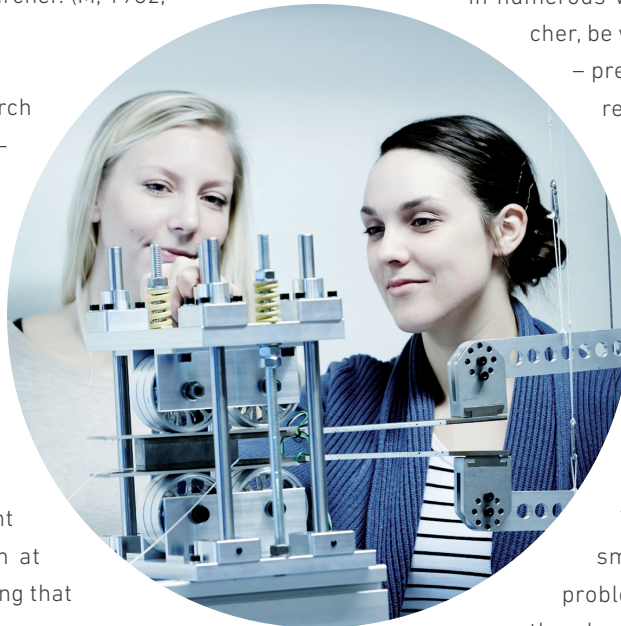
- People who work at a place like this are very perfectionist in numerous ways (...) You want to be a good teacher, be well prepared, prepared for meetings – prepared for everything. But where there's force of action that's what takes your time. So publishing comes up at night when you're undisturbed. (F, 1968, Associate Professor, Hum.)

The endlessness of knowledge work where you can always do things a little better is to some degree experienced as challenging by all of the interviewed PhDs in university employments.

The three male informants all have small children and find that it can be problematic to have enough time. On the other hand, children and family obligations seem to help them frame their work life. They still problematize the endless knowledge work, which makes great demands on their time – too much if you are not careful. This is felt in particular for the ones who have no small children to pick up and attend to, because then you have no one to keep you from continuing to work.

As motivation for a university career she mentions,

- (...) if sometimes you find that you've actually made a difference somewhere. That's what makes you want to continue (...). Somewhere it's also about knowing different language games in relation to communicating research findings. That's a competence from the PhD which has been really useful for me.



PHD CAREERS AND COMPETENCES

Also, when it comes to teaching and supervising students, such as having some communication skills in ways of identifying and presenting a problem. To initiate and enter a dialogue in finding out where the problem is. (F, Associate Professor, Hum.)

Her PhD project was about innovation in the public sector and networks. She was making research on how cooperation on innovations takes place and changes the welfare state. The research formed part of a large research project in collaboration with three other universities in Denmark, which also meant she had to spend a lot of time communicating and presenting her work in such networks. Accordingly, there is a great deal of interplay between the research, communication and teaching activities, resulting from her PhD, and the work she is doing now. The strategies behind the university careers are characterized by dedication to research. The two PhD graduates are clearly driven by ideas and methods developed in the course of their PhD and opt for strategies of remaining at university.

CAREER PATHS INTO PUBLIC SECTOR ADMINISTRATION

Public sector administration is the second largest sector of employment for the social sciences PhD. According to the most recent developments in employment patterns for PhDs from AAU (Drejer et al. 2016, p. 45), 10 per cent of the PhDs from the social sciences find employment in the category of public sector administration compared to only 4 per cent of PhDs from the humanities.

This area of employment can be roughly divided into three levels: municipal, regional and state/ministry administration. We interviewed three PhDs representing these three levels. In the following we describe their career paths.

Employed in a municipal department

This graduate did an Industrial PhD in social work and had expected to continue the cooperation with the company financing

her PhD. Based on the results from her PhD, she tried to develop a strategy for the company which would include her as an employee. But the company was not willing to engage in this new project.

Discouraged by this, but encouraged by personal relations, she decided to apply for a managerial position in Copenhagen Municipality. Although she had not envisaged herself in a managerial position, she found out that this was an ideal way to use her competences,

- I know that sometimes you might say that if you've done a PhD then you're managing yourself and some processes. But it's something else to be a manager for other people. But earlier, before studying for the PhD I did some developmental work, which I had to coordinate. That's how you also develop some competences, by managing or starting up some processes and facilitating some work. And that's what I've been interested in; developing and running organisations. So, it wasn't far away for me. But I never imagined that it would be like this and in this way, so that's very much a matter of chance. (F, 1967, Manager of Municipal Department, soc.)

As manager of a municipal department she draws on competences achieved at university; not directly through the PhD study but rather from initiating and coordinating other research and development tasks.

She obtained the position by written application. The advertisement concerned a position in a social services department, which was different from the one she had anticipated in her PhD process. But the job appealed to her, because she found it interesting in relation to the topic of social work in her PhD. Reflecting on the process from PhD graduation to this employment, she finds that the new direction has contributed a lot to her personal development.

PHD CAREERS AND COMPETENCES

Employed in a regional department

This PhD had worked with human resource management in her PhD and now works with human resources in a regional department. Despite a keen interest in her discipline of study, she did not go for a continued full-time university career, because

- (...) I knew that I wasn't good enough. It was obvious to me how much the others liked reading and doing paper reviews in their leisure time and that didn't interest me. So it would be a tiresome work life if it didn't amuse me. So it was clear to me that I shouldn't and I still have the gut feeling that it's the right decision. That being said I'm still affiliated as an external lecturer at the department. (F, 1984, Human Resource Consultant, soc.)

She found the position as human resource consultant at a regional department through a public announcement, for which she applied. She had been keeping an eye open for upcoming positions in this particular region because it was close to her home. She did not want to travel too far or work in the private sector, which she associates with,

- It's very much performance and sales – that you have to be selling tasks (...) – consultancy at its worst. I didn't feel like it and I'm not good at it (...). But I've still got small children so that's another reason for me to prefer being employed in the public sector. When you've got children and days lost through illness, flexible hours and all that. (F, 1984, Human Resource Consultant, soc.)

But it was not all that easy to find a 'normal job' as she calls it. The feedback on some of her applications was that she was overqualified and expensive due to her senior status in work life while at the same time she did not have practical experience with human resource management. So compared to fellow applicants she was entitled to a high wage but too inexperienced.

In addition to her employment in the region she is external lecturer at university, which she explains as a way of keeping a door

open to the academic life. As one of her reasons for not wanting to continue her university career after PhD graduation was that she did not consider her competences good enough, she works to improve and gain more experience in lecturing. Unsure about what she wants to do in the future, she is keen to maintain good relations to the university and to her colleagues here. She is asked to lecture on themes related to her practical experiences, which allows her to combine theory and practice in ways that she finds stimulating for her own competence development,

- To be aware of the newest theory within the field and being part of the research group, I like being involved in empirical work and the world of research. So I prefer to be in the middle between theory and practice as much as possible (F, 1984, Human Resource Consultant, soc.)

She likes the interplay between theory and practice and sees it as an opportunity to develop at university. On the one hand she is attracted by and interested in keeping a door open to university and academic life, on the other hand, she is discouraged by the 'low action orientation' of it.

Employed in a ministry

For a PhD graduate from the political sciences, employment in one of the Danish ministries seemed like an obvious choice. He applied for a temporary position to replace someone during maternity leave. It was an open call, for which he had to send a written application and he applied on equal terms with everyone else. He did not have any relations or recommendations from the ministry beforehand, but 'was just lucky to get the position'.

He started as principal in the Ministry of Economic and Interior Affairs in April. But due to reorganization of the ministries after the election, he was transferred to the Ministry for Social Affairs, where he now works in the department of social policy. Basically he works with servicing the ministry, which means taking minutes, drafting policy proposals, writing speeches, and general ministry work.

PHD CAREERS AND COMPETENCES

He describes himself as 'fairly open in his application for jobs'. He knew all along that he would like to work in a political administration, which could also have been in a municipality. But he was sure that he did not want to continue a university career after the PhD,

- I found that the PhD life was a lonely affair. And I found it extremely hard that I was left so much on my own (...) in a way I didn't feel like continuing. (M, 1979, Principal in Ministry, soc.)

He associates a university career with loneliness, which is what he experienced during his PhD. Work life in the ministry suits him better, because of teamwork and networking, which he missed at university. Besides, he likes the opportunities for development which follow from external and internal reorganisation, moves and changes in the ministry.

Moving from Aalborg to Copenhagen for the job matched his taste for moves and challenges. He had also deliberately moved from the south of Denmark to study in Aalborg, and after PhD graduation made this next major move. As he is single and not tied by a family in Aalborg or elsewhere, he is 'free' to make such moves.

CAREER PATHS INTO BUSINESS SERVICES AND FINANCE

According to the most recent development in employment patterns (Drejer et al. 2016, p. 45), business services and finance only account for 4 per cent of the employment of the social sciences PhDs, and the percentage is even lower for the humanities and therefore does not figure in the statistics.

Understanding why so few PhDs choose employment in the private labour market is of specific relevance. Is it related to their competences or are there other reasons?

We identified a number of PhDs who work in business service and finance and asked them about the reasons and circumstances.

The five informants are employed in industry, self-employed consultancy, business development, research and development, and research institutes.

In general, they describe this as a very deliberate choice of work tasks and conditions. For some it was also a deliberate exit from academia. One found working as an assistant professor tedious; another did not like academia. There were other work areas that they found more attractive.

The dominant reasons among these PhDs seem to be that the work tasks and conditions in business services and finance appealed to them and matched their competences. It is decisive that the competences developed in the PhD are transferable to other areas. In the following we give some examples of PhD employment areas within business services and finance

Self-employed in consultancy

Two of the interviewed PhDs are self-employed consultants. Both have a Master's in psychology, followed up by an Industrial PhD focused on their present area of consultancy. We describe them in turn in the following.

In the first case, the self-employed PhD had been offered different positions within business consultancy. None of them seemed right to him, because he did not want to work in Aarhus and he did not feel in urgent need of a job. He was doing a lot of freelance work already and was considering going independent. This would be possible if he could scale up the work he was already doing into more tasks. He decided to do it because it allows him to take on tasks that he found exciting and was enthusiastic about.

He became a parent when he was finishing his PhD and was forced to plan and manage his time by himself. He was not 'hooked on a game' where he had to work very long hours during the week. Recalling the time right after graduation, he contemplates that,

PHD CAREERS AND COMPETENCES

- I actually experienced a need for some time where I could get back into my subject discipline, psychology, and where I would not necessarily work with only research-related tasks. And then I had the privilege of being able to take some time – some months – where I only took on tasks that were not strictly research-related but which involved the kind of classic, basic psychological work in a positive sense. (M, 1979, Independent Consultant, hum.)

He was not put off by the risks of being self-employed, like overwhelming workload and long work hours,

- That I found more easily manageable. It might've been an illusion or it was just the experience of – well, being able to manage the PhD process – I'll also be able to manage this. And then I had the need to do something somewhat different for some time. (M, 1979, Independent Consultant, hum.)

He does not consider self-employment a risky business in the sense that one could end up being unemployed. The other PhD candidates in the focus group also agree that something else would come up; they do not appear preoccupied with the risk of unemployment or failure, but rather display a positive spirit that something will always come up.

In the second case, the PhD had worked at consultancy and development firm. He had been employed as a consultant all along doing his industrial PhD and thereby obtained a certain advantage in 'finding' employment afterwards,

- You could say that when I completed the PhD it was very easy; it wasn't much of a difference. It wasn't about going looking for a new job. Well, I just stayed in the job I had, and you could say that my career path was to succeed at what I was doing. To be successful, to generate a good reputation and to create attention, new customers, and new tools that were useful for our customers and our consultants. Start up new PhD projects and so on. (M, 1976, Executive Team Trainer)

Thus, he did not actually look for employment to 'find it', but rather explains his own PhD career as the beginning of a successful career of expanding business by using the advantages the PhD gave in relation to the business of consultancy.

Employed in business development

This PhD has ventured into local development in a small business foundation, which works to develop tourism, after temporarily pursuing a university career. She applied for an assistant professor position and stayed in it for about a year. She quit because,

- (...) it was just extremely boring, I found; and I remember how lonely I felt. So, I decided to quit, because otherwise it would get me down. And I had been thinking all along, writing my thesis, that it had to be useful for practical life, in business. In a way, I was lucky to have this mind-set, because it made it relatively easy to go elsewhere. And in Northern Jutland there's a lot of focus on tourism and attracting highly skilled people into this business, so... (F, 1979, Development Consultant, hum.)

She felt extremely lonely and that she did not have 'a real place of work with an environment which to a higher degree connects socially to private or public life'.

After about six months, she found a job at a now defunct regional organization. She was there for about a year, or the duration of a temporary maternity vacancy, which was the condition of the job. Then she was recruited for a position in a municipal business department, where she worked closely with the political level and worked out business development strategies and action plans. She was then hired as a project manager for the energy and resource policies, which took her in a very different direction.

While working for the municipality, her present employer invited her to come and work there. She finds that her career path has offered her a good flow where each employment has given her competences that have helped her proceed into the next step of her career.

PHD CAREERS AND COMPETENCES

Employed in research and development

The drive of this PhD was to find employment in a company working with sustainability. As an Industrial PhD, she had worked closely with a company, and she was determined to find employment outside the university sector,

- Both my parents are in academia. So that's the last thing in the world I'd want to do with my life... (...) I simply contacted all the firms working with sustainability, and one of them hired me as a sustainability consultant. So, I've worked on developing a sustainable strategy for them and on a project which has just been accepted for industrial postdoc support from the Innovation Fund Denmark. (F, 1979, Industrial postdoc, soc.)

She uses her parents' university careers as examples of what she did not want to do. With the Industrial PhD it was natural to seek continued employment in the company she had been cooperating with during the PhD. Its main activities are located in England where she was offered a job after her PhD graduation. But with a small daughter and a husband who would have to give up his career to move to England, she did not consider it a viable option. Instead, the family moved to Aarhus, where her husband could realise his visions of employment and she started her search for a career.

Employed at a research institute

The PhD had applied for two different positions at the research institute and was offered both. He had also been offered a third position in a large, private consulting company. However, he chose the research institute, which he ponders was 'probably a good decision',

- (...) because of the hours and the freedom of choice in research methods and such things. I wouldn't have fitted into the other job (...) they sent me a very bad contract, for example without paternity leave. (M, 1984, Evaluation Consultant, soc.)

The terms of employment at the national research institute appeared more favourable. He adds that his present position appealed to him because he identifies strongly with its elements of methodology, development, and consultancy.

Another PhD graduate who works for a different national research institute describes her path into employment here as one of several bypasses. At first, she opted for continued employment at the department at Aalborg University where she was doing her PhD. Then she moved to the Copenhagen department and then on to one of the other universities in the Copenhagen area, where she had a postdoc position for three years. After that she applied for a researcher position outside of university, as her position here was coming to an end.

After the PhD, she expected to continue doing research. It appeared natural to her to follow that path, and which happened to be possible,

- I've been lucky surfing this wave of quality and evaluation, which has been part of education policies for the last 10 years. I just remember the day I arrived at the department with this PhD project about quality and evaluation, the head of department was just so fond of it. I realized from day one that this was a research topic that was highly valued by the department to have some capacity within. (F, 1979, Senior Researcher)

The subject knowledge of her PhD project appeared to be well coordinated with the strategic moves of the university department. But this was a coincidence rather than a deliberately strategy. She considers herself 'lucky' to have chosen a research subject that enjoyed goodwill from the head of department. This assured her that there would be a place for her in research, which has been a determining factor in her choice of career.

PHD CAREERS AND COMPETENCES

BACKGROUND FEATURES

In the following, matters of concern across the examples are discussed. There is a variety of reasons across the examples for entering the particular areas of employment. Matters of concern include considerations of mobility, work-life balance, job satisfaction and community. Further there appears to be some major distinctions between the types of knowledge relevant to the different career paths; this dimension will be further elaborated in the next chapter.

Mobility

Aalborg University is a regional university in the sense that it attracts a large population of students from the local area. Unlike the older universities of Copenhagen and Aarhus, Aalborg University attracts a larger group of students whose parents have not taken a university degree, namely 80 percent compared to 50 percent at University of Copenhagen (Djøfblad, 2013). This group of students tend to choose the university closest to where they live (Thomsen et al. 2007).

Mobility plays a role in a variety of ways and with different outcomes in relation to career. Some PhD graduates wish to stay in the local area, close to Aalborg, which then determines their choice of employment. Sometimes the local area reaches further, to Aarhus or elsewhere in Jutland. Those without family or partners in Aalborg have planned to move with the job, for instance to Copenhagen. Most of them are young and have not yet started a family or their family is there.

When the PhDs have a family, partner and/or children, it affects where they can accept employment. One PhD has to say no to a position abroad because it is not compatible with her partner's career. To start up a family with children can also be a reason for going into the PhD because it can be a way to increase flexibility of work life, which some examples show.

Work-life balance

The PhD graduates employed at university find it particularly challenging to find the right work-life balance. Family relations and small children are sometimes mentioned as a way of keeping the work life in balance. Some mention that small children help them keep their working hours down. But for this group, work tends to take up too much time.

Within other groups of employment, long working hours are also an aspect of their work life. The executive assistant, who works in a private sector business, usually stays on after normal working hours; partly because of international contacts in other time zones; partly because he finds his job interesting.

Flexibility of work is an attractive value mentioned by the consultant who chooses to go independent to obtain flexibility in work conditions and by the public sector employee who finds that her job in the region allows time for a family life and small children unlike a university career.

Job satisfaction and community

Although a PhD is an obvious first step into the direction of a researcher career path, it is not the only one. And other steps might alter the direction so that the PhD graduates end up in other career paths. Some experience life at university as very dissatisfactory and then look for other ways to go. The ones that have found employment outside university mention the lonely life as a researcher as an important reason for leaving university as a career path. They missed having a 'real job' and a more social atmosphere at work.

Frustrations about the university career also include the slow process of climbing the career ladder and the long way to obtaining tenure. PhDs employed at university ask for more transparency as to what it takes to obtain a tenured position, which they experience as a complex interplay of strategy, practical matters, and chance.

PHD CAREERS AND COMPETENCES

SUMMARY: CAREER STRATEGIES

The analysis shows three main strategies for PhDs' career paths: a 'remain strategy', a 'mixed strategy' and an 'exit strategy'. The remain strategy applies to the PhDs who continue their employment and thus remain at university. The mixed strategy applies to the PhDs who are employed in or obtain employment in teaching and research outside of universities, typically at university colleges. The exit strategy applies to the PhDs who deliberate opt out of academia and venture into other types of employment. It is important to emphasise that the concept of strategy applied here diverges from an economic understanding of strategic action as resulting from deliberation in a rational choice sense or as driven by narrow economic interest (Bourdieu, 1997). Strategies in the above analysis involve decisions of a reflexive character as they are priceless practices that have a price (ibid.), and as such they involve considerations of the circumstances offered, of background features, and of the gains and losses incurred by pursuing the particular career.

Thus, decisions on employment involve such considerations. For those pursuing a career in the university sector, acquiring the PhD is a critical requirement. However, there is a common understanding across the sectors that the PhD is only a necessary first step. A general concern among the interviewed is how to develop sufficient additional research contributions as well as their teaching competences. The work-life balance of PhDs in this situation is typically challenged. Despite challenging work conditions, the PhDs employed at university are pursuing a 'remain strategy', as they are primarily concerned with continuing their research career here.

The PhDs employed in teaching typically work at university colleges. Most of the interviewed PhDs employed at UCs also started their careers here, i.e. they were employed at a UC while studying for the PhD. These PhDs typically continue their career at the university college after graduation. However, as a consequence of their new status they are expected to take on additional tasks, e.g. management of research and application for external funding. Their career paths represent a 'mixed strategy' as they either continue in or venture into new (in one case) employment in teaching and have or are developing research opportunities as part of their job.

The two other main sectors of employment include public sector administration and business services and finance, including various subgroups of employment. Several informants in these groups point out that an important element in their choice of career was to obtain a 'normal' work life with daily contact to colleagues. They explicitly went for a career outside of university and thus represent an 'exit strategy'.

3. APPLICATION OF PHD COMPETENCES

In this chapter, we ask what type of competences the PhDs have developed during their PhD study and how they draw on PhD competences in their present employment.

The interviewed PhD graduates have provided us with a variety of examples as to which PhD competences they find applicable in their jobs. In the following we analyse types of useful PhD competences, their applicability and the type of knowledge they refer to. Following what is found empirically normal across all levels of official education, it is possible to distinguish between three modes of knowledge (Bernstein, 2000, p. 51-53). The first is specialised knowledge that follows the traditional disciplines of academia. The second represents larger units, which operate both in the field of academia and in the field of external practices, like the professions. The third is essentially directed at extra-academia experiences of work and 'life'; it refers to re-contextualised knowledge, which is linked to the person and its underlying, tacit features are identified as 'competences' (ibid).

The structure of the analysis is based on the above typology of knowledge, which by and large follows the main sectors of employment. That is, we trace what types of competences the PhDs apply within the main sectors of employment and under the headings of academic knowledge (universities), professional knowledge (teaching professions at university colleges), and personal knowledge (consultancy services). We then consider across the cases and sectors of employment what competences have been developed and how they are applied, i.e. stand out as generic competences.

Generic competences are also known as transferable skills (OECD, 2012; Young and Chapman, 2010), so competences and skills seem to be used synonymously. Generic competences are seen as silencing the cultural basis of skills and giving rise to concepts of trainability (Bernstein, 2000, p. 53) and employability

(Jones, 2013; Brown et al. 2003); they include many types of competences (OECD, 2012) as will appear from the following.

ACADEMIC KNOWLEDGE

The interviewed PhDs employed at university find that they have developed useful competences in relation to their continued employment here, such as doing research, as described by this participant:

- Well, the craft of research I think. – Yes, the independent work of structuring an analysis; that is to design it and take responsibility for most processes, and then approach such an extensive material which I ended up with and somehow find the relevant analytical stances etc. Well, that's what I find has given me really good research experience. (F, 1975, Assistant professor, soc.)

Analytical skills in relation to a specific material or matter appear central in most answers to the question of competence development in the PhD. This goes for the above as well as the following:

- To take a very complex matter, analyse and define it, and communicate it at different levels and to different target groups – that's what I consider one of the essential competences developed during my PhD, and it's slightly different how you use it in academia and outside, in the business world. (M, 1983, Assistant professor, hum.)

As coined by the second interviewee, the competences he finds that he really needs in academia include the ability to address complex matters, analyse them, and communicate them to different target groups, especially to peers through scientific journals and conferences. He also finds these communicative competences necessary in the business world, with which he has a close cooperation and did his PhD.

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He later adds 'networking' as an important skill that he also developed through the PhD, which focused on innovative networks as is his present position. He applies competences developed in the PhD, which are very general. All interviewed PhDs employed at university have continued in research – if not a direct continuation of subject then at least within the same discipline – and are therefore drawing on specialised, academic knowledge while they also emphasise more general competences.

The specific discipline is central to the understanding of competences applied in academia. There is a specialised discourse linked to the specific discipline as a singular, which determines its width and limitation of applicability. The more specialised the discourse, the narrower its application, typically academia and research practised in this context.

PROFESSIONAL KNOWLEDGE

The interviewed PhDs employed at university colleges (UCs) are generally somewhat older than their counterparts employed elsewhere. They have several years of work experience life before entering the PhD study, which is important in terms of their competence background. Their prior knowledge and practical experiences from the professions blend into the competences developed in their PhD; partly because the PhD for this group of informants focused on researching and analysing the very same professions, in which they are now (or were already) employed to manage the teaching of new professionals. Via the PhD, they have now developed their existing practical knowledge in for instance managing a complicated longitudinal project, as described by this informant:

- Completing a PhD has given me competences in handling a long-term project with a complicated content. Managing all the elements and turning it into a final product. It has given me scientific competences which are also appreciated in our organisation. (...) For personal reasons, I had some experience

from consultancy before commencing the PhD, which however is nicely combined. (M, UC, assistant professor, 1959, soc.)

The PhD considers the combination of his general competences from consultancy and the academic project competences ideal, which is valued in his organisation.

Another informant, employed in a different department of the same organisation adds:

- I've worked with the human and social sciences and returned to a technical and mercantile environment with a great deal of production-logical thinking. So, when I assist colleagues in projects, it's not so much about scheduling and streamlining the process as about opening up the research questions and viewing them from different perspectives. I sometimes tell my colleagues to attempt more explorative approaches (M, UC, associate professor, 1959, tec.)

Leaving and returning to an environment with focus on production, the PhD had developed new perspectives on the logic of the production field. He finds this competence helpful in supervising colleagues in research matters, which tend to be narrowly focused on the technical perspectives. Thus, merging different perspectives has helped him open up and become more explorative. Other PhDs have similar experiences of new knowledge perspectives, but from the quite opposite angle. These perspectives are reflected in this quote:

- It becomes clear when I am supervising students that the scientific work with my PhD has given me insight into different scientific positions and it makes me a more qualified supervisor, also in subjects that I'm less familiar with. It has something to do with the systematic thinking and knowledge and being able to keep focus. These are necessary competences in our world. (F, 1966, UC associate professor, hum.)

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This experience is seen from the position of a Danish teacher who is working with teacher training and is supported by a colleague who is working with pedagogic training. They both find that in the fields of professional training, the students have a tendency to approach their assignments in too wide-ranging and essayistic ways. Completing the PhD has given them competences they find helpful when they supervise their students to focus, conduct analyses and produce more systematic knowledge.

The competences developed in the PhD and their type and extent of applicability are typically founded on the PhD graduates' prior professional life. Different types of professional knowledge – like different types of academic knowledge – have different educational and philosophical foundations. On the one hand, experiences from the technical professions describe them as taking narrowly focused and precise point of departures, which can be enriched by adding more explorative perspectives from the human and social disciplines. On the other hand, the scientific systematics of these very same disciplines are experienced as helpful to teaching and research in the pedagogic professions, which the profession teachers find lacking in systemic thinking.

The interplay of knowledge between disciplines is characteristic of professional knowledge, which is typically drawn on by PhDs working with or for the professions, most of whom are employed at university colleges. Professional knowledge thus covers regions of knowledge as conceptualised by Bernstein (2000).



PERSONAL KNOWLEDGE

While the PhDs are undertaking the specific research tasks involved in the PhD process, both academic, subject-specific knowledge and more general, personal knowledge types are needed and developed. This goes for all interviewed PhDs regardless of their subsequent areas of employment. The PhDs employed at university and university colleges thus also mention their development and use of general competences like networking, project management, and communication (teaching).

Outside the academic world of university and university colleges, the applicability of PhD competences is expected to give more emphasis to the general aspect of learning, which is often translated into personal skills (Golovushkina and Milligan, 2013; Brown et al. 2001) or personal knowledge. In the following statements from informants employed outside academia such personal knowledge takes precedence over the academic knowledge.

Personal contacts and relations appear to be very important in terms of obtaining and maintaining jobs. For instance, the PhD graduate working with independent and consultancy oriented tasks says:

- You might say that the assignments I've had all appeared via networks and personal contacts. So what I'm doing can be characterised as relational work, which also widely characterised my PhD study. Well, what research areas can you find? Who do you know? Who could open a door here? Well this is what I find extremely important. And here I find that the title of PhD has been an advantage. When you write to people that

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you're a psychology student and psychologist versus a PhD, it varies widely how easy it is to open the door. In this way, I have experienced it as easier now to make the new contacts where you need them. (M, 1979, Independent Consultant, hum.)

The competence of networking and taking advantage of knowing people is a prerequisite for getting orders in a business, based on relations. As the PhD quoted above is also involved in relation-based work, this has contributed to his competence development in the field. In his experience, the PhD diploma is also an asset in this respect as it facilitates access to new relations.

Another PhD graduate has similar experiences with personal knowledge being one of, if not the most important competence developed in the PhD process:

- Of course, the subject matter of the PhD is also important, and I'm pretty sure that I've also been selected for the position due to that. But reflecting deeply on it, I actually consider my personal development most important. It might not be quite what society is paying for. But somehow it has made me into who I am personally, to be capable of solving this type of problems which are huge and complex and very longitudinal and without any immediate results (F, 1979, Development Consultant, hum.)

This PhD has earlier described her way into the present employment as paved by personal relations, which underlines their importance in this respect. In the quote, she also describes a sense of personal development which she ascribes to the process of completing a PhD. This broad development and formation resemble the Danish notion of *dannelse*, symbolising a general approach and interactional skills rather than a detailed programme and technical skills (Jenkins, 2012, p. 202).

Similarly, as chairman of the board of directors and manager of the research department in a consultancy company another PhD draws on a kind of personal knowledge,

- (...) of getting new ideas, completing projects, and getting complicated collaborative relations to work – both inside the company and outside, between the company and customers, and also between the university and our companies. And as consultant I have to understand and manage the dynamics of groups, interact with and develop such interaction. (...) So, speaking the language and knowing the values and quality criteria operating within that field is a great help. (M, 1976, Executive Team Trainer, hum.)

Communication and personal relations intersect in the above quote. Communication is a core element of the consultant's work, including developing management teams and communicating about it. For the development of the business consultancy and Industrial PhDs in his company he draws on his insider knowledge about the institutional structures of the university and the language applied here, which also implies activating personal relations. His own background as an industrial PhD seems to be a clear advantage.

In the cases of consultancy, personal knowledge is important to this type of employment. Such competences are partly developed through the PhD, partly through activities connected to or derived from it.

PhD students typically have teaching obligations and attend seminars and conferences where they present their research and have it peer reviewed. Referring to the competences obtained by such activities, one informant finds them useful in certain situations:

- When I've got to provide consultancy at top level but also lower levels which imply nurses and social health assistants. Then it's my experience that I use it a lot, and I'm not afraid of taking the lead and running the meeting even if my head of department and superiors are there. This self-confidence is clearly derived from the PhD. I feel a lot more self-assured

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after having completed the PhD, because it just adds on to it. I feel it provides me with a bigger rucksack than just having a master's degree. (F, 1984, Human Resource Consultant, soc.)

Communication belongs under personal development and is hard to distinguish from other general competences. In this case it is described by the noun 'self-confidence' and by the metaphor of personal luggage which seems bigger than after the Master's degree.

PhD graduates working with applied research also draw widely on communication competences. Applied research can roughly be understood as the intersection between academic and e.g. political, business, and professional knowledge. It depends highly on advanced academic knowledge and methods but is dedicated to the solution of practical problems rather than further development of knowledge and methods. Applied research is contrasted with basic research, which is dedicated to the production of science, i.e. managing and increasing knowledge of general validity (Roll-Hansen, 2009). Applied research is extensively used in consultancy, business research and management, which is where we find the Industrial PhDs.

It is a recurrent observation in the interviews that the personal competences developed during the PhD process are important. Such competences are not easily distinguishable from others and thus appear more implicit. Nevertheless, it seems that a PhD project can develop personal relations. In a wider sense, the completion of the PhD process is experienced as a personal development.

GENERIC COMPETENCES

Generic competences also translate into transferable skills, which implies that competences obtained in one setting, university, are transferable to other functions and tasks, in or outside academia (Golovushkina and Milligan, 2013; Young and Chapman,

2010). Such competences are not limited to a particular subject or professional specialization but are applicable in many different situations and areas of knowledge, which underlines their very general character. There is no clear and unambiguous definition of such competences (Young and Chapman, 2010; OECD, 2012, p. 19), but the interviewed PhDs employed outside academia give some examples.

The first example is given by an assistant to the managing director in a private company. The working conditions are described by problem complexity and a need for an all-round attention and openness in solutions rather than just looking at bottom lines. Reflecting on the competences needed for this, he describes his job as,

- (...) to try out different solutions to test what weaknesses there might be, and not just listen to the loudest voices. But to look for the arguments and let the argumentation decide. And then test how do you know that the context is like this; how do we know that next month you won't be saying something else. Of course we're not presenting it like this, but I'll try and test the arguments and the statements forwarded. This is to make sure that we're basing our decisions on facts and knowledge rather than just feelings. (M, 1982, Executive Assistant, soc.)

To reach good solutions he finds it necessary to question and ask for arguments and evidence. In some ways, this resembles the academic reasoning, which he knows not only from the PhD but then developed into a more practical level, because as he describes,

- I don't get anywhere by talking about Heidegger at any of those managerial meetings or at meetings with clerks. It doesn't make sense. But to me it means something and it is important how the managers relate to themselves in a field of diverse interests. When you've got somebody from Denmark showing you how it's going to be done. Then they've got to turn it into another reality and make it function. So it was like that all the time that now I'm responsible for doing this, how does it

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influence me and why am I doing this. Am I doing it because they ask me to or because I find it's a good idea? (M, 1982, Executive Assistant, soc.)

This was the type of management research he worked with in his PhD and the thoughts and experiences which he tries to transfer to his present job. He finds such analytical stances applicable in situations, when for instance he has to deal with an IT salesman who is interested in selling him some 'smart IT system'. Then he asks himself why do we do this, what can it do for us, how does it help us if we implement new means of registration, and how can we use it? He describes critical questioning as useful in his daily work life. He finds it applicable in asking whether to buy new devices and systems because they are popular and everyone else buys them, or because there is an actual need for them and they are considered meaningful for the company. To judge and arrive at such decision-making he has to apply his critical examination skills. (M, 1982, Executive Assistant)

Analytical skills are also important to the PhD graduate who works as head of a municipal department. She is partially drawing on skills from her PhD when,

- We launch some projects where you've got to keep track of the idea of it. In the public sector it's called a business case, in other contexts an interest analysis, which implies the same thing. When initiating changes, it's about setting targets and deciding what kinds of efficiency and outcome are to be achieved, based on an analysis of economy and resources. This is similar to what you do in a PhD, developing skills to evaluate where you're going and what's important in it. (F, 1967, Head of Department, soc.)

The quote illustrates the use of the analytical and rational approaches that she finds transferable from the PhD to procedures followed in her daily work.

Additionally, she is confident that having completed her PhD within the prescribed time has also favoured her for the job. She

adds that the ability to set up and complete a project within a deadline is valuable like other analytical and managerial skills such as

- Handling an enormous amount of data and maybe complex material in a limited time and analysing what it's about or what is essential. That's analytical work which is also useful for me as a manager in the public sector indeed; thinking from the individual citizen to group level and to the strategic level. I'm in a political organisation so what kind of signals do we get from the city council or the social services committee and how do we translate new political strategies? That's what I find transferable from the PhD, but also teaching and communicating things have provided one with useful competences. (F, 1967, Head of Department, soc.)

Experiences of teaching and communication as part of the PhD thus provide you with competences that are useful for working in a complex political organisation like a municipality.

Another PhD in the public sector (region department) finds that the methodological competences relate most explicitly to the researcher training. This employee at the region's health department points to the knowledge from her PhD which she can use in her employment,

- Nursing is a pivotal point in my PhD, and being in the health sector, which is including psychiatrists, nurses, and nursing officers, I use a lot of my knowledge in this area and am also involved in projects. Now we're starting up a management project on nurses, which in relation my PhD project is spot-on. And I use methodical competences too; they like the PhDs in the public sector. (F, 1984, Human Resource Consultant, soc.)

Having specialised knowledge about the sector is one asset, and methodological knowledge is another. The PhD graduate considers her basic knowledge of sociological methods useful in relation to her present job functions. It is her general impression that PhD graduates enjoy a high status in public administration. The PhD employed as head of a municipal social department has

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to work with data, for instance statistics, economics, or other recent research; she has the tools to assess whether it is relevant data. It is important that you are not afraid of it but are capable of assessing it critically and questioning its assumptions and conclusions.

- "(...) it's not that I think you can't do that without the PhD, it's not like that. But you know, I've studied a lot and you're schooled to be critical. Of course, I've also got a social science education, which implies viewing things through critical lenses – you can't avoid that. (F, 1967, Head of Department, soc.)

She acknowledges that this might be possible without the PhD too. As already stated, her main point is that you are not afraid of accessing it or of confronting the producers of data with your reading of it. Thus, she finds that the PhD gives her a general basis for understanding data, because she has been trained to or had opportunities to access and to assess data critically.

SUMMARY: KNOWLEDGE TYPES AND COMPETENCES

Competences developed in the PhD have been analysed within three major types of knowledge: academic, professional, and personal. Crossing those types of knowledge or transferring the skills of work linked to each of them is characteristic of the so-called generic competences. The knowledge areas dealt with are,

- academic knowledge, which concerns the discipline and field of study. This entails knowledge of the discipline and the relevant methods for studying within the particular discipline
- professional knowledge, which is characterized by the interplay between knowledge and competences between disciplines. It derives from both practicing and teaching the professions and therefore crosses boundaries of academic knowledge and personal knowledge
- personal knowledge, which goes beyond the discipline; it is linked to the person, is general and easily transferable.

The interviewed PhDs employed in research – whether in or outside academia – mention research methods and critical research as central competences and thus draw on academic knowledge in particular. This goes for the ones employed in the university colleges and research institutes as well, whose core competences draw on professional knowledge. To the informants from other areas of employment, communication skills and other personal knowledge types appear more useful.

Project management, critical judgement, and pragmatic skills of considering resources and contextualised conditions are skills that are central to the PhDs employed in public sector administration and business services. Such skills, partly personal, partly generated by experiences from studying and working in academia but useful in non-academic employment as well, constitute generic competences, as they are transferable from one context to another.

Personal knowledge seems useful in consultancy and management, while the subject-specialised academic knowledge seems less important in such positions. But then again, within some 'disciplines' of study, the distinction between the academic, professional, and personal knowledge dimensions is blurred because disciplines are merged into regions or professions and represent a move from the academic to the generic. The distinction between academic and professional knowledge also concerns the type of research and whether it was linked to an industrial PhD. Thus, building on professional knowledge, informants who hold industrial PhDs are more likely to be employed outside academia than those who followed an ordinary academic track.

4. STATUS OF THE PHD OUTSIDE ACADEMIA

This chapter describes the status of the PhDs who are employed outside academia. This is both regarding status as corresponding with the formal position in the organization and status as a more social phenomenon, even if the two of course are related to each other.

The first part of the chapter describes how the employers value the PhDs' competences. The second part of it is seen from the perspectives of PhDs employed in university colleges, public sector administration, and industry services and finance, the three main non-university areas of employment.

As analysis shows, PhDs are in general a rather attractive group of employees especially in some of the organizations; in some cases, due to area-specific conditions and research competences. Such conditions influence the PhDs' formal as well as social status relations; and high status is also underlined by the fact that they are a group of employees who are highly paid. In other areas, the PhDs might have to struggle to prove their worth for the organization.

EMPLOYER PERSPECTIVES

We have interviewed employers from organisations who hire many PhDs; two UCs, a region, and two research institutes. University colleges as viewing points

As outlined, national policies require university to put increased emphasis on research. This in principle opens up for new research positions, but local circumstances, resources and demand at each particular university college obviously play a role.

We asked employers at university colleges how they can benefit from the PhDs' competences, and one answer was,

- (...) when I look at the PhDs what I find really interesting is that they have general research competences. That they have learned about methods, about setting up research designs, about general perspectives and systematics, about choosing the right methods for the right problems, and just being accurate all the way. But actually, I think the so-called general competences are more important for us and more necessary, because the specific field is not always interesting. It might be during the research process and the work on it. But not the specific knowledge, unless you build onto it... (Head of Social Work Training, University College, F)

The interviewee stresses general competences as more important to the organisation than specific field or subject knowledge. Later, however, she points to the need to attend to the particular field of knowledge,

- There's no doubt that the universities have a task in relation to the university colleges; to pay attention to the topics they define for PhD projects. They have to be relevant to the professions, because we really need the PhDs; also more generally. (Head of Social Work Training, University College, F)

As this quote illustrates, the employer also attaches great importance to the subject-specific knowledge with which the PhDs can enrich and qualify the professions, i.e. professional knowledge. The universities in her opinion have a responsibility to ensure

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that the right topics of relevance to the professions are studied. To the question 'which jobs are there for the PhDs at university colleges?' she gave the following answer,

- It depends on whom in the organisation you ask. When asked what our key tasks are, several people will say that there are two key tasks, the basic training programs, i.e. teaching and qualification, and then knowledge production and communication. They consider the research and development just as important as a key task, and if you ask me, I'm focused on the educational side of course. But at the same time I take an interest in the research development – here and elsewhere – being relevant and contributing to improved social work in Denmark. (Head of Social Work Training, University College, F)

As pointed out in the quote, answers to the question of PhD jobs and competences will partly depend on whom in the organisation you ask. This interviewee finds that the key task of the UC is teaching, while she admits that research also has a certain importance. Others might say that main tasks today include on the one hand teaching and competence development, on the other hand research, development and communication.

The other interviewed UC employer also mentions teaching as an important, if not the most important task for the PhDs employed at UCs. Following this importance, an employer focus on PhD competences is likewise focused on their teaching,

- You can't necessarily say that just because they've been trained as researchers they're better at teaching. This is a serious problem I think. We need to consider how they teach. (...) Even if you're qualified at an associate professor (at UC level, Ed.) you've got something to learn about organising lectures. There's a need for new ways of teaching and they should con-

sider new ways of organising it – well, I don't have employee responsibility but – so I think they should. It may be in terms of bigger lectures that could address many – 200 students at a time. I know some wouldn't approve of it and would consider it an economic measure. Yes, but the hours saved could be used elsewhere in the organisation (...). (Head of Research, University College, M)

The interviewed head of research is concerned that the PhDs do not improve their teaching skills. He finds that teaching is the most important task for the UCs, and that most people employed here have something to learn about teaching. Therefore, he sets up a scenario that includes teaching for larger audiences and a measure of economy that would liberate resources for other purposes. Next to teaching he finds that the PhDs have a role as craftsmen in research, drawing on their empirical competences and continues,

- (...) and that's where I find that the PhDs should have a hand in it to a wider extent than they've had before. This is where I see opportunities, where you involve the students in their research. Not that they should become researchers but because they've got to learn to think more systematically than if they hadn't been participating in such a thing. (Head of Research, University College, M)

The other scenario is that teacher students get to do research with their teachers, who hold a PhD. Again, he returns to teacher training as the essential task of the UC and so important to develop by drawing on and thereby assuring the continuous development of the PhDs' competences.

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The points of view of the UC employers illustrate that the UCs are situated in between two main tasks of professional training and contributing to research-based development of the professions. The employers outline a dilemma between putting more emphasis on research and thereby having fewer resources for teaching and needing research to ensure quality and provide a research base for the professional training.

POINTS OF VIEWS FROM OTHER BUSINESS SERVICES

The national research institutes we consulted for employer perspectives on PhD competences operate on business conditions. PhDs counts for about half of their employees.

In some ways, the research institutes resemble the university colleges in representing a demand for research-based knowledge and function and encourage employees to enrol in and complete a PhD. In other ways, the research institutes diverge from university colleges; for instance, teaching is not their central activity. But fundamentally, they like to hire graduates from universities as expressed by an employer,

- Yes, newly skilled candidates, they're great and so are the PhDs – they're great too. They typically apply about half a year before they've graduated and then we wait for them, if it's the right person. (Head of Analysis and Research, National research institute, F)

While the employer is happy to hire new graduates, she also has some scepticism as to what kind of competences they actually have, as she continues

- They're supposed to express a certain standard. But I'm actually quite critical as to the practice being developed where ... it looks as if it's almost impossible to turn down a PhD. As a purchaser of PhDs, it quite annoying that you can't trust the label, so I make many efforts to find out what's behind it. (Head of Analysis and Research, National research institute, F)

She finds it problematic to see through the PhD, to uncover the competences behind it. Even if the PhD is a label for having developed research competences, she does not find that the graduates fully live up to her expectations. Some of them are too weak. Therefore, it is decisive what is behind the PhD title; what is the analytical drive, which kinds of problems have they worked with, and what kind of personality do they have? She needs answers to such questions before hiring them.

But she is also realistic about not having all expectations fulfilled and even expects some weaknesses in certain areas,

- They need project management competences. In our business we need to be systematically relating to possible customers and collaboration partners. We need to agree on what types of projects we should proceed with and complete within exact deadlines and with which deliveries and cooperation – often in complex constellations of interests. So they need to learn such basic skills as setting up a budget, handling diverse interests of stakeholders, and handing in their work on time, which is new to them (...) So they have to learn a lot about project management. (Head of Analysis and Research, National research institute, F)

As outlined by the employer, a newly graduated PhD has a lot to learn. Thus, the externally financed projects demand that you can keep strict deadlines and work with and among many different partners. And the PhDs in her opinion lack such competences.

The employer holds a PhD from Aalborg University. Therefore, she knows and attaches to this university a particular set of competences and a particular type of PhDs, as she describes,

- (...) What I'm interested in when looking to you [AAU, ed.] is somebody who's not too fixed on political control but rather has bottom-up perspectives. So when looking to Aalborg, Roskilde and the CBS it's because this is where I find the types I'm looking for as alternatives to political scientists (...) strong qualitative competences and problem orientation.

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They are the elements I would demand from these places. (Head of Analysis and Research, National research institute, F)

The problem-based approach appeals to her in particular. Maybe because she knows it well from her own background. She finds the explorative and open project approach a sympathetic and helpful competence in completing her staff, as many others represent a top-down approach.

PhD students are trained to do thorough and complete – meticulous – research. It has to be 100 % perfect and complete. But perfection has difficult terms outside the academic world, as pointed out by another employer engaged in consultancy,

- There's also something called 'to settle for less'. Some students, especially the PhDs, are trained in doing their stuff 100 per cent and it needs to be completely perfect. But in the real world, when we are at about 80 per cent, few people find it necessary to carry on. That is, you're asked to deliver knowledge of a lower quality than you're used to, because you only have a certain number of hours for it. It just needs to be as good as possible within this time limit. That's something you've got to accept (...) and put aside the academic vanity. What we're doing is still good enough. It's good for something else and it's communicating differently. As far as the academic level is concerned you've got to be more pragmatic and forget about state of the art. Otherwise you've got to go back to university if that's what you prefer. I rest my case. (Head of Division, National research institute, M)

The point of view is that research outside of universities functions on different, business-oriented conditions. You cannot pur-



sue the perfection you pursued in your PhD and which constitutes an ideal in the academic world. When research is part of business, it is distinguished from the ideal academic research by much more limited resources and time. On this background, he advocates for a more pragmatic approach in research, which he defines as 'settling for less'.

PHD INSIDER PERSPECTIVES

In the following we describe whether and how PhDs experience a need for their PhD competences in employment outside of academia, and the role of diploma regarding the status of the PhD in the organization. The sectors of employment include university colleges; public sector administration; and business services and finance.

INSIDE UNIVERSITY COLLEGES

As outlined in the previous chapters, an increasing number of PhDs are employed in teaching outside of university. This matches the UCs' formulated a strategy to increase the number of employees holding a PhD (Danske Professionshøjskoler, University Colleges i Danmark, 2015).

As described in the first part of the chapter, university colleges represent an increasing opportunity of academic employment outside university. The growing demand for PhDs is likely to influence their status in the organisation, how they are received as well as their more formal status in the organization, when they find or return to employment at the UC. Many PhDs from this group experience advancement when they return. In accordance with this, one of our informants describes,

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- I was received with open arms – 'yes now we've got a PhD!' Then, what am I going to do with it? The open arms might refer to the need for knowledge and research basing our professions and the training for them. This has really been strengthened with the employment of PhDs to take care of basic training and of profession bachelors at the UCs. The municipalities and the regions are very sympathetic to this, because they demand supplementary and continued training and competence development for their professions. So in this way, there's a great demand for us – and in our organization there's a need to strengthen these areas. (M, 1955, Associate Professor at UC, soc.)

This PhD was promoted when she has finished her PhD and became responsible for research and developmental activities. She has experienced a very positive reception and an extensive need for the developed research competences.

Sometimes the PhDs experience ambiguities as to how much time they should devote to research and on which conditions. Thus, they are still expected to teach and the ones who are UC employed for the first time (after graduation) might be so mainly to teach. This was the case for one of the interviewees who started as a substitute teacher. His impression is that his PhD was his entrance ticket to the job,

- I happened to be employed at a time when they focused on assuring the research base of the social work profession and training for it. SoSo, I just happened to arrive at the right time when this is highly valued. And well, I'd imagine that if I hadn't written this PhD I'd have had no chance of getting in. And it's also my impression from the ones being employed after me – there has just been an advertisement this spring for substitutes – when I had the permanent position – and the ones who got it both had a PhD. (M, 1959, Assistant Professor at UC, soc.)

The PhD experiences it as indispensable to have a PhD for his position as teacher, which gradually has come to involve research tasks too. Initially his substitute position involved teaching only, and this goes for new positions generally he has noticed. It is his impression by looking at new employees in his department that PhDs are preferred when new positions are filled.

There are some disillusionings linked with returning with new competences and the opportunities to use them in the work context of the UC, as expressed in the following,

- When people start coming back, which we've experienced and talked about, and our colleagues are now in a similar situation, then our organization isn't ready for it. Well, if we hadn't created a place ourselves – I had a platform but had to do a lot to extend, seek projects and create my own position. But this seems to be the conditions for research and for the UC development which isn't a new thing but still surprising that they haven't thought about it. (M, 1955, Associate Professor at UC, soc.)

The PhD's scepticism about the prospects for research is supported by his colleague,

- When they want PhDs it's not primarily because there's a need, but because there's a political, strategic objective of a certain percentage which has now been downgraded, which is crazy. That's why if I'm asked by colleagues I'll advise them to consider carefully and reflect on it. As increasingly more PhDs graduate it'll be harder to find jobs afterwards. (M, 1959, Associate Professor at UC, soc.)

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Implicit in this statement is that the potentially hard-to-find jobs are the ones that imply research, not employment as such. It appears that the UC research environments might not yet be ready to absorb as many PhDs as are graduating these years. The interviewed PhDs from the UCs experience some dilemmas in this development. They are expected to use their research competences, and these expectations are nurtured by the policy formulations of strengthening the research base of the UCs. In practice, some new PhDs are hired for teaching and not immediately drawn into research and development tasks. So there is no guarantee that they will need their research competences, but they need them to get the job.

INSIDE PUBLIC SECTOR ADMINISTRATION

Outside the academic world, to which the university colleges increasingly belong, it might be less evident that a PhD graduate is better qualified than others. As relatively few PhDs are employed in the public sector, they constitute a minority and this affects their formal and social status in the organization.

Thus, a PhD is not a requirement for employment in a human resources unit of a region. When people do not expect specific PhD-related competences, there is no need to emphasise them,

- I haven't made too much of it, especially not in the beginning, because I didn't want to wear that hat ... I sometimes experience that it makes people afraid to speak out because 'she probably knows better'. And it was mentioned at my job interview that as mail signature we just use 'R Consultant'. So, I don't use PhD in my signature and it's fine with me, because I want appreciation for my competences and not for my diplomas or degrees. But it's clearly something that people find out quickly. I also have the feeling when engaged in jobs that I have more theoretical knowledge than others. I don't know if my boss finds it valuable (F, 1984, Human Resource Consultant, hum.)

The PhD describes how she plays down the significance of her PhD. She experiences that people may not speak up around her if they know about her PhD might due to her supposedly superior knowledge. She has also been told not to display the PhD title but only her work title in her mail signature. This shows that in some areas of employment customers as well as colleagues have to get used to employees with a PhD degree in the organization.

In the municipality's social affairs section, the PhD is also not an asset as described in relation to the job in general,

- Well, I talk about it when it's relevant. In some contexts, I talk about it because it's relevant. But in others it isn't. I might do it in some connections when it's meaningful, for instance when I'm teaching. But if I'm discussing managerial matters I wouldn't say, well I've got a PhD and therefore ... Somehow that wouldn't be relevant. But when it is I will, but of course it's a very personal matter. And somehow, I'm not in an employment where it's something to hide. But on the other hand, it doesn't make sense to repeat every other day, I've got a PhD.
- (F, 1967, Head of Department, soc.)

When the work situation opens up for it, she might mention or refer to her PhD. But the main impression from the above quote is that in general she does not find it relevant to bring up her PhD background. She is drawing on more general competences than the research or subject-specific ones normally linked with a PhD. Inside business services and finance

In the focus group interview with PhDs employed in other sectors, it appeared that they had relatively high-level positions with corresponding responsibilities. But the PhDs in public administration and business services were divided as to how much they

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advertise their PhD. Some accentuate it a lot and use the title to promote their advanced competences. Others keep it to themselves as expressed here,

- Well, I find that it also depends a bit on which part of the country you're in (...) For instance, when I was job hunting in Northern Jutland I played down the PhD very, very much. And generally, it's not something I talk about having this doctoral degree which we don't say at all in this country. It's just a PhD. But for instance I'm at a meeting with the Capital Region and other people from Zealand, then they tell me to emphasise it when I'm presenting myself. But I tend to maybe not attach to it the value it actually deserves. Now I've dealt a lot with the region up north and had an office here but still travelled around the country. But it's interesting how it influences the way you talk about it. (F, 1979, Development Consultant, hum.)

This PhD has the experience that it varies across the country how much emphasis is given to a PhD. She finds that there is a difference between the provincial and rural areas on the one hand and the capital, urban areas on the other, and she adapts the way she talks about it and about herself.

As mentioned, some underplay the importance of the PhD, others use it actively to promote themselves in business. Asked about the particular status attached to the PhD and whether this is a useful profile, one of the interviewees answers,

- Absolutely, it's a kind of safety label so that people if hiring me or if I give a presentation or some talk, then there's no doubt that the PhD is a legitimization that I'm not just some fellow trying to sell something but I'm actually a person who knows something. There's no doubt about this, and the ones who hire me can feel safe because I hold a PhD. It's not like I'm anybody. (M, 1976, Executive Team Trainer, hum.)

The view is that a PhD is an essential way of legitimising particular competences and knowledge areas. By referring to the PhD you legitimise that you have specific knowledge which is useful for promoting your business and for finding new customers. As such the PhD serves as an informative labelling.

Likewise, the PhD might function as an entrance ticket in the job application process itself,

- Well, I used it when I applied (laughing) and showed off my good marks (...) so in that way... But next time I don't think I'll use it. I'll judge by then. I'll think carefully about. But it's very much about which dependent variables you'd choose to register, such as wage, education etc. What it has given me personally. I haven't regretted a second even if it has given me a lower wage. But how it can be used instrumentally I don't know. Or yes, of course I could have invested the three years better doing something else in relation to career – I probably could (M, 1984, Evaluation Consultant, soc.)

Exam papers appear as necessary as informative labelling to be invited for a job interview. It was indeed relevant as an entrance ticket, as the job includes research and therefore values research competences highly. From then onwards, at the interview and the later wage bargaining, it does not seem very important. When the interviewee reflects on the 'instrumental' value of the PhD he finds that it is not very valuable to him in for instance wage bargaining.

When the PhD is an exception and no one else is holding one, it is indeed questionable how it is valued. As illustrated earlier, this might be the condition in public sector administration, but it is even more likely that the PhD is the only high-skilled labour in

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private sector companies which do not rely on advanced knowledge in their production. This is the situation for one of the PhDs who describes his work conditions as,

- (...) lots of responsibility and opportunities of in-service training. I also have the experience of being heard more and more. I feel that some of the more experienced people come to me now to discuss matters with me – maybe something concerning human resources; how they deal with this or that situation. So, after two years of employment I find that most days when I wake up in the morning I look forward to going to work. And I don't just do a 37-hour week, which I haven't done at all since my employment started. That's also because I like it. (M, 1982, Executive Assistant, soc.)

Thus, the PhD graduate has succeeded in establishing a profile, is given wide responsibility and builds up respect around him. This is reflected in his earnings, which are higher now than when he started. First, he had to 'prove his worth'.

There is an interesting difference in how female and male informants attach importance to the PhD in their field of employment and refer to it in their daily work. The female informants tend to downplay the importance of their PhD and not use it actively to promote themselves as particularly knowledgeable, while more male informants use it actively for self-promotion and business purposes.

This difference might on the one hand reflect an incidental coincidence between gender and different types of employment in public sector versus administration versus business services, where the stronger business orientation entails an inclination to

use the PhD as a promoting device. On the other hand, the coincidence between gender and employment sector reflects some structural differences in male and female preferences in employment (Bloksgaard, 2011). Some of our informants diverge from this structure, as some women in business also do not like to promote themselves actively by means of the PhD. This indicates that the gender dimension affects whether you give status to the PhD.

SUMMARY OF STATUS

The interviewed employers outside of academia view the PhDs as an important resource for research. At university colleges, there is an increased demand for PhDs who are seen as important resources both for teaching and research. Teaching still appears to be the key task and the PhDs are primarily hired to teach. But the university colleges have an obligation to provide research and research-based knowledge for the development of the professions. They find that the university has an obligation to provide research that is relevant to the professions.

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Within public sector administration and business services and finance, PhDs also appear to be important resources. In consultancy where work tasks also concern research, employers emphasise the very different conditions for their research projects compared to the ones at university. They operate on business conditions which are dependent on customers and markets.

The PhD's status is interconnected with the organization's knowledge and research orientation. If the objective is to provide business services that depend on or are considered dependent on knowledge at a high level, the PhD is seen as a guarantee of the most advanced knowledge in the field. This goes for some businesses in consultancy. But in cases where there is no tradition of employing PhDs, some of our informants have had to prove their worth in the practice field before their qualifications were recognized as valuable and deserving a higher wage.

The PhD employees in some business contexts use their PhD as an informative labelling, which can be seen as similar to a certain market value. The self-employed PhDs illustrate that the degree can be used for marketing their services and guaranteeing expertise within a certain field. This function appears important in consultancy in particular. Here the PhD helps them communicate an expertise in tasks and business services. Likewise, education and teaching constitute frameworks where the PhD gives the holder a certain status because the PhD signals theories and high levels of abstraction which are considered valuable in most educational contexts. Most of the informants involved in teaching experience the PhD as qualifying their education and training activities no matter the level of teaching. Most take place at professional or managerial levels which allow them to apply their academic competences.

In some contexts, the PhD does not automatically imply a higher status because the academic knowledge is not considered a precondition for practice. Thus, in public sector administration and management there is not an immediate recognition that the PhD is adding extra value. This is also the case for a small company in industry, where production and management are the central tasks. In such cases, some PhD find that they have to downplay their academic competences which might seem too theoretically abstract in a business context. This might also imply that PhDs are unusual in this context and that the organisation has to get used to this 'new' type of employee, whose educational background diverges from the traditional ones.

The informants have different experiences with having and taking advantages of the PhD. Some experience that it depends on where in the country you are whether the PhD is considered a valuable asset. To use and benefit from the PhD as an informative labelling is experienced as more acceptable in the capital and urban areas than in rural Jutland for instance. It also seems to be a more acceptable practice among men to use the PhD as a profile than among the women, who tend to downplay its importance. Such gender differences to some degree intersect with different employment areas of public sector administration versus business services and finance.



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7. CONCLUSION

The study set out to analyse the career paths of PhDs, the transferable skills and workplace value of competences developed during their study as well as their employability. As stated with references to OECD and the Globalisation Agreement, the background was found in policy issues of training for transferable skills and provision of workplace competences that are relevant for a broad job market (OECD, 2012; Royal Danish Ministry of Foreign Affairs, 2006). Thus, there is a general policy interest in how higher education contributes to accumulation of human capital by ensuring employability of PhDs.

Based on an understanding of strategy as reflection on career paths (Bourdieu, 1997), PhDs' strategies can be classified into three categories: a remain strategy, a mixed strategy and an exit strategy, expressing their extent of continued attachment to academia.

The remain strategy conceptualises the PhDs who pursue a career path at university and thus remain on the track laid out by the PhD. They are urged by their desire to do research. The PhD is a first critical requirement for maintaining employment at university. A general concern among the interviewed is how to develop sufficient additional research contributions and simultaneously develop their teaching competences.

The mixed strategy is followed by the PhDs employed as teachers at university colleges. Most of them were employed at a UC while studying for the PhD. These PhDs typically continue their careers at the UC after graduation. However, as a consequence of their new status they are expected to take on additional tasks of management, research and application for external funding. Some continue employment in teaching because they were already employed at a UC, but due to research opportunities, their career paths represent a 'mixed strategy'.

The exit strategy involves an exit from academia and entry in other types of employment, for instance public sector administration or business services and finance. The informants who chose this option point out that an important element in their choice of career was to obtain a 'normal' work life with daily contact to colleagues. They explicitly wanted a career outside of university and thus represent an 'exit strategy'.

Competences developed in the PhD are conceptualised in three major types of knowledge; academic knowledge, professional knowledge, and personal knowledge (Bernstein, 2000). All three are of course relevant in the PhDs' job functions and further career, but in different ways.

Academic knowledge pertains specifically to the field of study of the PhD, the subject and theme of the research, but also to the development of research competences, knowledge of the discipline and relevant methods for studying within the particular discipline as well as in a more general sense. Thus, it includes general academic and scientific competences. Such competences are particularly important for the PhDs remaining in academia, but they are also important in other areas of employment, especially teaching.

Professional knowledge is related to the specific profession of the PhD and to the interplay between the subject-specific knowledge and the competences of the discipline. It is rooted in the practice of the profession and derives from practicing and training for the professions. Therefore, it is a matter of crossing the boundaries of academic knowledge and personal knowledge. Personal knowledge has a higher transferable value than the two other types. It is linked to the person, it transcends the discipline. It has a general character and can be transferred to other disciplines and types of employment than where it is developed and is easily transformed into generic competences.

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All the informants employed in research – whether in or outside academia (i.e., university, university college or research institutes) – mention academic knowledge, and especially research methods and critical analysis, as central competences. To the informants from other areas of employment, the communicative and personal competences appear to be more useful.

Another distinction, which partly follows the distinction between academic and professional knowledge, concerns basic or applied research (Roll-Hansen, 2009). Applied research is typically more dominant in an industrial PhD and these informants are typically employed outside academia unlike the informants who have followed an ordinary academic track.

The interviewed employers outside of academia view the PhDs as an important resource for research. At university colleges, there is an increased demand for PhDs who are seen as important resources both for teaching and research. Teaching still appears to be the key task at university colleges, and the PhDs are primarily hired to teach. However, the university colleges have an obligation to provide research-based knowledge for the development of the professions. They find that the universities have an obligation to produce research that is relevant to the professions. Within public sector administration and business services and finance, PhDs also appear to be important resources. In the cases of consultancy where work tasks also concern research, employers emphasise the very different conditions for research projects here compared to university projects. They operate on business conditions which are dependent on customers and markets; they are less willing to invest in the amount of time and meticulous work involved with academic knowledge. Generic competences of business and project management, communicative skills, and problem-based approaches are therefore more valued in these sectors of employment than academic knowledge as such.

Status includes status in the organisation as this is reflected in different job positions, wages, influence, leadership and responsibilities, and status in a more social sense. The status of the PhDs in their specific organisations and work places is interconnected with the context of employment, the role of research and academic knowledge in the services the organisation provides and thus also the role of the competences gained through a PhD. In organisations that provide business services corresponding to or depending on knowledge at a high level, the PhD is seen as a guarantee of the most advanced knowledge in the field, which also has a tradition for employing PhDs. In such contexts, having earned a PhD corresponds positively with status and has a high positive value. This applies to consultancy, even if these employers although paying high wages are not willing to pay the price of time-consuming and meticulous academic knowledge.

In some business contexts, the PhD serves as a kind of informative labelling which can be seen as similar to a certain market value. The self-employed illustrate that the PhD can be used to market their services and guarantees expertise in a certain field. This function appears important in consultancy in particular. The PhD helps them communicate an expertise in tasks and business services. Likewise, education and teaching constitute frameworks where the PhD gives the holder a certain status as it signals theories and high levels of abstraction, which are considered valuable in most educational contexts. Most of the informants involved in teaching find that the PhD qualifies their education and training activities regardless of level of teaching. Most teach at professional or managerial level which allows them to apply their academic competences.

The opposite might be the case in contexts with no tradition of employing PhDs. Some of our informants have had to prove their worth in the practice field before their qualifications were re-

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cognized as valuable and deserving a higher wage. The general tendency is that the PhDs are employed as high earners, even though only few of them enter management positions and self-employment (Drejer et al. 2016). PhD graduates from Aalborg University rarely enter job functions requiring formal qualifications below a master's level.

In some contexts, the PhD does not automatically imply a higher formal or social status because the specific academic knowledge is not considered a precondition for practice. In public sector administration and management there is no immediate recognition that the PhD adds extra value to the employee. Thus, a PhD might not correspond with improved opportunity of promotion, influence or leadership. In the analysis, this was seen also to be the case for a small company in industry where production and management are the central tasks. In such cases, some PhDs might even find it necessary to downplay their academic competences which might seem too theoretically abstract in a business context. This might also indicate that PhDs are unusual in this context and that the organisation has to get used to this 'new' type of employee, whose educational background diverges from the traditional ones.

The informants thus have different experiences with having and taking advantages of the PhD. Some find that it depends on where in the country you are whether the PhD is considered a valuable asset. Here the reflections of the informants indicate that the distance to universities, or put in another way, the distance to bigger cities, might play a role. Also, gender might be reflected in these questions, since it appears to be more acceptable and commonplace among men to use the PhD as profile than among the women, who tend to downplay its importance. Such gender differences to some degree intersect with different employment areas of public sector administration versus business services and finance.

Generic competences, i.e., competences that evolve from PhD work in academia and from extra-curricular activities especially, are considered key to assuring employability inside and outside academia. To what extent generic competences could and should be enhanced by university during a PhD project remains only partially answered, as such competences or skills seem highly dependent on extra-academia activities of work, 'life' and other extra-curricular activities (Jones, 2013). This is also evident from our analysis of the heterogeneous mass of PhD graduates, including both the young and inexperienced and the older more experienced, for some of whom the PhD almost equals in-service training.

As emphasised by Bernstein (2000) and others (Brown et al. 2003), generic competences ignore the cultural and contextual basis of skills and give rise to concepts of trainability and employability. These are clearly important concepts as far as the role universities can and should play with regard to graduate employment. However, the concept of employability is relative and double-sided, although often used as a one-sided, individualised understanding of having the capability to gain employment, maintain it and obtain new employment if required. Employability also depends on economic conditions defining the laws of supply and demand within the labour market, which is often omitted in policy papers and agreements on the issue. This dual perspective is often forgotten in policy debates, which tend to focus on the individual side of it. With its point of departure in the contextual basis, this study has attended to the dual perspective.

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