

Career Trajectories of PhDs



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Outline

- Who am I – My own career journey
- Career paths of doctorate holders
- Skills and the labour market
- Recommendations



SKILLS 

1. My Own Career Journey



Inge van der Weijden



time

Career Development...a rocky road to tenure

- 6 months as junior researcher. VU Amsterdam
- 6 months as junior researcher. VU Amsterdam
- PhD candidate: 3 year funding from Dutch research council
- 6 months extension due to teaching, job as journal editor
- 3 months extension due to management tasks [chairman PhD council social sciences VU]
- 1 year: policy advisor at Dutch Research Council. The Hague
- *6 months: no job: finished dissertation [back to VU Amsterdam]*
- 6 months: teaching position at VU Amsterdam
- 2 year: postdoc 1. Higher Education Policy Research. Research Institute The Hague
- 2 year: postdoc 2. Higher Education Policy Research. Research Institute The Hague
- 2 year: postdoc 3. Higher Education Policy Research. Research Institute The Hague. Left after 1 year.
- 2 year: researcher. Leiden University
- 6 months: researcher. Leiden University
- Permanent position as senior researcher at Leiden Leiden from Summer 2014

12 temporary contracts
within period of 15 years

+ short international
working visits

Working Group Career Studies

The Career Studies working group analyzes how careers of scientists are shaped through individual characteristics, research environment, organizational HRM instruments and career policy. The working group is led by Inge van der Weijden.

Research lines

Research in this working group is organized in two research lines: Career Progression of Early Career Researchers and Gender and Diversity.

Career Progression of Early Career Researchers

The academic job market has tightened in recent years as opportunities for academic employment do not keep pace with this increase of PhD graduates. Given the limited number of research-teaching positions, the number of individuals who complete the PhD and leave the academy to seek for non-academic positions is relatively consistent at more than 50% across countries. In this research line, we study post PhD employment and examine the various career paths of PhDs different research methods (e.g. administrative data analyses, interviews, focus group discussions, intervention studies, questionnaires, scientometrics). In addition, we examine work load, competition, stress and mental health of researchers.

Gender and Diversity in Academia

An important dimension of career studies is the analysis of gender relations (and bias) in academia. Sustainable, long term improvement of academic practices of recruitment, promotion, stimulating research, and shaping curricula can only be obtained by addressing the deep-seated mechanisms that cause gender inequality. In this research line, we study gender in academic education, career paths, performance, leadership, funding, and even well-being. A diversity of research methods is used, ranging for instance from interviews and focus groups to intervention studies and scientometric analyses. In addition, we aim to develop projects that change human resource and career practices and policies at universities in order to make them less gender and diversity biased.

Chairs and Working Groups

➤ [Chair Scientometrics](#)

➤ [Chair Science and Innovation St...](#)

➤ [Special Chair Evidence for Scien...](#)

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2. Career Paths of Doctorate Holders

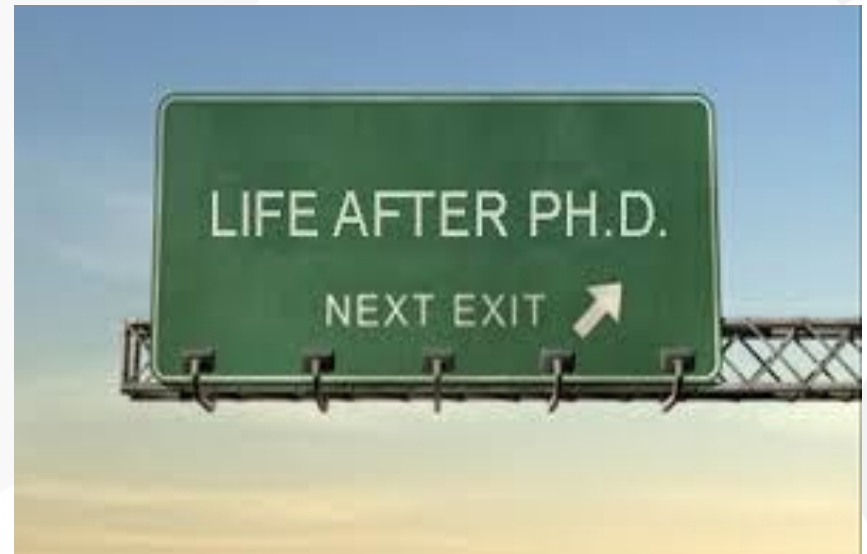
Results from our Empirical Studies

Study 1: Career Paths of Doctorate Holders

Post-PhD employment: *2–6 years after PhD graduation*

PhD graduates from 5 Dutch Universities

- Online survey
- 1133 respondents
- 52% response rate
- Different scientific fields
- 96% employed



Results: Employment Status	N (%)
Employed	1055 (96.3)
of which (multiple answers possible):	
Employee	979 (89.3)
Self-employed	95 (8.7)
Working paid or unpaid for own or family's business	17 (1.6)
Away from work ill, on maternity leave or temporarily laid off	22 (2.0)
Doing any other kind of paid work	9 (0.8)
Unemployed	27 (2.5)
of which (multiple answers possible):	
Looking for job	24 (2.2)
Waiting to start job	3 (0.3)
Inactive	14 (1.3)
of which (multiple answers possible):	
Retired	5 (0.5)
Student	-
Looking after home or family	4 (0.4)
Long-term sick or disabled	1 (0.1)
Other	6 (0.5)
Total	1096 (100)

Sector of Employment

	Male	Female	Total
	%	%	%
Academia	56	64	60
Non-academic research	34	22	28
Outside research	10	14	12

Based on definitions of Frascati “basic research, applied research and/or experimental development” and type of employer

Level and Sector

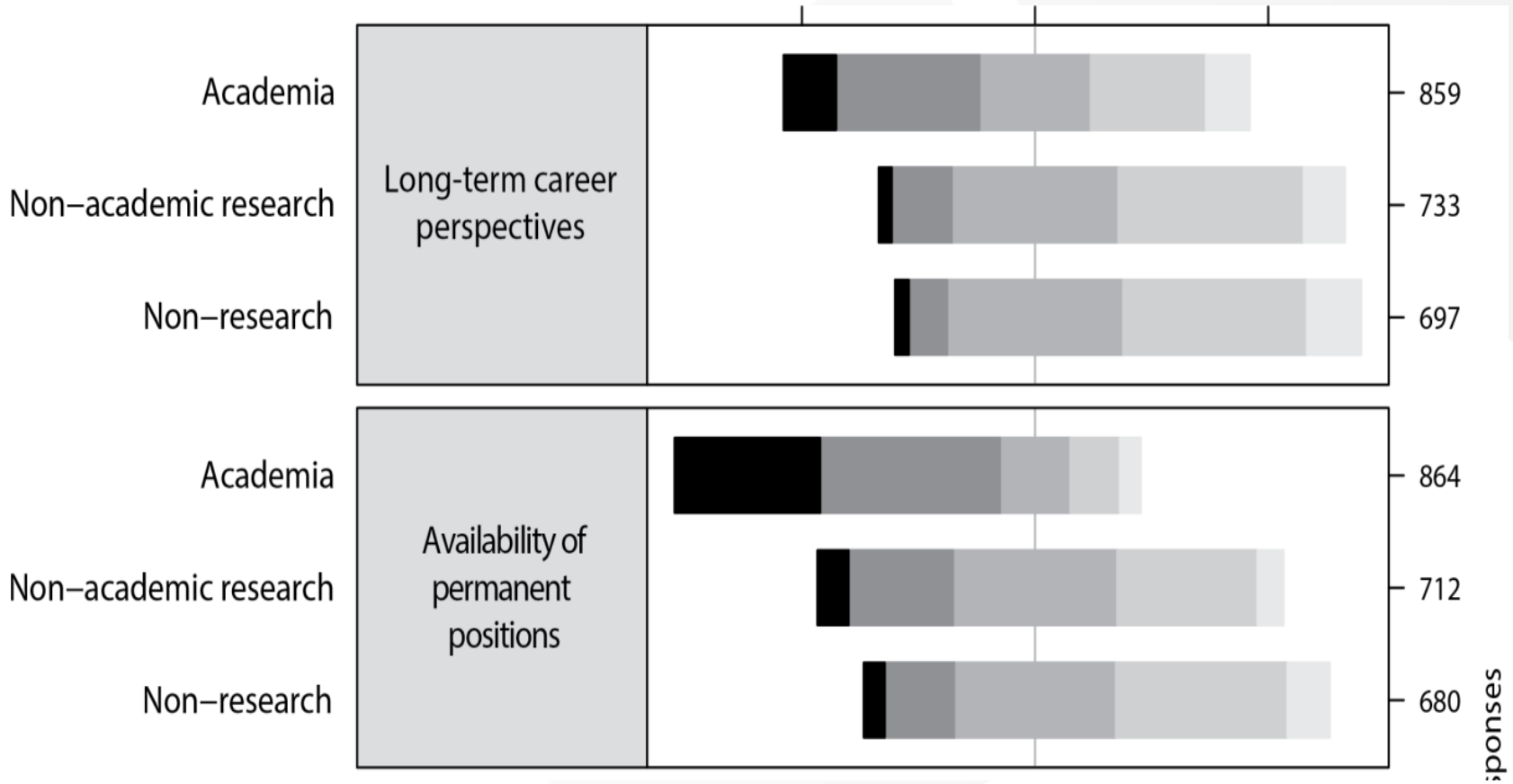
	Academia	Non-Academic Research	Outside Research
Educational Level	%	%	%
Bachelor or lower	0	4	7
Master	7	35	53
PhD	82	48	24
Professional	11	13	17

Type of Contract Per sector

Type contract	Academia	Non-academic research	Outside research	Total
	%	%	%	%
Permanent	42	66	55	50
Probation period	3	3	4	3
Tenure track	9	1	2	6
Temporary without prospect of permanence	46	11	26	34
Self-employed	0	19	13	7

Women more often have a temporary contract (39% vs. 29% of males) and less often a permanent contract (45% vs. 55% of males)

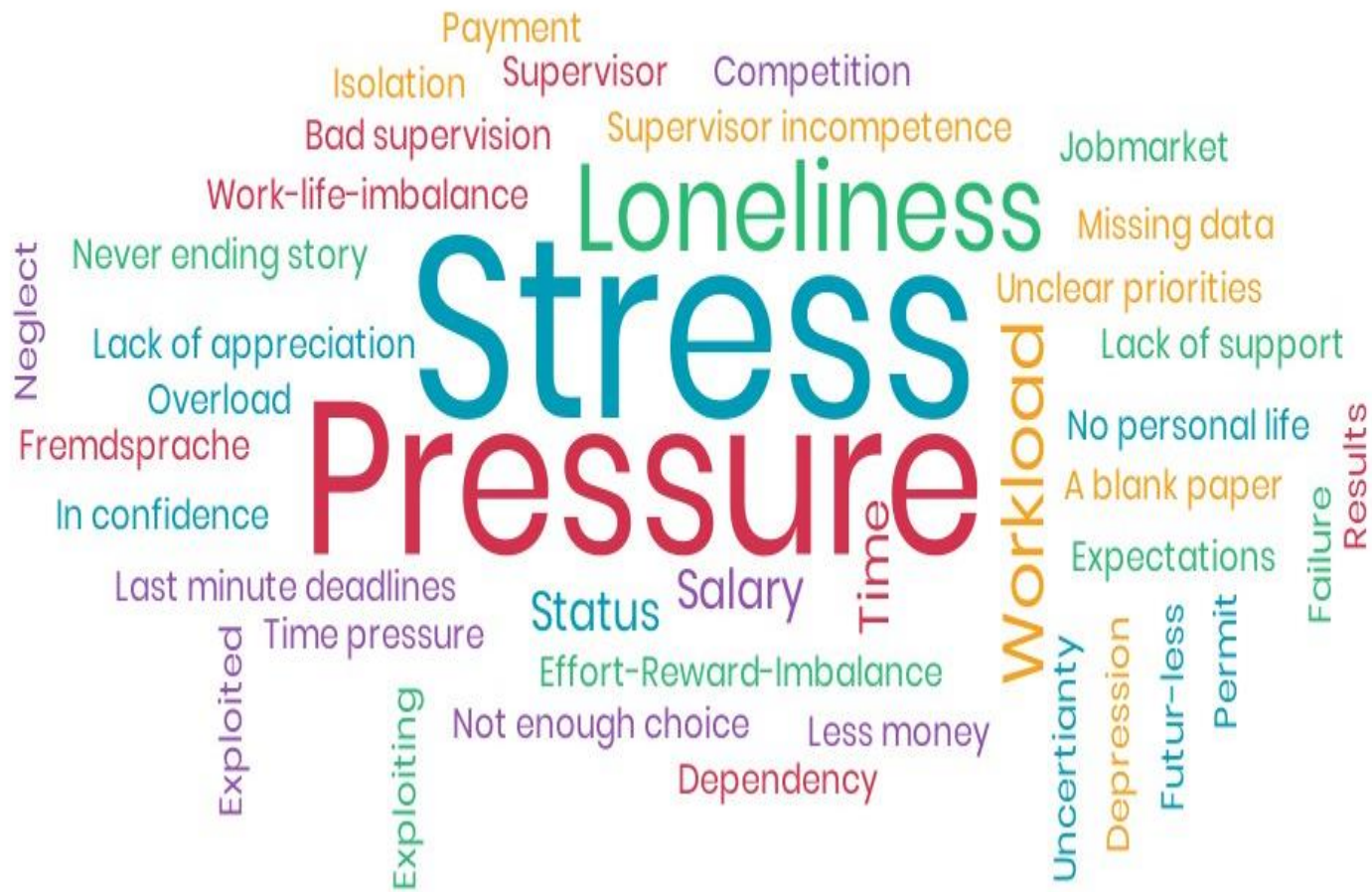
Career Perceptions



Very bad ■ Bad ■ Neutral ■ Good ■ Very good ■

Career Development in Academia

- Limited career prospects
- Limited job security
- Increased workloads (*e.g. Shen 2015*)
- Increased competition and pressures to publish and acquire (personal) grants (*e.g. Waaijer et al 2017*)
- ‘Excellence’ norm
- In NL: 68% have to leave academia



Transition into Non-Academic Labour Market



Study 2: PhD and Transition into Non-Academic Labour Market

- Interviews with 33 PhD holders and 6 managers
- LinkedIn & CWTS Database 2008/2009 graduates
- Personal stories on their careers inside and outside academia, and their transition
- 13 of them published with name and photo (2017)
- Provide inspiration and recommendations for students, PhDs, universities & employers

Interviews with 33 PhD holders

- Time to 'leave academia'
 - Publication culture / pressure / long working hours
 - Little hope to receive a permanent position at university
 - Explore what's out the 'bubble of academia'
- Search for:
 - Work that has (more) practical and social significance
 - Work together towards a common goal
 - More dynamic environment / more variation in tasks
 - Room for personal development / decent salary

Perception of pressures (PhDs)

	Pressure to publish	Pressure to obtain grants
N=1133		%
Far too high	16	23
Too high	45	49
Neutral	38	25
Too low	1	2
Far too low	0	0

*“Career prospects within science are not very bright. Most people have fixed-term contracts with little hopes of attaining tenure. There also is very **stiff competition** when it comes to obtaining grants and these also involve a decent amount of luck. The fact that only publications contribute to a successful career in science, leads to a rather **one-dimensional view on researchers**. For me, the **unhealthy focus on publications and the high amount of uncertainty with regards to employment contracts may be reasons to leave science.**”*

(interview with PhD candidate)

Experiences



Learn how to dive



Subtropical swimming paradise

What is different...? (1)

- Greater emphasis on working together to achieve your organizational goals
- Increased identification with the organisation
- Personal career development



What is different...? (2)

- Projects tend to move much more quickly
- Solve problems quickly and be satisfied with answers that may not be 100% watertight
- Deadlines are less flexible

Don't Miss the
DEADLINE!

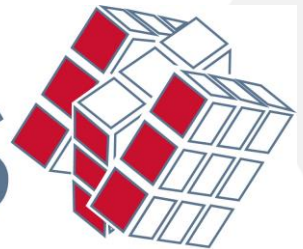


3. Skills and the labour market

An abstract graphic consisting of a large blue circle on the left side of the page. From the right edge of this circle, several thick blue lines radiate outwards towards the right edge of the frame. These lines intersect with a large, solid blue circle that is partially cut off by the right edge of the image. The overall composition is minimalist and modern, using a monochromatic blue color scheme.

Study 3: Skill Development of PhDs

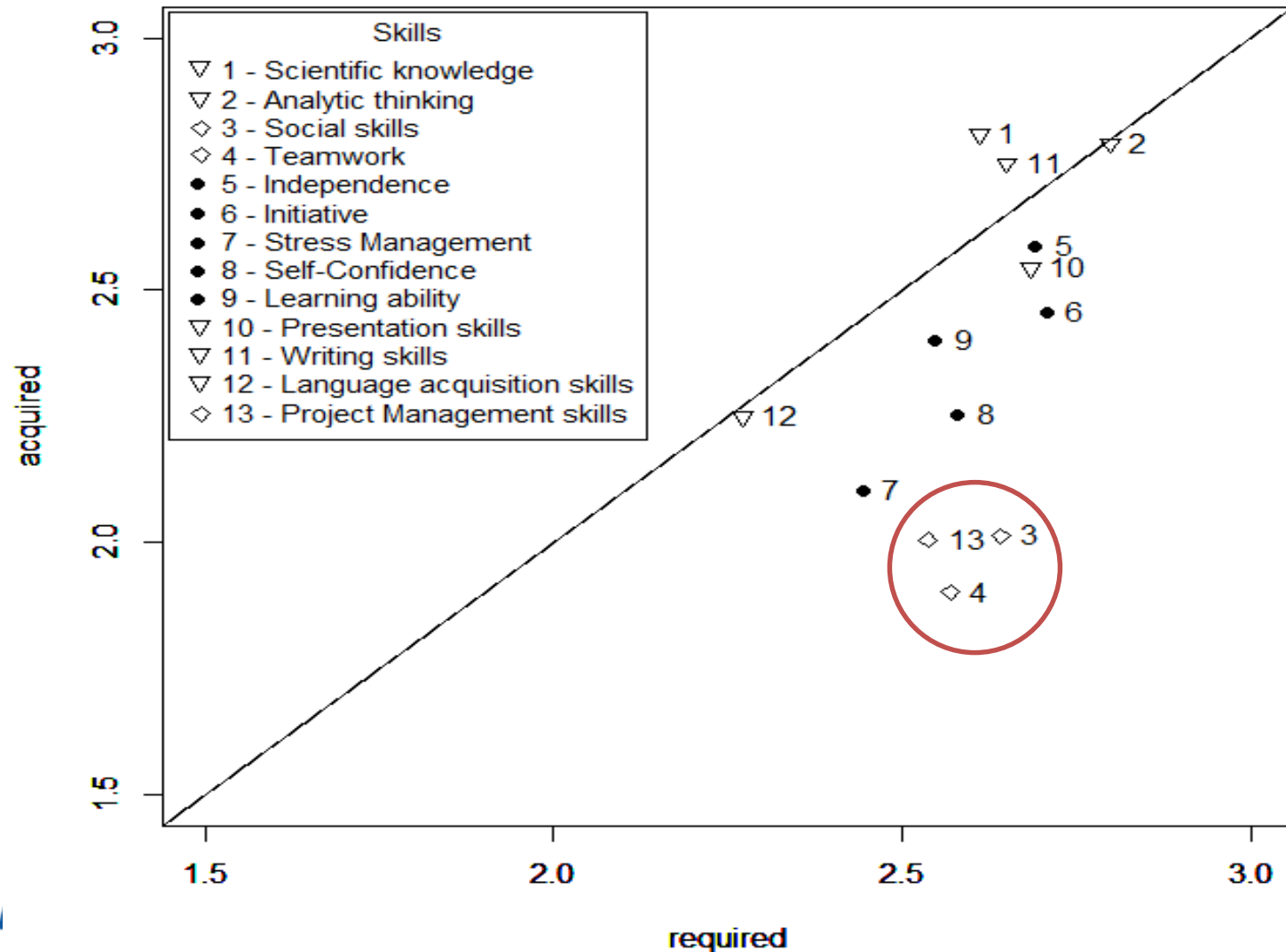
- Which skills do recent PhDs feel they have acquired during doctoral education?
- To what extent is there a skill mismatch between the acquired skills and the skills they need in their current jobs?
- And for jobs outside academia: points of concern?
- ->Survey & Interviews with PhD holders<-



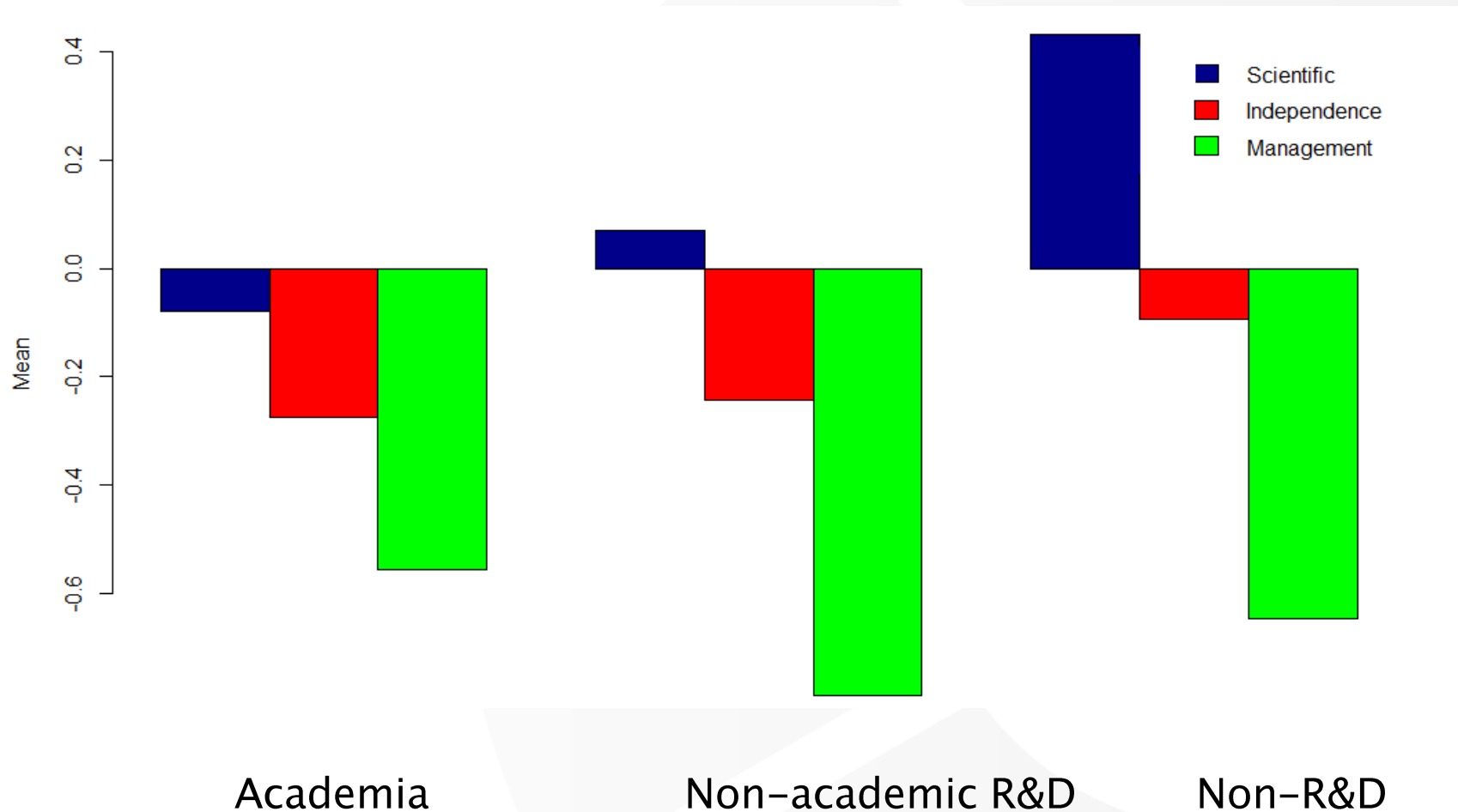
Analytical	Recognize-assumptions	Research-mentality
Perseverance	Academic	Skilled-researcher
Knowledge	Decide	Deduction
Independent	Hard-work	Organize
Quick	Concise	Share-knowledge
Abstract-thinking	Understand-complexity	Convincing
Guidance	Concentration	Recognize-patterns
Discipline	Coordinate	Talking
Expert-status	Decisive	Problem-solving
Curious	Think	Project-management
Writing-skills	Questioning	Solving-puzzles
Smart	Jack-of-all-trades	Open-minded
Process-information	Clear-explanations	Solidarity
Multiple-perspectives	Project-ownership	Cooperation
Networking-skills	Motivate-others	Conference-speakers
Presentation	Flexible	Steadfast
Weighing-options	Motivated	Storytelling
Ambition	Helicopter-view	Strategic-thinking
Communication	Inductive-reasoning	Long-term-solutions
Creative	Interdisciplinary-communication	Dealing-with-disappointment
Teaching	Interdisciplinary-cooperation	Feedback
Interested	International	Theoretical
Structuring-information	Insight	Self-examination
Intelligent	Work-ethic	Endurance
Critical-thinking	Meticulous	Explain
Learning	Dealing-with-difficult-people	Attempt
Overview	Negotiation	Engaged
Grant-applications	Research-oriented-problem-solving	Responsible
Well-rounded	Understands-researchers	
	Research-ambitions	

Skill Discrepancy – researcher opinion

To what extent is there a skill mismatch between the acquired skills and the skills they need in their current jobs?



Skill discrepancy by sector



Skills mismatch – Employer opinion

Strong dev. Skills

- Analytical skills
- Perseverance
- Writing Skills
- Independent

Weak dev. Skills

- Indecisive
- Too critical
- Impractical
- Weak developed social skills
- Difficulties in recognizing linkages
- Used to a slower working rate
- Difficulties in making transitions
- Weak developed entrepreneurial skills
- Weak developed communication skills

Recommendations



Tips for PhDs

- Begin building up a relevant professional network
- Use your connections to explore career opportunities
- Develop a broad range of skills / competencies
- Seek out new activities and responsibilities during your PhD
- Learn to see your PhD as proof of your skills and ability
-> use the transferable tree
- Describe your experiences in terms of useful skills you have gained, focusing on your strengths and on what you enjoy doing, not just on your specialist knowledge

How? A few examples...

- Alumni network graduate school: Mentor or Buddy
- Linked-in connections
- Speed / coffee dates
- Prepare a pitch
- Membership committee / think-tank
- Internship

Recommendations for Graduate Schools / Universities

- Put PhD candidates in touch with PhDs who have made successful careers for themselves inside/outside of academia. Track your alumni. Start mentor program.
- Integrate a broader social focus into PhD programmes from the earliest stages, for example by:
 - organizing visits to organisations working in relevant fields
 - offering joint research projects [internships] in which PhD candidates work together with those organisations
- Invest in your PhD candidates by helping them to develop a broader range of skills: social skills / teamwork / project management.

Thanks for your attention

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<http://www.phdcentre.eu/en/practices/portraits.html>

Publication:

Which grass is greener?

Personal stories from PhDs about their careers within and outside of academia

May 2017

Dr. Inge van der Weijden	CWTS, Leiden University
Evan de Gelder BSc	CWTS, Leiden University
Dr. Christine Teelken	VU University Amsterdam
Dr. Marian Thunnissen	Fontys University of Applied Sciences



More information?

- Temporary contracts: effect on job satisfaction and personal lives of recent PhD graduates (2016). *Higher Education*.
<http://link.springer.com/article/10.1007/s10734-016-0050-8>
- Perceived career prospects and their influence on the sector of employment of recent PhD graduates. (2016). *Science and Public Policy*.
<http://spp.oxfordjournals.org/content/early/2016/04/22/scipol.scw007.abstract>
- The role of gender in the employment, career perception and research performance of recent PhD graduates from Dutch universities (2016) *PlosOne*. <http://dx.doi.org/10.1371/journal.pone.0164784>
- Survey on the Labour Market Position of PhD graduates: Development of a Novel Questionnaire (2015).
<https://openaccess.leidenuniv.nl/handle/1887/32604>