



The Doctoral Space revisited

Monday November 7th, 2016

**Concluding Symposium
of the KVAB Thinker's Programme 2016**

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Palace of the Academies
Hertogsstraat 1
Brussels



KVAB Thinker's Programme 2016

THE DOCTORAL SPACE REVISITED

Thinker Prof. Dr. Maria Helena Nazaré

The doctorate is a centuries-old institution, born in the 12th century in Paris primarily as a qualification to "profess". It was re-shaped in the early 19th century in Germany as a research degree, the prerequisite for an academic career.

As demonstrated by recent reports from the European Science Foundation (2015), OECD (Auriol et al. 2013), Science Europe (2013), the Vlaamse Raad voor Wetenschap en Innovatie (VRWI advice 215, 2015 and report 27, 2016), the Royal Academy of Sciences of The Netherlands (2016) and ECOOM (Stassen et al. 2014), the PhD is increasingly regarded as an instrument of innovative career development – far beyond the academic realm.

Conscious of the importance of this development, the Royal Flemish Academy of Sciences and Arts of Belgium has initiated the 2016 Thinker's Programme "The Doctoral Space revisited".

The perspective of the present analysis is broad: we like to define the "Doctoral Space" to comprise not only the PhD thesis period, but also its lead phase in the research master, as well as the early postdoctoral phase. The choice of the term space in this context is not fortuitous. It emphasizes the importance given to the provision of space to young researchers: space to allow them to develop their ideas, to fail and to rebound - pathways forging perseverance and resilience, pathways leading to autonomy and entrepreneurship.

Particular attention is needed to the tracking of the move of PhD holders into professional life, a process currently taking shape in the early postdoctoral years. For such analysis, the perspective and information from young researchers is of paramount importance: this Thinker's programme consequently closely collaborates with Flanders' Young Academy (Jonge Academie).

We trust that Flanders' graduation policy is functioning well: doctoral schools in general provide a number of learning opportunities and Flanders' innovation capacity, breeding in particular within strategic research centres closely linked to universities, is scoring high.

Yet, a number of key questions remain:

- Are we optimally preparing our top young researchers to leadership and entrepreneurship in science and to the generation of employment in innovation, and are we doing so in a sustainable way?

- Shouldn't all our PhD's be regarded as Starters, regardless of their research field and employment horizon, and have we truly shaped the incubation space, crucial for their success?
- Is the Bologna process – sparked in the former century – as a preparatory phase fully meeting the expectations raised, or does it require some fine tuning?
- Are we fully offering to young researchers within the Doctoral Space the right skills at the right moment, in the right way?
- Do we fully control the transition between the incubation process and the production phase, and are we capable of verifying to what extent the products of our doctoral training eventually meet the expectations of Society, quantitatively and qualitatively?

A challenge for Flanders and Europe

As clearly observed by both ESF and OECD studies, tracking postdoctoral careers in Europe remains in many aspects a challenging venture. Flanders however seems to turn out an interesting testing ground for grasping the quintessence of the problem and the scale of the challenge. While Flanders is targeted as prime beneficiary of this ongoing strategic thinking, the findings and the impact of this Thinker's programme may reach far beyond its borders, and be of relevance for Europe.

Early observations from fact finding actions in the 5 Flanders universities suggest that notwithstanding an apparently satisfactory flow of PhD's into the market, the so-called "postdoctoral cloud" gravitating around the Flemish universities has nearly doubled over the past ten years, exceeding in its present dimension (rated from various sources at some 3750) the total academic staff of the 5 Flemish universities (some 2800 in 2014); one may suspect that a virtual university and strategic research center has taken shape in Flanders!

A linear extrapolation from this observation in a small, yet possibly representative data set of 5 Flanders universities to the population of 850 European universities producing PhD's might lead us to speculate that Europe holds a potential "Starters Cloud" somewhere between half a million and a million - still largely under the radar, as confirmed by OECD and ESF.

The key question arising from this preliminary analysis is to what extent is Flanders – and by extension Europe – prepared to fully capture the vast pool of potential energy represented by this generation, which not only embodies a considerable societal investment, but is nowadays also truly empowered in an unprecedented and unrivalled way by the Digital Revolution: to what extent will we be successful in transforming this potential energy into economic momentum and employment for Flanders and Europe?



#doctoralspace

@_KVAB

10:00 Coffee and registration

Welcome by the President and Report of the Thinker

10:30 Welcome by **Prof. Dr. em. Hubert Bocken**, President of KVAB

10:45 Report of the Thinker "*Doctoral Space – Building Bridges*",
Prof. Dr. Maria Helena Nazaré

From the European Higher Education Area (EHEA) to the European Research Area (ERA)

11:15 Statement of **Prof. Dr. Maria da Graça Carvalho**, EC DG Research & Innovation,
Technical University of Lisbon

Career tracking and mapping of doctoral degree holders in Flanders and Europe: everything under control? Researcher's Careers: Postdoctoral Funding and Intersectoral Mobility Schemes.

11:30 Panel Debate 1:

- Prof. Dr. Maria Helena Nazaré, Thinker
- Prof. Dr. Maria da Graça Carvalho, EC
- Dr. Karen Vandeveldde, UG, ECOOM
- Dr. Sébastien Huber, Science Europe

12:30 Lunch break

To what extent are Flanders and Europe prepared to fully capture the vast pool of potential represented by the present generation of doctoral degree holders and use it to build a strong and cohesive society empowered by knowledge?

14:00 Policy Statement by **Prof. Dr. Manuel Heitor**, Government of Portugal, Minister of
Science, Technology & Higher Education

Perception and statements from the community of doctoral degree holders

14:30 Statement by **Dr. Kristien Hens**, UA, Young Academy

14:45 Panel debate 2:

- Prof. Dr. Maria Helena Nazaré, Thinker
- Dr. Kristien Hens, UA, Young Academy
- Dr. Vincent Ginis, VUB
- Prof. Dr. Hans Op de Beeck, KU Leuven, Young Academy
- Leen Cuypers, KU Leuven, Arenberg Doctoral School
- Dr. Kris Pauwels, VIB, Structural Biology Research Center

15:45 Coffee break

To what extent can universities, institutional stakeholders and the private sector still better contribute to prepare and coach the present generation of doctoral degree holders in their empowerment to contribute to a strong and cohesive society driven by knowledge

16:15 Panel debate 3:

- Prof. Dr. Manuel Heitor, Government of Portugal, Minister of Science, Technology & Higher Education
- Prof. Pol Ghesquière, KU Leuven, Doctoral School Humanities and Social Sciences
- Prof. Erik Matthyssen, UA, Doctoral School Exact Sciences
- Dr. Karen Vandevælde, UG, ECOOM
- Prof. dr. Karen François, Vrije Universiteit Brussel, Doctoral School of Human Sciences
- Dr. Olivier Boehme, FWO
- Dr. Elie Ratinckx, VRWI
- Dr. Bram Vanthournout, Flemish Government, Department EWI
- Prof. Dr. Ken Haenen, UHasselt, Doctoral School Sciences and Technology
- Prof. Dr. Guido Groeseneken, imec
- Dr. Lieve Ongena, VIB

Concluding Statements

17:15 Conclusions by **Prof. Dr. Jean-Pierre Henriët**, coordinator of the KVAB Thinker's Programme 2016 The Doctoral Space revisited

17:30 Reception

Maria Helena Nazaré, Thinker

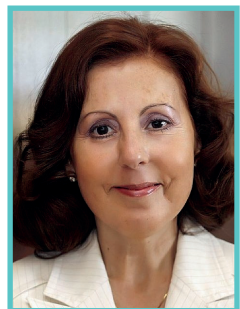
Prof. Dr. Maria Helena Vaz de Carvalho Nazaré is former rector of the University of Aveiro, Portugal, and former President of the European University Association (2013-2015). She is presently Chair for the Higher Education Council in Portugal, and is also currently engaged in studies for OECD.

Various mandates in boards of industrial and governance organizations have contributed to her broad perspective, crossing sectorial boundaries.



Maria da Graça Carvalho

Maria da Graça Carvalho is currently member of the Unit "Scientific Advice Mechanism" of the Directorate-General Research and Innovation of the European Commission. She was a senior advisor of Commissioner for Research, Science and Innovation from November 2014 to December 2015. She was a member of the European Parliament in the EPP group since July 2009 to May 2014. In the capacity she was one of the rapporteurs of Horizon 2020. She has been Principal Adviser of President Barroso in the areas of Science, Higher Education, Innovation, Research Policy, Energy, Environment and Climate Change from 2006 to 2009. She has been Minister of Science and Higher Education of the XV Constitutional Government of Portugal and Minister of Science, Innovation and Higher Education of the XVI Constitutional Government. She is a Full Professor at Instituto Superior Técnico (University of Lisbon).



Manuel Heitor



Manuel Heitor is Minister for Science, Technology and Higher Education in the Government of Portugal since November 2015. From March 2005 to June 2011 he served as Secretary of State for Science, Technology and Higher Education.

Manuel Heitor is full Professor at Instituto Superior Técnico, IST, the engineering school of the University of Lisbon and was founder and director of the IST's "Center for Innovation, Technology and Policy Research", as well as director of the IST's doctoral Programs in "Engineering and Public Policy, EPP" and in "Engineering Design". In 2011-12 he was a Visiting Scholar at Harvard.

He earned a PhD at Imperial College, London, in 1985 in combustion research and did post-doctoral training at the University of California San Diego. Then he pursued an academic career at IST, in Lisbon, where he served as Deputy-President for the period 1993-1998. Since 1995, he has been Research Fellow of the IC2 Institute of the University of Texas at Austin. He is a founding member of the S&T Council of the "International Risk Governance Council", IRGC. He was a co-founder of the European network "science, technology, education and policy for Europe, step4EU".

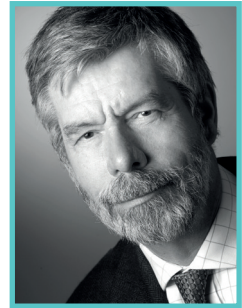
Kristien Hens



Kristien Hens is a bioethicist whose work focuses on ethical issues related to genetics, reproductive medicine, feminism, disability studies and neurodiversity (autism, ADHD). She is currently working as a postdoctoral researcher at the Philosophy department of the University of Antwerp investigating the ethical implications of biological explanations of psychiatric and neurodevelopmental disorders. She is also a research fellow at the Centre for Biomedical Ethics and Law of the KU Leuven. Before that she worked as postdoctoral researcher on the ethics of embryo selection, at Maastricht University, and as a PhD student at the KU Leuven on the ethics of the use of stored tissue samples from children for research.

Jean-Pierre Henriet

Prof. Dr. Jean-Pierre Henriet is a marine geologist/ exploration geophysicist, trained at Ghent University, Belgium, and at the University of Aarhus, Denmark. As teenager, he got thrilled by the International Geophysical Year, which would determine his career orientation: he would spend more than two years of his professional life at sea. Founder of the Renard Centre of Marine Geology (RCMG) at Ghent University, he played on all EU framework programmes up to FP7 and several ESF EUROCORES programmes. The early ESF polar networks and Belgium's Antarctic Research Programme allowed him to join two Antarctic expeditions on R/V Polarstern (PONAM), as well as ocean drilling (ECOD). He was director of the Marine Geosciences Department of IFREMER in Brest, France 1990-1995. Deep-sea dives (4650m) in Fracture Zone Kane on board of the submarine Nautilus and dives in Lake Geneva with Jacques Piccard. President of the European Association of Exploration Geophysicists 1992 (now EAGE), he founded and chaired the EAGE PACE Foundation (support to international cooperation, initially with geophysical communities of the former Soviet Union). Coordinator of the FP4 coordination action CORSAIRES which pioneered the scheme of mission-specific platforms in ocean drilling. PI of IODP Expedition 307 which first drilled deepsea carbonate mounds off Ireland. Proposed and successfully defended at the General Assembly of UNESCO in Paris the IOC-UNESCO "Geosphere-Biosphere Coupling Processes" (GBCP) Programme. Steering Committee member of the IOC-UNESCO Training Through Research (TTR) programme on board of R/V Professor Logachev. Presently Member of the Commission Nationale de la Flotte Hauturière (Paris), co-chair EUROFLEETS Science Review Panel, Council Member ECORD (Ocean drilling), alternate Member Executive Committee ICDP (International Continental Drilling Program). Capacity building in Morocco, Ethiopia, Ecuador. Director, Class Natural Sciences, Royal Flemish Academy of Sciences and Arts of Belgium.



Participants list

Micheline	Blanchart	Glaverbel
Hubert	Bocken	KVAB, Ghent University
Olivier	Boehme	FWO
Nathalie	Boelens	KVAB
Yvan	Bruynseraede	KVAB, KU Leuven
Nelly	Cans	
Reinhardt	Ceulemans	UAntwerpen
John	Creemers	KU Leuven
Leen	Cuypers	KU Leuven
Maria	da Graça Carvalho	EC DG Research & Innovation
Noëmi	Debacker	Ghent University
Angelo	De Bruycker	Ghent University
Dieter	De Bruyn	Ghent University
Hannelore	De Grande	VUB
Anja	De Meerleer	
Bram	De Ridder	KU Leuven
Esther	De Smet	Ghent University
Linda	De Vooght	Institute of Tropical Medicine, Antwerp
Jim	Dratwa	European Commission / Woodrow Wilson Center
Inez	Dua	KVAB
Freddy	Dumortier	KVAB, UHasselt
Hendrik	Ferdinande	Gent Fysica & HOPE
Karen	François	Vrije Universiteit Brussel, Doctoral School of Human Sciences
Pol	Ghesquière	KU Leuven
Danielle	Gilliot	VLIR - Flemish Interuniversity Council
Vincent	Ginis	VUB
Gerard	Govers	KU Leuven
Nel	Grillaert	Antwerp Doctoral School, UAntwerpen
Guido	Groeseneken	imec, KU Leuven
Ken	Haenen	Hasselt University
Marie-Claude	Hayoit	B.A.E.F.
Manuel	Heitor	Minister of Science, Technology & Higher Education - Portugal
Jean-Pierre	Henriet	Ghent University, KVAB
Kristien	Hens	University of Antwerp, Jonge Academie
Steven	Heylen	Fonds Wetenschappelijk Onderzoek - Vlaanderen
Sébastien	Huber	Science Europe
An	Jansen	KU Leuven
Lai	Jiang	KU Leuven, Institute of Tropical Medicine
Stefanie	Kerkhofs	Hasselt University
Josiane	Leroy	
Walter	Luyten	KU Leuven
Cedric	Malfroid	
Erik	Matthysen	University of Antwerp

Veronique	Meert	YouReCa Career Center KU Leuven
Maria Helena	Nazaré	Thinker in Residence
Nele	Nivelle	Universiteit Hasselt
Lieve	Ongena	VIB
Hans	Op de Beeck	KU Leuven
Kris	Pauwels	VUB, VIB
Danielle	Raspoet	Flemish Council for Science and Innovation (VRWI)
Elie	Ratinckx	Flemish Council for Science and Innovation (VRWI)
Nele	Robberechts	VLIR
Bert	Seghers	KVAB / VCWI / Jonge Academie
Sarah	Shelmerdine	Institute of Tropical Medicine
Rosette	S'Jegers	Flemish Interuniversity Council (VLIR)
Lucia	Smit	VUB / Braingain
Jan	Soons	COC, ACV Onderwijs
Mieke	Stevens	Institute of Tropical Medicine
Laurence	Theunis	Focus Research
Johan	Van de Voorde	Ghent University, Director Doctoral School Life Sciences and Medicine
Frederik	Van den Broeck	Institute of Tropical Medicine
Karen	Vandavelde	Ghent University
Joos	Vandewalle	KVAB, KU Leuven
Marleen	Vanstraelen	VIB
Bram	Vanthournout	Flemish Government, EWI
Irina	Veretennicoff	KVAB, VUB
Ann	Verlinden	Institute of Tropical Medicine, Antwerp
Arnaud	Zonderman	Scriptie vzw



**Vlaamse
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