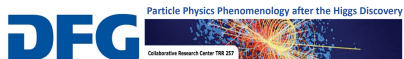


How to make an academic career in HEP-Theory

Thomas Mannel

CRC Annual Meeting, 6.-8. October 2020



... there are many ways, there is no recipe with guaranteed success ...

Part 1: Basics

Part 2: DFG Opportunities

Part 2: A few words on EU Opportunites

Career Steps (German System):

- Bachelor
- Master
- PhD Phase
- Postdoc Phase
 - "Standard" Postdoc
 - Long Term Postdoc (Akademischer Rat)
 - Juniorprofessor
 - Young Investigator Group
- Full Professor (W2, W3 or equivalent)

Qualification steps:

- Bachelor degree
- Master degree
- PhD / Dr. rer.nat.
- Habilitation:
 - Write your own book
 - Cumulative: Collect your papers
 - No Habilitation at all (Jun. Prof.)

various possibilities:

- (Fraction of) a position from the university
- (Fraction of) a position from a project (such as DFG GRK, CRC or alike)
- Individual Fellowship of a foundation (Studienstiftung, political or religious foundations ...)
 - Requires to work out a project plan
 - Some selection process, depending on the foundation
 - may have also other restriction (political party, confession, etc.)
- (Free lance)

Form most funding agencies the PhD is required to file your own application

- A position from the university
- A position from a project (such as DFG GRK, CRC or alike)
- Fellowships
- DFG opportunities
 - Research Fellowship
 - “Eigene Stelle”
 - New: Walter Bejamin Program
 - (Emmy Noether Fellowship)
- Others
 - (ERC Starting grants)
 - (Helmholtz Young Investigator Group)
 - (Max Planck Young Investigator Group)

- Long-Term Postdoc Positions 3+3 (Akademischer Rat or alike)
- Junior Professor 3+3 (+1) (Counts as being equivalent to Habilitation after 3 years)
- Junior Professor Tenure Track 3+3+permanent
- **Various Young Investigator Groups**
 - usually including additional resources to built your own group
 - usually fixed term 3+2 or 3+3
 - counts as being equivalent to Habilitation
 - **tough selection process**
- Fixed Term Professorships (5 years)
 - e.g. DFG Heisenberg Fellowship
 - ... or DFG Heisenberg Professorship
- ERC Starting grants
- (Tenure Track Professorships, e.g. W2 → W3)

Most of these possibilities have a selection process analogous to a professorship
see “Berufungsverfahren”

Part 2: DFG Opportunities

- DFG is the largest (national) funding agency
- Transparent review processes
- **Many possibilities for young scientists at different stages:**
 - Funding within projects (Coordinated Programs as well as individual projects)
 - Individual funding at all career stages

Abbildung 2:
Wissenschaftliche Karrierephasen und Förderformate der DFG

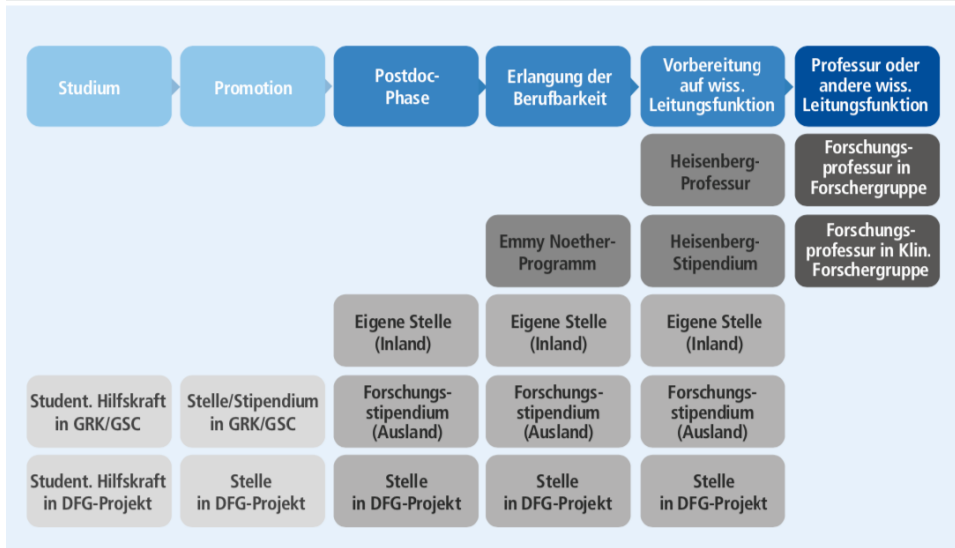


Abbildung 1:

Indirekt und direkt DFG-geförderte Postdoktorandinnen und -doktoranden in laufenden Projekten 2016

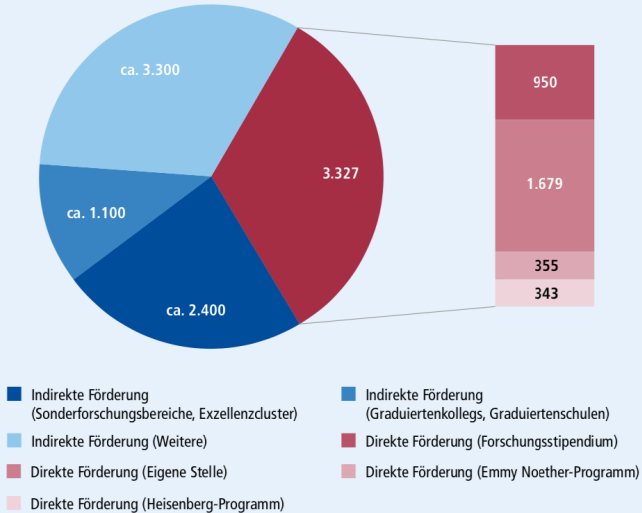


Tabelle 1:

Antragsvoraussetzungen und maximale Förderdauer der DFG-Programme zur Förderung der wissenschaftlichen Karriere

Instrument	Antragsvoraussetzung	Maximale Förderdauer
Forschungsstipendium	Promoviert	2 Jahre
Eigene Stelle	Promoviert	3 Jahre
Emmy Noether-Programm	2–4 Jahre nach Promotion, vor Habilitation	$3+2+(1) = 5$ oder 6 Jahre
Heisenberg-Stipendium	Berufbarkeit erlangt, aber noch nicht berufen	$3+2 = 5$ Jahre
Heisenberg-Professur	Berufbarkeit erlangt, aber noch nicht berufen	$3+2 = 5$ Jahre

Abbildung 3:
Durchschnittsalter der Neuantragstellerinnen und -antragsteller bei Förderentscheidung nach Programm und Jahr

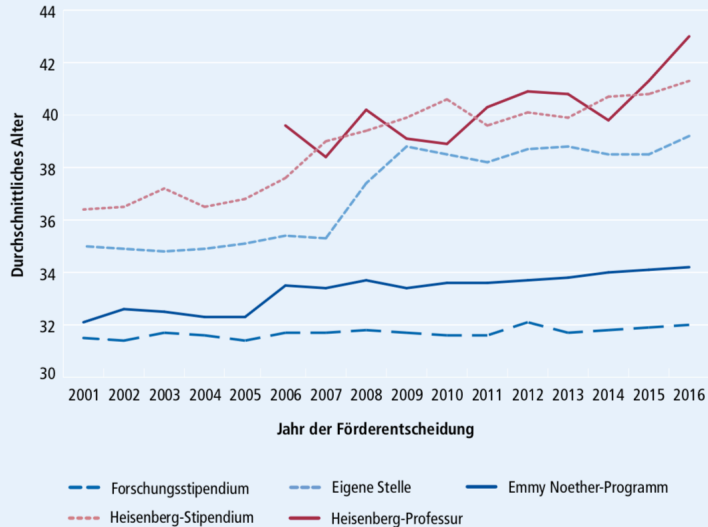


Abbildung 7:
Anteil der Fachgebiete innerhalb der Programme (alle Programme und Einzelförderung)

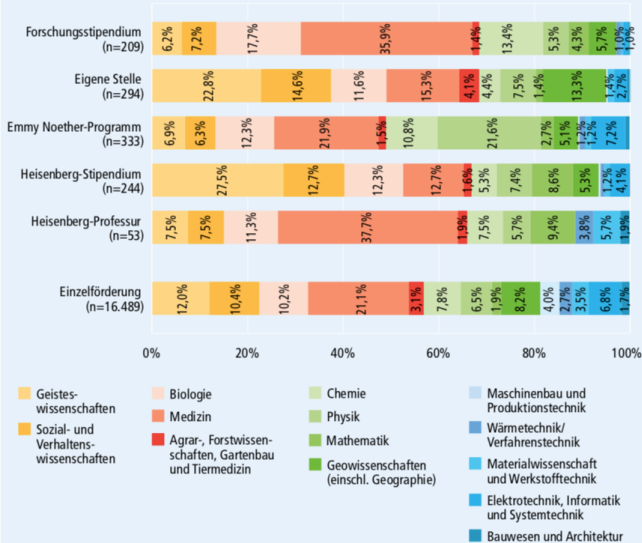
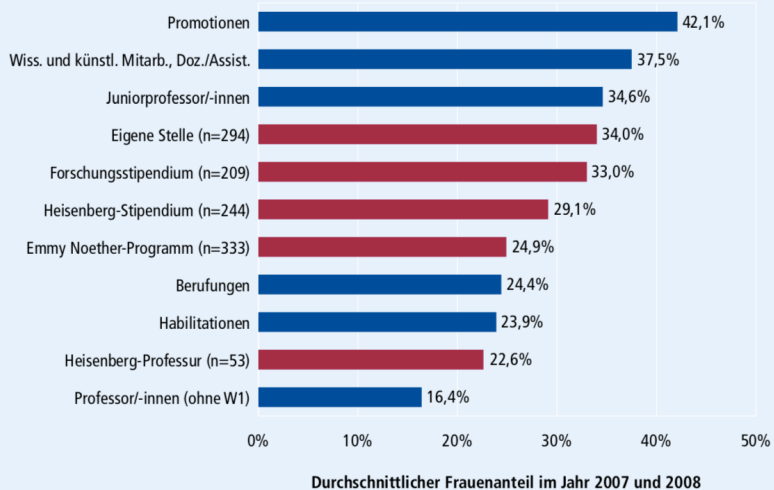


Abbildung 6:

Frauenanteile im deutschlandweiten Vergleich nach Qualifikationsstufe bzw. Programm in den Jahren 2007 und 2008



Eigene Stelle:

- Written application, anonymous review
- “Arbeitsplatzzusage” of the host institute

Forschungsstipendium:

- Written application, anonymous review
- Invitation letter of the host

Heisenberg Stipendium

- Written application, anonymous review
- Invitation letter of the host

Heisenberg Professorship

- Written application, anonymous review
- Selection process at the host institution (“Berufungsverfahren”)
- Permanent Position, first five years payed by DFG

Emmy-Noether Fellowship

- Written application, anonymous review
- Positive review → invitation to present in the “Emmy Noether Panel”
- Decision on the basis of the review and the panel presentation

Extremely tough selection process

95% Quota to get position in academia or equivalent

Part 3: A few words on EU Opportunities

ERC Grants for different career stages:

- ERC starting grant
 - 2-7 Years after the completion of the PhD
 - Up to 1.5 MEuro for 5 years, possibly including the PI's salary
- ERC consolidator grant
 - 7-12 Years after the completion of the PhD
 - Up to 2 MEuro for 5 years, possibly including the PI's salary
- ERC advanced grant
 - Very experienced researcher
 - Up to 2.5 MEuro for 5 years

Application requires not only excellent projects, but also the proper “wording”
applicants need to be coached on this

Review on the basis of a written application, in case of a positive review invitation to present

There are many ways to build a career, but nothing is guaranteed!

Carefully think about (and possibly seek advice):

- Is an academic career what I really want?
- Is it realistic to go for an academic career?
- Which grant application can I apply for at what stage?