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## The Heisenberg Professorship – A Statistical Profile

*Less than five years after its introduction, the DFG has already awarded more than 100 Heisenberg professorships. On this occasion, this infobrief provides some key information on the statistical profile of the researchers who are funded with a Heisenberg professorship. Special attention is given here to the "DFG biography" of the funding recipients.*

### 1 The Heisenberg professorship funding programme of the DFG

Among the DFG's numerous funding instruments, the Heisenberg professorship has its place both at the very end as well as at the very top for early career researchers: it opens the possibility of a permanent professorship to outstanding researchers who are on the final academic qualification level.

With the help of this funding programme, the DFG offers a professorship that is funded for a period of five years, which, following a positive evaluation, is continued on a permanent basis by the respective university. This so-called tenure-track process opens an excellent and reliable career perspective for the professors of tomorrow.

The funding programme offers considerable added value for the universities as well: because Heisenberg professorships are only awarded to persons who aim to establish an area of science not previously present at the respective location, it gives the universities the opportunity to further develop structurally. Thus, the Heisenberg professorship funding instrument

also serves as new way for universities to enhance their profiles<sup>1</sup>.

On the basis of the data collected at the DFG Head Office during the course of proposal processing, this infobrief uses several pieces of statistical key information to examine the profiles of the 103 individuals who have been funded with a Heisenberg professorship in the period 2006-2010. In addition to the question of the regional distribution of Heisenberg professors, their extensive participation in other funding programmes offered by the DFG is also discussed.

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<sup>1</sup> In addition to the Heisenberg professorship, the DFG also offers the Heisenberg fellowship under the "Heisenberg Programme" designation. The latter is also oriented towards particularly talented early career researchers in the research system. Unlike the professorship, however, it is not linked to an appointment process at a university. Further information on the Heisenberg Programme can be found at [http://www.dfg.de/en/research\\_funding/programmes/individual/heisenberg](http://www.dfg.de/en/research_funding/programmes/individual/heisenberg)

## 2 Statistical profile of the funded researchers

### 2.1 Distribution among the scientific disciplines

In accordance with the central role of the DFG – to serve research in all branches of science – the Heisenberg professorship can be applied for by outstanding researchers from all subject areas.

The distribution of the awarded Heisenberg professorships among the four different scientific disciplines distinguished by DFG shows that an overproportionate number of Heisenberg professorships have been awarded in the life sciences: of the total 103 new proposals awarded in the period 2006-2010, more than half – 55 – went to the life sciences; 24 professorships were awarded in the natural sciences, 16 in the humanities and social sciences and 8 in the engineering sciences.

It can be seen in Figure 1 that the proportion of the scientific disciplines receiving approvals for the Heisenberg professorship tends to

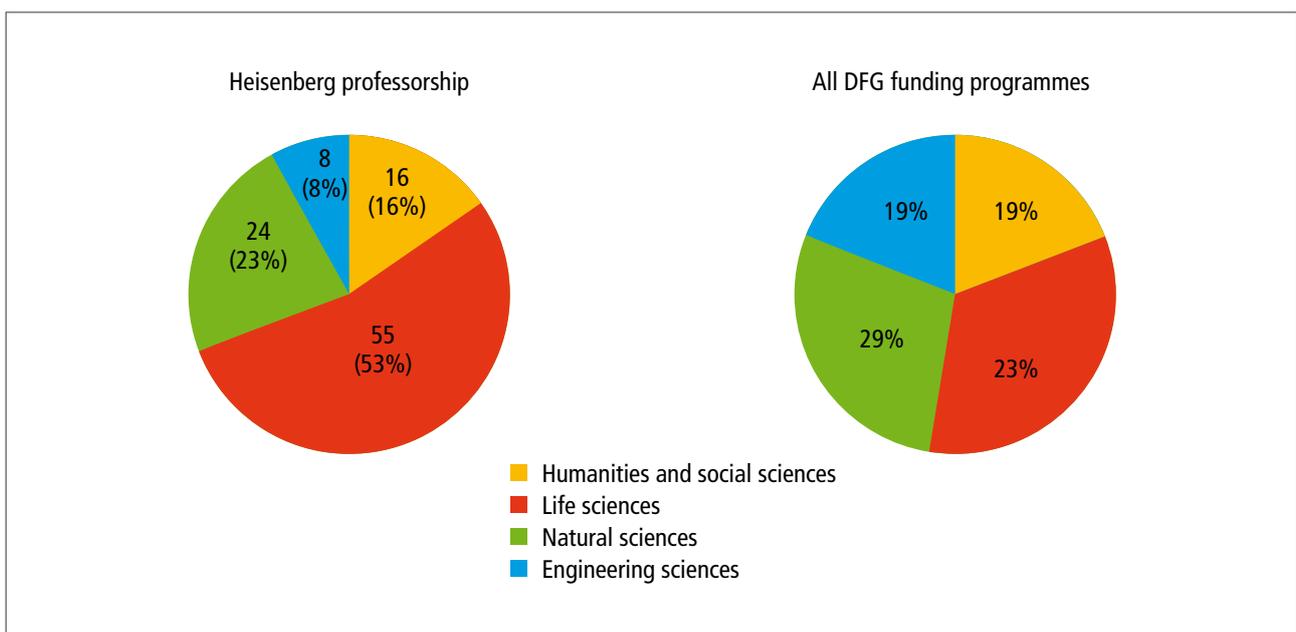
be in line with all DFG funding programmes<sup>2</sup>. A direct comparison shows the greatest difference for the life sciences. Here, the proportion within the Heisenberg professorship programme is 20 percentage points higher than in the DFG as a whole.

### 2.2 Regional distribution

The cartographic representation in Figure 2 shows the regions and university locations within Germany in which Heisenberg professorships were awarded and at which locations universities utilised the Heisenberg professorship funding programme of the DFG to enhance their profiles.

Consistent with the high density of universities located there, the largest number of Heisenberg professors is found in North Rhine-Westphalia: 21 Heisenberg professorships were established at a total of 9 universities. Thus,

<sup>2</sup> Serving as the basis for the proportion of scientific disciplines in "All DFG funding programmes" are the awarded proposals in all DFG funding programmes in the period 2006-2010.



**Figure 1: Awards per scientific discipline in the period 2006-2010**

Source: DFG, own calculations

one in five researchers funded with a Heisenberg professorship chose a university in NRW.

The single location with the most Heisenberg professors is in Lower Saxony: the Georg August University of Göttingen is home to a to-

tal of eight Heisenberg professorships, of which five are associated with the life sciences<sup>3</sup>.

<sup>3</sup> The ten professors in Berlin are distributed among TU Berlin (1), HU Berlin (3) as well as "Charité - University Medical Centre Berlin", which is operated jointly by HU and FU Berlin (6)

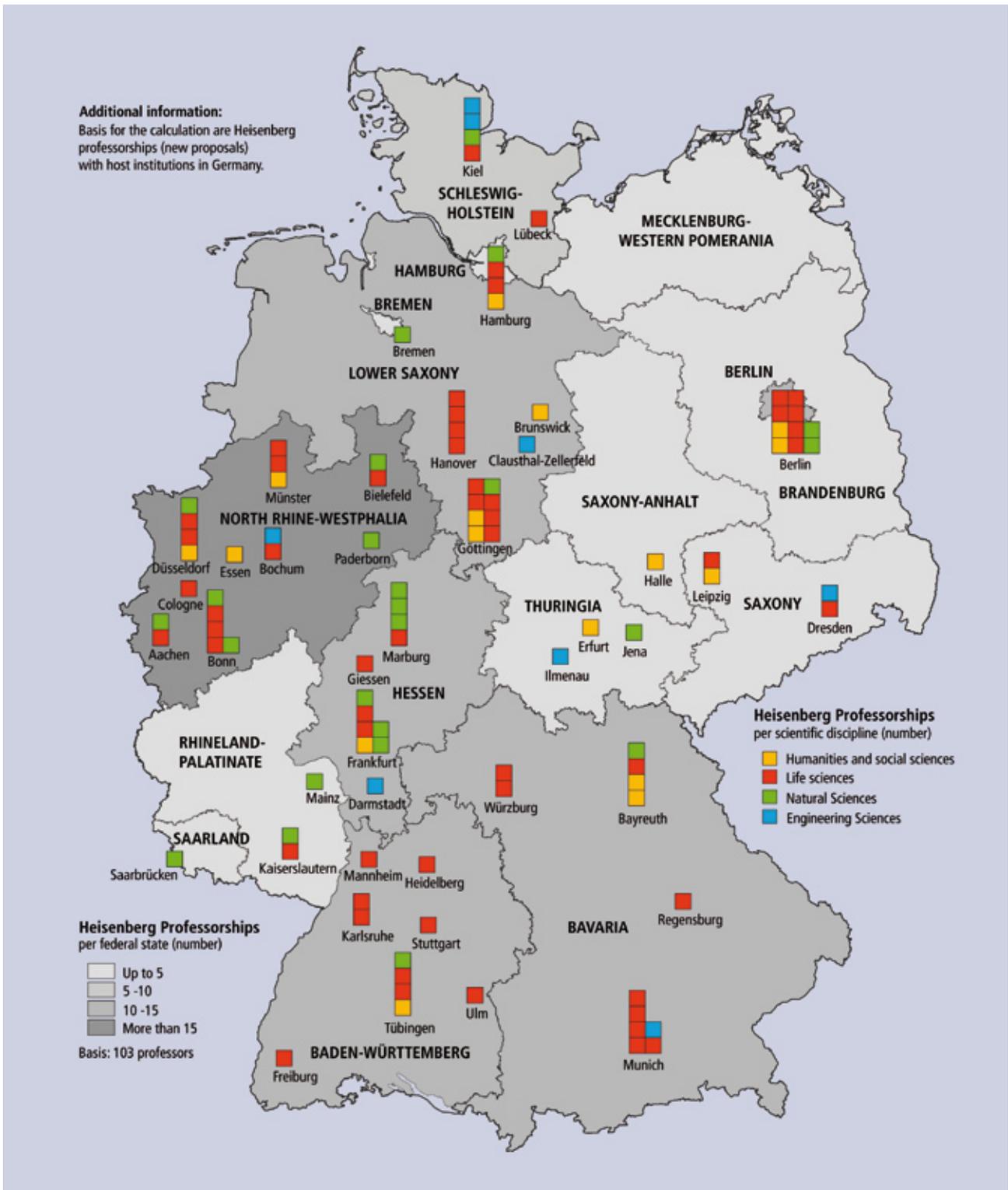


Figure 2: Awards per scientific discipline in the period 2006-2010  
Source: DFG, own calculations

### 2.3 Distribution by age and gender

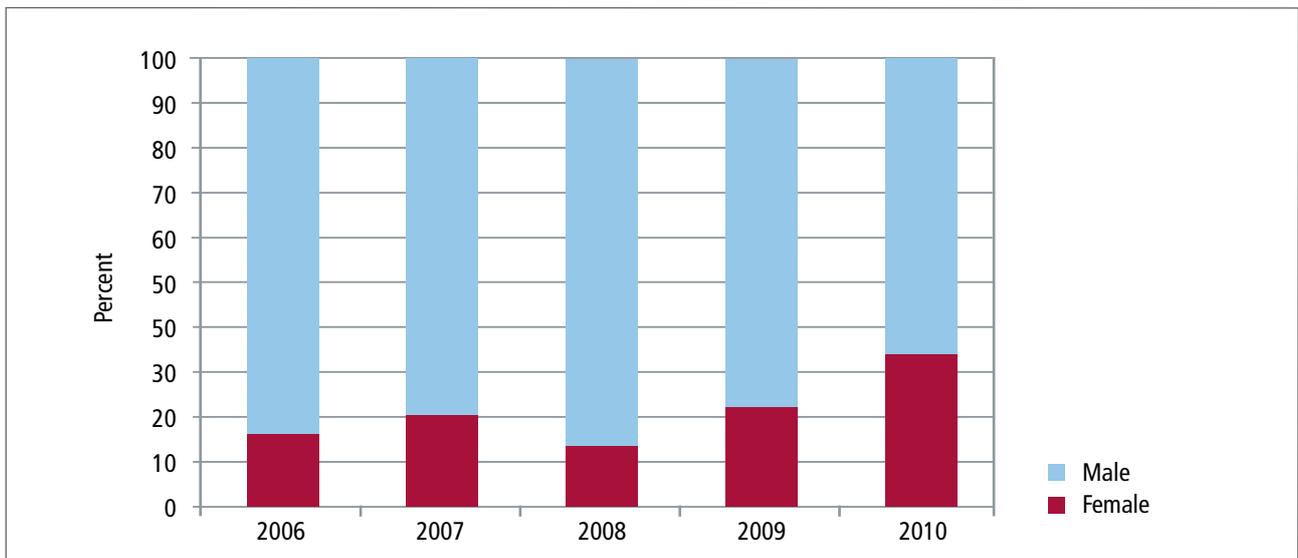
Figure 3 shows the development of the Heisenberg Programme according to gender. During the period 2006-2010, the proportion of women awarded Heisenberg professorships averaged approximately 23 percent. In the year 2010, 9 of the total 26 awarded Heisenberg professorships went to female researchers.

Figure 4 also shows that the majority of researchers who apply for a Heisenberg pro-

fessorship are in the 36 to 40 age group<sup>4</sup>. The average age at the time the professorship was awarded is 39.

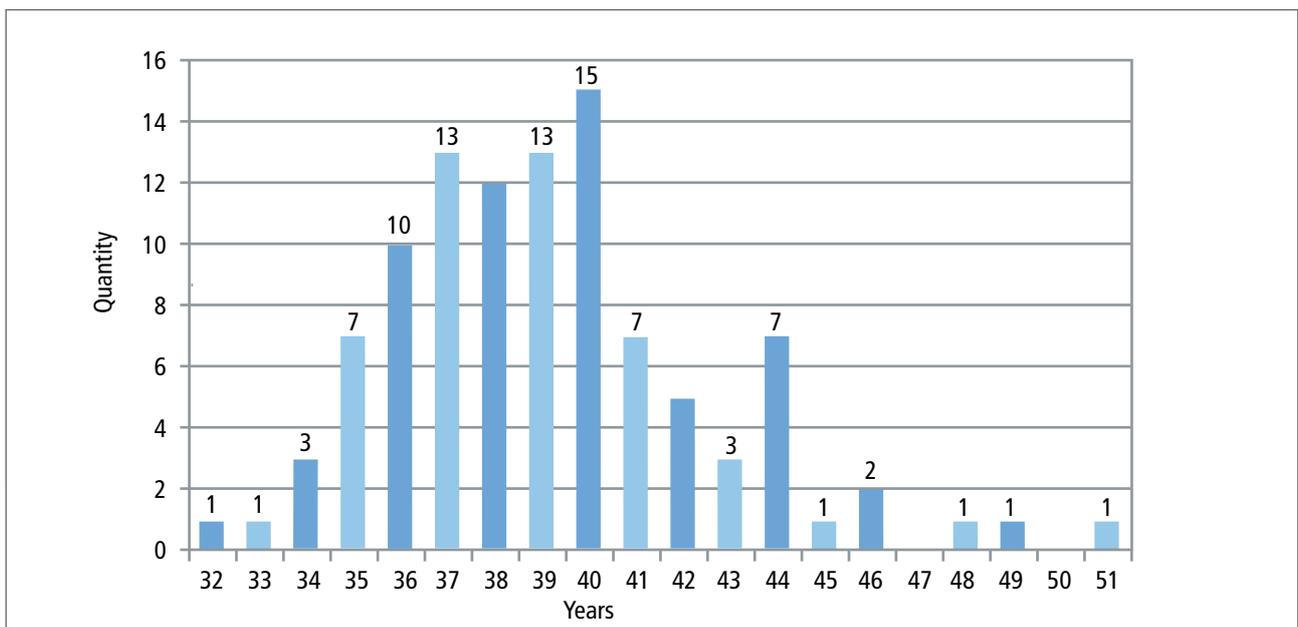
It is to be noted here that many Heisenberg professors were accepted earlier into the Heisenberg Programme, as they previously received a Heisenberg fellowship.

<sup>4</sup> The age refers to the time at which the professorship was awarded.



**Figure 3: Development of the proportion of women in the number of awarded Heisenberg professorships**

Source: DFG, own calculations



**Figure 4: Age structure of the Heisenberg professorships awarded in the period 2006-2010**

Source: DFG, own calculations

### 3 “DFG-biography” of the funded researchers

The Heisenberg professorship is a programme of excellence for outstanding researchers who, based on their qualifications, satisfy all requirements for a lifetime professorship. Consequently, the target group of this programme tends to have a scientific career with above-average research activity.

A suitable indicator for the research activity of the Heisenberg professors is participation in other DFG funding programmes. The result speaks for itself: a total of 386 grants or participation<sup>5</sup> in other DFG programmes went to the 103 researchers who were awarded Heisenberg professorships. This corresponds to an above-average rate of nearly four per person. Given the relatively young average age of the Heisenberg professors, one can expect a distinguished – and, particularly with a view to the future, promising – “DFG biography”.

Figure 5 gives a differentiated overview of the application awards and participations by

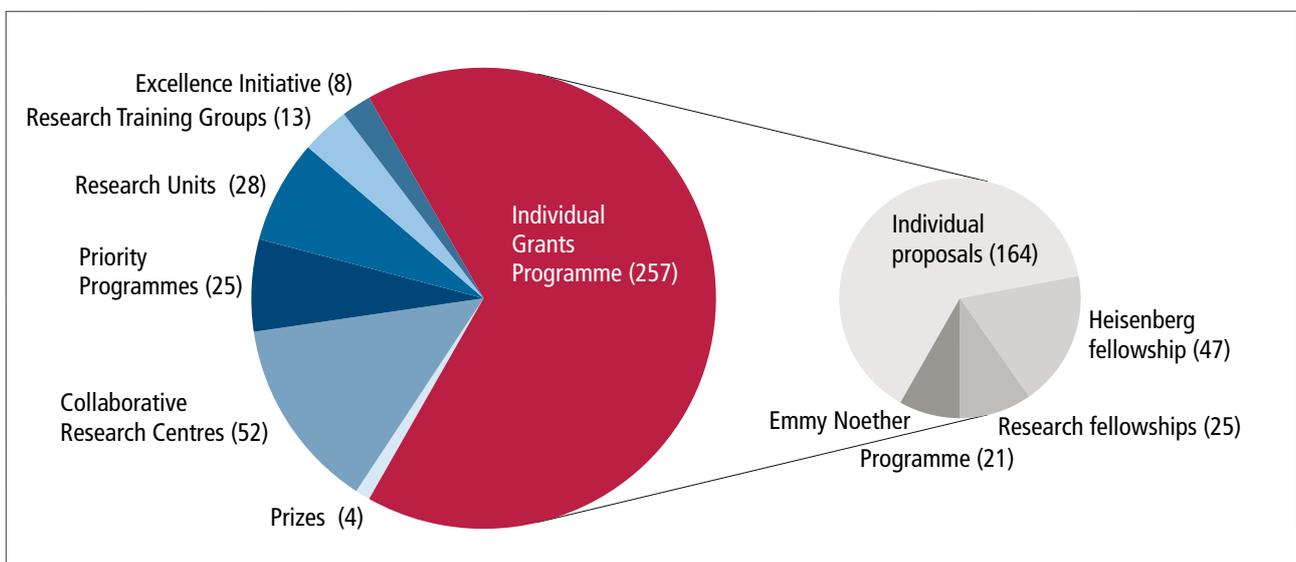
DFG funding programm<sup>6</sup>. It is seen that the researchers funded with a Heisenberg professorship demonstrate very high proposal activity in the Individual Grants Programme. They alone were involved in 164 approved individual proposals. A possible justification for the high number of approved individual proposals may be that many Heisenberg professors were previously funded with a Heisenberg fellowship and the fellows can apply for the funds necessary for their research within the framework of an individual proposal.

Among the coordinated programmes, particular importance is attached to the Collaborative Research Centres: 32 researchers funded with a Heisenberg professorship are documented in the DFG proposal database with a total of 52 instances of participation as project leader.

Programmes for funding early career researchers that are intended to qualify outstanding researchers for an appointment to a professorship include the Emmy Noether Programme and the Heisenberg fellowship.

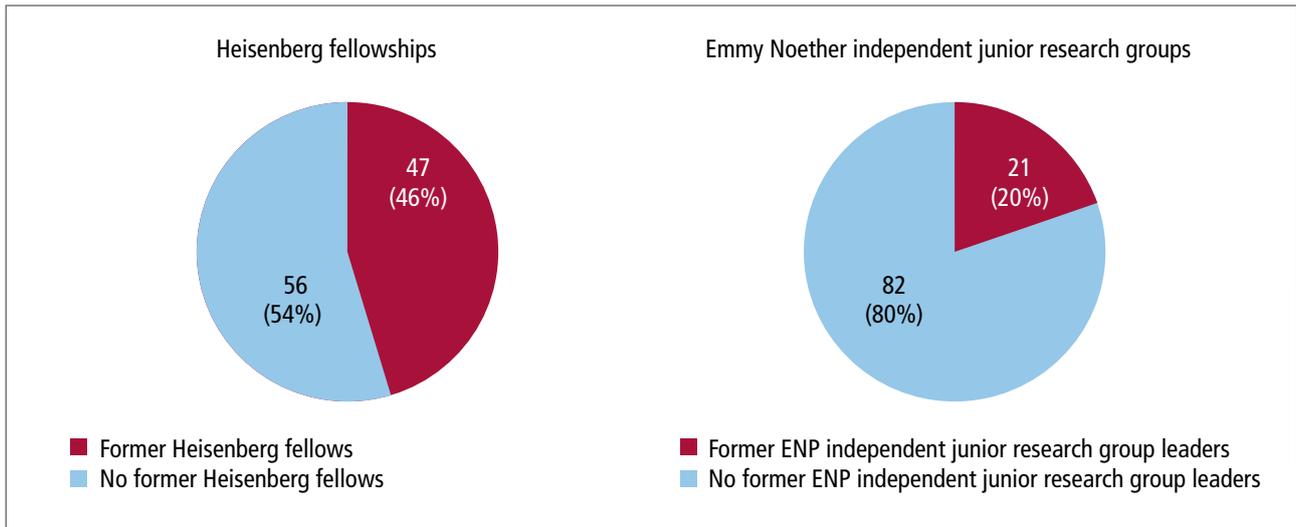
5 Serving as the data basis are approved projects in the Individual Grants Programme, participations in projects in coordinated programmes as well as prizes that have been received. There were no time restrictions on data collection. Thus, participations that took place prior to and following the awarding of the Heisenberg professorship are included.

6 Taken into account are the participation roles of project leader (Collaborative Research Centres, clusters of excellence), applicant (Individual Grants Programme, Priority Programmes, Research Units) as well as participating researcher and spokesperson (Research Training Groups, clusters of excellence, graduate schools, institutional strategies).



**Figure 5: Instances of participation of Heisenberg professors in DFG funding programmes**

Source: DFG, own calculations



**Figure 6: Prior funding of Heisenberg professors in the "Heisenberg fellowship" and "Emmy Noether independent junior research group" programmes**

Source: DFG, own calculations

In this regard, Figure 6 shows that 21, or approximately 20 percent, of all Heisenberg professors benefit from prior experience as the leader of an Emmy Noether independent junior research group. Of the researchers funded with a Heisenberg professorship, 47 made prior use of the Heisenberg fellowship. An application may be submitted to convert this to a professorship if a university presents a corresponding structure development concept which is given a positive evaluation.

Although they constitute only a small part of the „DFG biography“ of the researchers who are funded with Heisenberg professorships, the importance of the scientific prizes is not to be ignored. Prior to the start of their professorships, 3 of the 103 Heisenberg professors were awarded the most distinguished prize for early career researchers in Germany, the Heinz Maier-Leibnitz Prize. Ulm-based gastroenterologist Professor Karl Lenhard Rudolph, recipient in 2006 of the fourth Heisenberg professorship, was awarded the most prestigious research prize in Germany, the Gottfried Wilhelm Leibniz Prize, in 2009.

## DFG infobrief

### Imprint

Issue 2.10

The DFG infobrief is published by the Information Management Section of the German Research Foundation (DFG), Bonn.

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Basic layout: besscom, Berlin; Tim Wübben, DFG  
Design: Designbureau Pi Heinz, Cologne