

## Chapter 2

# The Rocky Road to Tenure – Career Paths in Academia

Angelika Brechelmacher, Elke Park, Gülay Ates, and David F.J. Campbell

### 2.1 Introduction

Embarking on an academic career apparently is a risky undertaking. Across all eight countries many interviewees claim that what is needed is perseverance and persistence, not giving up (you need an “absolute will to do it”), steadfastness, ambition, obstinacy, flexibility and a willingness to take risks. Young academics must face periods of uncertainty, in the words of one interviewee it is vital “not to have a need for security”. Uncertain employment prospects, in many cases adverse financial circumstances, quite often slightly above the ‘at-risk-of-poverty’ level (Ates and Brechelmacher 2013), go hand in hand with self-exploitation and long working hours at the expense of a private life. Also, mobility and a willingness to go abroad international experiences are increasingly requirements for an academic career. Coincidence also play a role as several interviewees claim that it was ultimately luck that got them where they are (“being in the right place at the right time”), however, as one interviewee points out: “Women say their academic careers are based on luck, men claim it was their competence”.

This chapter tries to identify and analyse different stages of an academic career from the early stages as a PhD candidate via the selective postdoctoral phase towards reaching permanent employment, preferably but not necessarily as a tenured university professor. As academic career paths and perspectives are currently in a state of transformation recent national attempts to give new structure and perspective to academic careers (tenure-track) will be discussed as well as alternative career models that are possibly emerging (externally funded positions, cross employment). Focusing on the personal perspectives and experiences of academics

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A. Brechelmacher (✉) • E. Park • G. Ates • D.F.J. Campbell  
IFF Institute for Science Communication and Higher Education Research, Universität  
Klagenfurt-Graz-Wien, Schottenfeldgasse 29, Vienna 1070, Austria  
e-mail: [Angelika.Brechelmacher@uni-klu.ac.at](mailto:Angelika.Brechelmacher@uni-klu.ac.at)

the situation and problems they currently find themselves confronted with will be reflected.

## 2.2 The PhD Phase: Entering an Academic Career

In the following a brief insight into the early stages of an academic career, before completion of the doctoral degree will be given. The analysis centers on the following questions: Is a doctorate required for an academic career? What tasks are expected of early career researchers? How do PhD-candidates perceive their situation? How satisfied are they with their working conditions?

In Austria a doctoral degree is still the first requirement for an academic career. Short-term positions as tutors, student assistants, assistants on research projects or as pre-doctoral assistants, are seen as important first steps towards entering an academic trajectory. One interviewee stated that her career started with the first employment in a pre-doc position, which was an “entry ticket to the institution”. (AT46) According to many interviewees – especially university managers and professors – the ideal start into an academic career is to secure a place in one of the newly established structured doctoral programmes. Entering these highly selective programmes is reserved for only a few successful candidates. “It is impossible to finance everyone, and not everyone is able to do a doctorate.” (AT34) Both juniors and seniors at Austrian universities see involvement in research projects, integration into the department, building up networks, active participation at conferences and journal publications as important elements for career advancement in academia. Some of the interviewed seniors recommend that being mobile is also important during this early career stage. Regarding the profile and status of pre-doctoral junior academics, changes are observed:

Today’s pre-docs are equal to former university assistants, but have to remain in the role of students, they are employed through projects and lab-jobs, whereas former university assistants were firmly integrated into the team/institute. (AT47)

In Switzerland an academic career starts right after a master thesis by being employed as an assistant and doing a PhD. Interestingly, many junior respondents mention getting their post was easy and without any competition.

Swiss funding and the recruitment procedures are dynamic, which makes it very attractive to do a PhD in Switzerland. However, it is also mentioned that structured doctoral schools tend to overburden young scientists. Junior respondents from Swiss universities list teaching, correcting exams of undergraduates or supervision of master thesis, doing laboratory jobs, and publication of articles as important tasks. One of the respondents observes that teaching has been devalued and there is too much focus on research:

Everybody at [my institution] always says that teaching is important and so on, but in the end I want to get my PhD, and for my PhD [my institution] doesn’t care how much teaching I did but how many results I have. [...] So it’s always if I spend more time on teaching, I

spend less on research, I have less results and in the long term I have some smiling faces of the students but it's not helpful for me at all. (CH34)

The interviewee thinks that the tension between teaching and research comes partly because of a lack of rules regulating the time devoted to teaching and research.

An influx of highly educated German PhDs in Switzerland could contribute to an increasingly competitive environment for Swiss PhDs: "Doing a PhD in Switzerland could become less attractive." (CH24) Not least because of this, being mobile before or after obtaining a PhD seems to be highly common at Swiss universities.

Also at Polish universities, doctoral degrees are required for an academic career. However, interviewees repeatedly point to an insufficient funding level for pre-docs. The salaries of junior position holders seem to be low and additional remuneration is required. One of them underlines:

If a young researcher has no decent place to live, faces problems in providing sufficient income for the family, then research career development is wishful-thinking. And the lack of academic leaders and research teams makes it difficult to absorb external funding. (PL6)

Furthermore, both senior and junior interviewees criticise still predominantly feudal senior-junior relationships.

Taking advantage of younger academics unfortunately seems to be an integral part of higher education in Poland. Fortunately, the new generation of senior academics who are more internationally oriented know that feudalism in science is already a thing of the past. (PL50)

At Finnish universities too, doing a PhD is a requirement for an academic career. As in Austria and Switzerland, structured doctoral programmes have recently been established. The standard time to complete a degree has been decreased to 4 years. Research merits, social skills and networking have until recently belonged to the post-doctoral phase. The norms for these abilities, skills and competences are subject to change. These and are now to be developed in the doctoral phase. However, compared to before, the supervisors now support the doctoral candidates more fully and are responsible until completion of the doctoral thesis.

Because of the required competence profile for doctoral candidates it seems that Finish junior researchers have to postpone the time of being abroad to the postdoctoral phase. Job opportunities for PhDs are rare inside of academic institutions:

When I started as a doctoral student most graduates stayed in the academia. Now we have quite a few doctoral graduates who work outside academia. (FIJW71)

In Germany the PhD is still seen as an extended training phase. Currently established structured doctoral programmes and excellence initiatives of German universities are considered as a good start into an academic career. However, many juniors feel pressurized into finishing their degree in 4 years as required by the new doctoral programmes. Doctoral candidates at German universities list as their core duties: being involved in teaching and research activities, supervising Bachelor- and Master students, supporting the professor, administrative tasks, publishing, being mobile and finally, writing a PhD. In addition, doctoral candidates in

structured programmes mention a specific amount of courses as further required activities. Respondents in junior positions find it difficult to go abroad under these circumstances. One of them underlines that one needs a high frustration tolerance (0310SS). The situation during the doctoral phase is described as follows:

I definitely think that there is very big competition among the doctoral candidates and the team work suffers. Those who compete for the next position are known. The dissertation's quality suffers, because one is left alone. In addition, the readiness to work more than eight hours a day, is required. It is important to commit oneself completely to this career, which is actually no career. This includes working late, at weekends and travelling a lot. (...) I would be happy with my job, if I knew that the work would pay off. (0120SH)

Despite the high performance pressure, low income and 60 hours per week workload, some of the junior researchers are highly motivated and satisfied with their situation. "I have fun in scientific work and teaching. My work is creative." (0120 MB)

Working at Croatian universities requires a PhD too. The allocated time for a doctoral degree has been reduced to 6 years. Also in Croatia there is a trend to faster completion of the doctorate. Junior researchers mention that their scientific performance should include research and teaching activities, publishing as many articles as possible, gaining international experience and the active participation in conferences. Many criticise the high teaching workload, which prevents them from completing their PhD.

My teaching workload is a major problem. Although my contract says I should spend 25 percent of my time in teaching and 75 percent in research work, in reality it is the other way around. (HR48)

Junior interviewees also complain about a lack of participatory rights and collegial support. However, one interviewee points out the freedom and autonomy to "define my own field of research and the opportunity to suggest and implement changes relating to the teaching process and my work with students" (HR6).

Obtaining a PhD is a requirement for an academic career also in Romania. There have been recent changes and adaptations in line with the European doctoral programmes. Often a lack of funding and/or low salaries for young academics are deplored. It is expected of doctoral candidates to participate at conferences and postgraduate programmes, besides doing research to attend professional training programmes for teachers, to publish articles in prestigious journals and to access grants and scholarships. One interviewee stresses the importance of belonging to a research team:

This is the only way to achieve performance in research. [...] To be a member of a sound research team favours publication and has a positive effect on the academic prestige of scientists. (RO19)

One of the senior respondents from a Romanian university talks about the important fruitful interrelation of senior and junior scientists. He highlights the relevance of communicating with junior researchers and motivating them to take part actively at competitions and conferences (RO39MAN).

In conclusion, in most of the countries analysed the completion of a PhD is a requirement for an academic career. However, Ireland stands apart from the

previously examined countries. Here bachelor graduates already have the opportunity to enter academia. Nevertheless, the increasing importance of doctoral degrees is noted as an upcoming trend. While in Croatia and Romania the doctorate is the final degree of the training phase, at Swiss, Finnish, Polish, German and Austrian universities, the doctorate is merely an intermediate degree before a habilitation or an equivalent post-doctoral degree.

Regarding competition, Swiss, Romanian and Polish respondents, find the application procedures for positions to obtain a doctoral degree not competitive. On the contrary, pre-doc position and structured programme applications procedures in Austria, Germany and Finland are highly competitive and selective. In nearly all countries, junior positions are fixed-term, precarious and have low incomes.

The expected tasks and core elements of the early career stages in nearly all countries are the advancement of teaching and research skills, participation in conferences, building up networks and publishing articles. With the exception of Finland, mobility requirements during the doctoral phase are strongly increasing in all countries.

Regarding the job satisfactions of junior academics, there is mixed evidence. However, a common impression is an increasing time pressure to finish the degree, and a heavy teaching workload which further impedes the completion of the thesis. Finally, regarding the senior-junior relationship, a hierarchical structure can be observed in nearly all countries.

### **2.3 The Critical Post-doctoral Phase: A Double Bottleneck?**

The phase after completion of the doctorate and thus after the last steps of training or education as an academic, is considered by many as the hardest and most difficult phase during an academic career. The training phase to becoming an academic is over and young postdoctoral researchers enter the academic labour market. They need to find their first university position, even if only on a fixed-term basis, and then manage to progress on to permanent, tenured employment. Interviewees portray the postdoc phase as a double bottleneck at the stage of entering it after the PhD (trying to obtain a postdoctoral position) and at the stage of leaving it by securing permanent, tenured employment. The postdoc phase emerges as a highly risky and uncertain period at the end of which you either “make it to the safe side” (DE0318PF) or you have to leave the university. Many interviewees described this phase as most “critical”, “problematic” or “difficult”. Obtaining postdoc-positions after finishing your education is also becoming “increasingly harder”. (AT01, AT19MAN) Interviewees claim that post-doctoral positions are rare and there is fierce and increasing competition for the few available posts. There are simply “not as many positions as applicants”. (CH22) Several Finnish interviewees attribute this lack of open postdoc positions to the fact that the number of PhDs has increased in

recent years, while the number of postdoctoral and professorial positions remained the same. One Finnish interviewee claims that “there are lots of PhDs [...] but after that it gets more complicated. Academic posts have not increased although more PhDs are trained.” (FILP12) Another Finnish colleague (junior) notices the same change: “Previously there were less researchers, and it was possible that some day you get a professorship. Nowadays there are so many researchers, that there are no positions for everyone.” (FILP17) There simply is “not enough work in the academy for doctoral graduates nowadays”. (FIJW80) One Austrian postdoctoral researcher even considers his career atypical, because of the fact that he managed to obtain a postdoctoral position at all. (AT01)

How arduous and difficult it is today to obtain university employment as a postdoctoral researcher is stressed in many interviews. There is also wide agreement among interviewees that the postdoctoral phase is the most competitive phase in an academic career. A Finnish junior summarises what many others said:

The post-doctoral phase is very exhausting, there is harsh competition going on and you usually have to work under fixed-term contracts for a very long time until you get a permanent position; if you ever get one. (FILP7)

The risky nature of an academic career and the uncertainty during the postdoctoral phase is also highlighted in other interviews: “One has to deal with a lot of insecurity” (FILP18) as “the path is unclear” (AT05).

Further, there is no guarantee that after competing on the tough academic job market a permanent position will open up at the end. Many will be forced to leave the university, having to end their academic career at a relatively late age (AT20MAN “at the age of forty academic corpses turn up – people who are too good for industry”). Ultimately, the postdoctoral phase is characterised by the race towards (permanent, tenured) university employment or dropping out of the race and having to leave academe (FILP18, AT19MAN).

The unpredictability of an academic career during this stage is also reflected in the interviews. Many claim that it was mere “coincidence” or “luck” that got them where they are (among others AT58, AT48, CH52, FILP4, FILP5, FILP8, FILP12).

There is also a growing pressure for mobility as in some countries academics are required or expected to leave their university after completion of the PhD. These mobility requirements present a further problem to postdoctoral academics as they collide with family and life-planning which usually takes place between the age of 30 and 40 (see also Sect. 2.3.4 on mobility). One Austrian interviewee states that “the decision to have a family, does not depend on your age, but on your employment contract” (AT48).

There is consensus, among university managers and academics alike that it is vital to structure the postdoc career phase more clearly and to provide perspectives for young academics during this phase. As a reaction to the high uncertainty and lack of concrete perspectives which makes the planning of an academic career difficult if not impossible, there have been recent attempts to structure the somewhat chaotic, highly risky postdoctoral phase, most notably through the introduction of new career models such as the tenure-track, a career track that is intended to

lead postdocs to permanent employment on the condition that certain, previously outlined qualification requirements are fulfilled (see Sect. 2.3.3).

### ***2.3.1 Fixed-Term Employment and Precarious Working Conditions***

The prevalence of fixed-term contracts is one of the central problems associated with the postdoctoral phase. Most postdoctoral employment contracts are fixed-term as universities often consider this phase to be the last selective phase for professorial, tenured positions and it is thus in this phase – between the age of 30 and 45 depending on the country and structure of the HE system – that precarious employment situations occur most frequently: One fixed-term employment contracts follow after the other with no guarantee of a positive outcome. A Swiss interviewee claims that as a “postdoc people become eternal temporary workers”. [...] “Getting a chair is an ambition but not a possibility” (CH4).

Many interviewees in several countries are under the impression that there have been changes in employment contracts at universities in recent years. They notice a rise and increase of fixed-term positions in academe and a trend towards less secure working conditions. (for example, AT24HE, DE01227BK, DE0201MH, DE0113DT). The “turnover” at universities is high (DE0215JR) and “contrary to former times staff today needs to be more flexible” (DE0301NA, DE0616AB). Due to contract limitations, performance pressure and competition increase (DE0120SG).

Several interviewees claim that formerly it was easier to obtain permanent employment at universities. “In the past” tenure was granted more or less automatically at the end of a contract (CH38), you simply had to “wait in line or queue” for a professorship after completing your PhD and habilitation (DE0215JR). According to the interviewees there used to be clearly outlined paths and employment prospects which no longer exist:

An academic career was previously very clear, now it is very uncertain. I do not imagine that I will get a permanent position from the university, but probably some temporary posts. There are discussions in my department about strengthening career paths, but I am very sceptical about this. (FILP15)

This clear notion of an increase in fixed-term employment is linked to and explained by the need for flexibility and budgetary constraints universities are facing, both by academics and university managers. In the opinion of an Austrian junior researcher “university Human Resources planning is getting more strategic: departments tactically try to avoid being ‘blocked’ [with permanent positions] and aim at preserving flexibility in hiring.” Many academics, especially in Austria, a country that only recently underwent drastic university reforms in the direction of New Public Management, are under the impression that university leadership is opting mostly for fixed-term junior positions and is reluctant to create permanent

positions in order to maintain flexibility (AT25) “aims to keep the numbers of core [i.e. permanent] staff low for budgetary reasons” (AT09, also AT31HE).

Generally, university management underlined the need for a certain degree of flexibility in HR management in the interviews. An Austrian university manager explained the increase in fixed-term positions “as a reaction to relatively relaxed hiring policies before, which gave even less well qualified staff access to permanent [civil servant] positions.” (AT12MAN). Another Austrian university manager argued in defense of an increase in non-permanent positions that he “also experienced phases of 100 % permanent employees, where positions were simply ‘sat out’” (AT19MAN).

Not surprisingly, academics on fixed-term positions experience their personal employment situation mostly negatively and voiced their dissatisfaction in the interviews (with few exceptions, one interviewee claimed the fixed-term nature of his job was a “motivation and a chance”, DE0523KS). However, there is support from senior academics who found the strongest words, when considering their younger colleagues’ situation. An Austrian senior found the situation “absolutely horrific” (AT34), another called it “scandalous. [...] Fixed-term employment contracts force talented people to leave. This is not conducive to scientific work. In the social sciences people develop hopes, are actively involved and are then left with nothing” (AT38). Another professor found it “a catastrophe [...] We are burning an entire generation.” At her department, [postdoctoral] university assistants are employed for 4 years, after this time the assistant “automatically” has to leave the department. This happens at a time in the academic’s career “where other universities are more than happy to have him or her [...], it is a brain drain without comparison” (AT34). The resulting brain drain due to a lack of permanent academic positions is also mentioned in a German interview (DE0317NN). Higher Education systems with a high rate of fixed-term positions are considered increasingly “internationally unattractive” (AT34). France and the UK on the other hand are mentioned repeatedly as systems with better career prospects (AT01, AT01, AT48). Besides the inherent financial and personal uncertainty of fixed-term positions also the lack of institutional affiliation and participation in university governance (DE0118BK, AT50 “Loyalty cannot be developed this way”) is seen as a reason why fixed-term employment is problematic and possibly detrimental. It was also mentioned that the quality of research suffers from time-pressure and temporal delimitations.

Most interviewees on fixed-term positions expressed their hopes for permanent employment after a long and exhausting phase of having taken “constant steps into financial uncertainty” (AT15). A Swiss postdoctoral researcher summarises: “Of course there is the anguish of having a position which you like but which is fixed in time. I have 5 years ahead then I hope I will finally get something permanent.” (CH24)

Permanent employment, but not necessarily a professorial position: one interviewee’s states that she does not aim for a “career” or a professorship, she only wants a “permanent position on which to do research” (AT15). Another interviewee from Austria claims that “his aim is a professorship or another permanent university

position, such as the senior lecturer in the UK (AT02). However, according to the interviewee, such positions do currently not exist in his country [and] tenure-track positions are currently not available in his field”. A male Austrian interviewee who is currently cross-employed as a consultant and works on a project basis at the university claims that as he started having a family “future fantasies of a permanent position” emerged. Apparently a permanent position to him is nothing but a fantasy, an unrealistic dream to him, which he claims he has now given up (AT58).

Another postdoctoral researcher from Austria recounts his career and looks back on over 25 years of precarious, fixed-term employment. This interviewee only recently obtained a position as university assistant (also fixed-term), “for which he is actually too old” and claims that “for the first time in 25 years I know what to live on for the next 4 years.” It is “strange not to have to permanently worry about finances.” The interviewee financed his life through projects and worked on research that interested him on the side, often unpaid (AT29).

### 2.3.2 *The – Changing? – Role of University Assistants*

The position as “university assistant” represents the traditional continental European model for postdoctoral employment (especially prevalent in the German speaking area or countries with a chair-system, this applies to Switzerland, Austria, Germany, Finland, Croatia, in the EuroAC survey). University assistants (both pre-doc and postdoc) are assigned to a professor, they belong to the “infrastructure” of a professorial chair and are in many ways tied and strongly dependent on the chair-holder. These positions are mostly fixed-term. After the postdoctoral assistant’s position expires, the only other option besides leaving the university was the application or appointment (“call”) to a full professorship (usually after the completion of the habilitation around 45 years of age). This model is currently subject to change due to the introduction of tenure-track structures and attempts to foster earlier academic independence. An Austrian senior/manager summarises:

The trend is away from traditional assistant positions that depend on professors towards early academic independence. [In] the old model young academics remained on assistant positions for a relatively long period of time, today comparative evaluations and reviews take place at a much earlier point in a career. (AT28MAN)

The traditional role of university assistants as an ‘asset’ of the professor was outlined in many interviews. Professors “have” or even “share” and “bring” their “own” assistants (CH28, CH17, CH48, AT10) “Some professors still keep assistants like in the old school.” (AT39) All pre- and post-doc positions are “tied to professors, they are only assigned to close collaborators of professors.” (AT48) An Austrian interviewee speaks of a “‘feudal system’ in the German speaking area” (AT57).

For professors, these human ‘resources’ are valuable, however: A Croatian senior sees a positive change in having assistants, because

[it] allows me to do those tasks I really love – writing books and working on my own improvement. Assistants do those less attractive tasks, such as evaluating students' progress, monitoring their work during the year, evaluating their seminar papers etc. (HR15)

University assistants traditionally got chosen by the professors they are assigned to (CH37, CH23) and they tend to depend strongly upon the chair-holder under and for whom they are working, in turn they (can) receive support from their mentor. This was the traditional model of academic career advancement but this model seems to be changing as an Austrian senior (AT41) notes that “formerly it was common that the assistant wrote the scientific paper and the professor put his name under it. In return the professor mentored and supported his assistant. Today, assistant positions are fixed-term, the assistants no longer work for the professors and do not take on administrative tasks any more, instead they have to closely watch and work on their own scientific performance.”

However, others claim that the old model is still present: “At other institutes research assistants have to make copies for the professor” (AT32). Regarding the division of labour between professors and assistants, a Swiss professor mentions that “he doesn't go into the lab anymore. It is the PhDs and the post-docs who do the experiments. There is a pyramidal division of labor. [...] His job is mainly to “have new ideas of research”, to find money to finance it, drive the research projects and write or rewrite the papers of his PhDs before sending it to journals” (CH54). That junior staff (both predoc and postdoc) does most of the academic “groundwork” is also recounted in other interviews in Austria and Switzerland: “Question: Whenever there is a publication it is co-signed by the head? Answer: Yes. Question: Always? Answer: Yes, no publication without the name of the professor and it is often written by himself” (CH29).

Several interviewees mention the high workload (especially in teaching and student supervision) assigned to assistants which impedes the completion of larger research projects such as the habilitation (AT48). An Austrian interviewee notices “that assistants have to carry the load of the high number of students, they are the ones standing in the lecture halls, they have to correct exams and they are blocked in their own academic careers.” (AT17). In addition, university assistants are faced with a pressure to publish during this phase: High research performance is expected of them as a position as university assistant is still considered a qualification position in the academic career.

Still, institutions rely on the work and contributions of university assistants. While an Austrian senior academic is generally in favour of “raising the number of professorial positions”, he states that “we cannot play America and pretend there are only professors”, his university needs assistant positions to be able to fulfil the large teaching obligations and administrative tasks (AT12MAN).

### 2.3.3 *New Career Tracks: The Tenure-Track as a Solution?*

In many Higher Education systems there have been attempts to restructure the often unregulated and chaotic academic career paths during the critical postdoctoral phase. New career tracks were introduced to provide a clearer perspective and to create an outlined track or pathway towards permanent, tenured employment for highly qualified young academics in recent years. In some countries, such as Austria, Switzerland and Finland a tenure-track system more or less loosely based on the US American tenure-track has recently been established. The tenure-track intends to bridge the gap between fixed-term university assistant positions and professorial appointments by introducing a trial period from assistant to associate and full professor based on the fulfillment of certain previously outlined qualification requirements. While in Switzerland and Finland the tenure-track leads up to the position of full professor, in Austria promotion on the tenure-track ends with an associate professorship. The position of full professor can still only be reached via a “call” or professorial appointment procedure.

In Germany, the so-called “junior professorship” has been established, an intermediary position and a – previously missing – link between fixed-term university assistant positions and the full professorship. Also in Ireland which already foresees a clear path toward permanent employment, changes in the career-paths of academics were implemented aiming at more simplified structures. In Poland the “road towards tenure” is generally not considered a problem, a clear tenure-track from associate to full professor was and is in place and most postdoctoral academics follow this path. In Poland the problematic aspect of postdoctoral academic careers (as assistant or associate professors) is not so much obtaining a permanent position as the low salary level these positions offer.

Interviewees in the countries which recently implemented the tenure-track model expressed hopes that the tenure-track will provide perspectives to academics and give more clarity and predictability to the academic career path. Generally, the introduction and underlying idea behind the tenure-track is regarded overwhelmingly positively by junior and senior academics alike. They welcome “the existence of a foreseeable career path with predefined procedures” (AT44). The tenure track “offers permanence and continuity” (AT08), “clear requirements and perspectives” (AT06) and overall “attractive conditions” (AT54), some even describe it as “ideal” (AT35).

“A tenure track system for young promising postdocs might create new options for strategic long term recruitment” (FIJW73), an Austrian academic even claims that “tenure-track positions are ‘the only adequate possibility’ to make academic careers more secure, in order not to fall out of the system right before the habilitation: ‘Long-term perspectives are very, very important’” (AT37).

However, while the concept is considered good, many interviewees also state that the number of these newly created positions is very limited, that there are “too few positions” (AT01, AT08), “assistant professorships are rare” (AT05), “available only for a limited number of people” (FILP4), their numbers are “not

sufficient" (AT27HE). Another interviewee claims that "the financial situation of universities allows only for a limited number of tenure-track positions". (AT08) The insufficiency of funds to create an adequate number of tenure-track positions is also noticed by other interviewees: "Actually now my HEI says that we have a tenure track, but unfortunately we do not have enough funding for it" (FIJW75, also AT20MAN). "For the first time in a long time a career model exists, however, there are only few available tenure-track positions, because these positions cost money" (AT42). "Not all docents proceed to the higher levels, because there are not professorships enough. They do not have funding to establish new professorships to all who would be qualified for it" (FILP13).

The view that the number of available tenure-track positions has to be increased is shared by several interviewees. Tenure-track positions are highly sought after and attractive to young postdoctoral academics (AT15, AT48, AT35) and reaching a tenure-track position is the declared goal and aim of many junior academics we interviewed. However, one Austrian junior claims that obtaining a tenure-track position remains "an illusion" (AT55).

Due to the limited amount of available tenure-track positions the competition for the few available posts is fierce. "Tenure-track positions are only foreseen for a small group: it is a competition-oriented system. They offer concrete perspectives and predictability for those who get in" (AT29). Only few achieve an academic career this way: all others are "temporalised staff. This leads to an intensification of competition" (AT08).

The strongly competitive nature and highly selective recruitment procedure for tenure-track positions is underlined and pointed out by several interviewees. Young academics seem pinned against each other (FILP17, CH59, AT27HE). And there will inevitably be losers in this race as "many who would be good enough, will not make it. The system thus loses excellent people, many of them women" (AT52, also FIJW73).

However, competition for tenure-track positions in the new career model takes place at an earlier stage in the academic career, not around the age of 40 or 45 (applying for full professorship after the habilitation) which is mostly regarded positively. One senior academic notes: "The tenure-track system enables young academics to start an academic career early on and to prove themselves on the international market. Comparative evaluations and reviews take place at a much earlier point in a career [...] not during professorial appointments" (AT28MAN). Especially in the German interviews the lowering of the age structure was mentioned several times in regard to the "junior professorship": The newly appointed colleagues are "younger than they were in the past" (DE0203VS, also DE0208HPG). Junior professorships can begin at the age of 27, which is seen as a "decisive change in academic careers" (DE0208JR) compared to formerly, when there were 'waiting loops' before you could hold a chair at the age of 40–50 years. Due to the introduction of the junior professorship, the decision for or against an academic career will take place earlier in life (DE0124RL). Generally, "faster careers are registered, the times for study, promotion and habilitation decreased. Often a call is issued at the age of 35–41" (DE0308TH).

However, this trend towards earlier tenure is also criticised: “Especially in the humanities or education, where personal maturity is very important, I do not want to imagine a 30-year old professor teaching 20-year old students” (DE0525CLN). Another German interviewee notices an increasing number of young professors and claims that “the duties are often over their head, because of a lack at maturity, experience and practice. They purport to be someone who they couldn’t be, because of their age. Overambitious and inexperienced people will acquire junior professorships” (DE0601KP).

There is also a recurring notion among interviewees that tenure-track positions do not favor the life-planning of women (AT22, AT51, AT11HE). “In critical phases women decide against their career, for example by refusing to go abroad for private reasons” (AT50).

While qualification requirements during the trial period on the tenure-track are generally considered high, regarding the tasks and the institutional role of tenure-track staff, several Swiss interviewees mention that staff on the tenure-track is often spared time-consuming teaching and administrative duties as they have to focus on research and publications in order to fulfill their qualification requirements (CH35, CH36). In contrast to this view, an Austrian junior claims that the involvement in institutional self-governance as well as the higher teaching load for tenure-track staff than for assistants or other postdoc researchers represents a disadvantage for staff on the tenure-track (AT15).

### ***2.3.4 Mobility and the Requirement of International Experience***

Internationalisation in higher education addresses a wide range of research topics in literature (Kehm and Teichler 2007). Considered from the historical point of view, an increasing importance of scholars’ mobility and a “re-internationalisation” of the higher education sector are noticed (Teichler 2004). This also includes the increasing mobility of non-professorial academic staff. Musselin (2004) states that in the relevant literature, generally, every kind of mobility is presented as a positive career step and as “associated with all kinds of benefits”. She sees these arguments as largely “diffused and taken for granted in many higher education and research public policies. Specific measures and devices are developed by many countries in order to promote academic mobility” (Musselin 2004, p. 56). Especially in the post-doc phase, international (or at least institutional) mobility is expected by higher education management and the established scientific community. Interviewees’ responses confirm a shift from only punctual international contacts (e.g., attending conferences) to a vital requirement for longer-term stays abroad. In Switzerland in particular, long-term mobility seems to be an obligatory phase during the post-doctoral stage and a condition for academic career progress. Experiences abroad are more and more expected (CH21). “In the last three to five years, there have been

two changes: a lot of people willing to have an academic career [...] and a lot of mobility required. In order to do an academic career, you have to be very flexible” (CH22). As a common career path at high-ranked institutions, a Swiss interviewee describes the following steps:

I did my diploma and my PhD at this institution. Then I went to the US to do a post-doc. After two years in the US, I came back and prepared my habilitation in this institution before going to another European country to become a full professor. Finally, four years later, I was asked to come back to Switzerland to become a full professor. (CH48)

Also in the Finnish higher education system, research mobility in the post-doctoral phase is highly common. A Finnish manager stresses the strategic point of view at his institution:

Researchers in the post-doctoral phase should be encouraged to work abroad for some time. After completing a PhD the university is not responsible anymore for the PhDs. They should qualify themselves abroad, and if they are successful, they might be able to get a position at their home university or some other institution in Finland. (FILP9)

The post-doctoral phase in Austria is also increasingly defined by longer-term research experiences abroad (AT03). One of the interviewed professors stresses that, especially in the phase after the PhD, young academics are strongly advised to leave the university and to go abroad, since “there should not be continuous careers at one university only” (AT34). The later international mobility is planned, the more difficult it is to undertake it for personal reasons, as will become apparent below.

In Croatian interviews, international mobility is mentioned more often for the pre-doctoral phase than the phase after the doctorate (HR17, HR55). In some cases, it facilitates the entry to postgraduate doctoral study (HR6).

In the German and Polish interviews, research mobility was not systematically addressed but some of the interviewees brought up the topic themselves. There are no statements on international mobility in the Irish or Romanian interviews.

In accordance with Musselin, we note that in most cases post-doctoral mobility is part of a personal strategy to advance an academic career in the home country. “Most ‘mobile’ academics generally favour careers in their native country and use mobility as a ‘plus’” (Musselin 2004, p. 66). Not least, the lack of post-doctoral positions and the strong competition for tenured positions force young academics to flesh out their profile by international experience. To better understand what research mobility is about, both positive and negative arguments will be discussed, even while the predominant tenor stresses the importance and the advantages of international mobility.

The benefits interviewees frequently ascribe to international mobility are the following:

(A) *Networking and accumulating social capital*: Unquestionably, the benefit that was mentioned most often for the individual academic and his or her institution was participation in international scientific networks (FILP15, FILP16). During an international fellowship, the reputation of the host university is not of

negligible importance: “That provides respect and also helps to build social capital and networks all around the world” (PL25; similarly HR6). In this context, Swiss universities seem to be highly attractive as host institutions with regard to both scientific reputation and working conditions.

- (B) *Independence and self-assertion*: To assert oneself in a foreign academic environment is seen as an opportunity to increase young academics’ self-confidence, to be one’s “own master”. The time abroad is considered “the most important for my academic career progression” (AT07). Dauntlessness and her “strongly international orientation” contributed to her success, claims a young Austrian professor (AT34). Independence of the supervising professor can be a decisive step into scientific self-fulfilment, particularly in a disharmonic senior-junior-relationship. “The early opportunity through scholarships to go abroad has become important, so you don’t need to be a slave and do henchman jobs for your professor while you are writing for your habilitation”, mentions a German junior academic (0607RSK).

In Musselin’s words, “post-docs mostly see this international period as a risky but unavoidable phase to improve their situation in their home country” (Musselin 2004, p. 69). Nevertheless, some interviewees mention negative effects and experiences.

- (A) *Missing estimation when coming home*: Negative experiences can be related to the process of transferring the knowledge academics gained abroad to the department upon their return. The interest from colleagues or professors in what the postdoc scholar has learnt can be weak (Melin 2005, p. 235). Similar experiences are framed in answers of several interviewees. “We have all gone abroad, the problem is that nobody is waiting for you when you come back. Seniors are under pressure and do not want competition from the lower levels” (CH28). Despite positive experiences during post-doc fellowships abroad, some interviewees were disappointed about the faint response at the home institution (HR41). “This was priceless research experience. [...] Unfortunately, it does not seem to be important for my formal career path development” (PL40).
- (B) *Neglecting time and job opportunities in the home country*: The existence of strong time limitations of a maximum of 5 years to work for the habilitation is a problematic factor, mentions an interviewee in Germany. The required stay abroad during the post-doctoral phase implies an additional abbreviation of the period allowed (0113SH). A decreasing tendency in international mobility due to national competition for available positions has been observed by Finnish interviewees: “People stay more in Finland after PhD, [...] they keep active their contacts in Finland and are ready to apply for posts when they become available” (FILP7).
- (C) *Work-life-balance*: One of the most discussed critical aspects of research mobility is its irreconcilability with family needs, especially for women. “Going abroad is becoming more and more important, and for women with a family, it is very difficult” (CH25, female). Particularly in Austrian interviews, that issue is often taken up. Academics’ post-doctoral mobility – on average in

their early or mid-30s – coincides with the phase of family formation (AT24HE, female). “Some women accomplish a career with children or in difficult family situations. However, women need more strength and endurance. Mobility requirements in the post-doc phase are harder to fulfil for women” (AT28MAN, male). But men also take up the topic as a crucial test of their academic career. “International experience and stays abroad are gaining in importance”. This is difficult for one interviewee “as my life-partner would also have to be willing to go abroad [which is not the case]” (AT41, male). Expected mobility is compared to “the sword of Damocles. The decision to move to another city means to be torn out of your family and your social networks” (AT10, male). As a general problem, work-life-balance in the scientific community is summarized by a Romanian professor: “We have to identify ourselves more with our profession, thereby reducing the time devoted to extra-professional activities” (RO42, female) – a requirement, which obviously is not backed by a number of interviewees.

## **2.4 Alternative Career Models: Externally Funded Positions and Cross-Employment**

### ***2.4.1 An Alternative Career-Track or a Dead-End Road: Externally Funded Project Work***

External funding of research projects has been on the rise in recent years and it has taken on a significant role in the formation of academic careers. While – even fixed-term – university positions are rare and hard to come by, working on an externally funded position can be an alternative to a regular university post. While externally funded positions and working on research projects certainly present an opportunity for young pre-doc researchers to enter academe (one interviewee expressly mentioned that “the main purpose of external funding is to create positions for young academics”, AT28MAN), externally funded academic positions become more problematic in the postdoctoral phase due to the fixed-term nature of project work. Is working on the basis of external funds an alternative to a regular university career or does it represent a dead-end road?

The issue of academic work on the basis of external funds was mostly discussed in the Austrian interviewees and this sub-section thus has a strong, but not exclusive focus on the situation in Austria.

First, externally funded positions seem easier to obtain than regular university positions but they are also less attractive (FILP15, AT48). This is due to the fixed-term nature and the high uncertainty and risk associated with external employment as mostly the job ends when the project ends: “The risk to lose your job at a department that relies heavily on external funds is as high as in a private enterprise if funds are running out. The risk is always higher than in a state-funded position”

(AT12MAN). Some academics remain on externally funded positions for quite a long time as they try to apply for university positions and “they are not happy. To have to finance yourself on the basis of external funds is not easy. The sword of Damocles of not knowing if you will be employed the next year is hanging over them” (AT22MAN).

Still, despite the less attractive working conditions externally funded positions seem to be on the rise, as several interviewees have noticed (among others DE0210BP, DE0127BK, AT17MAN, AT27HE, AT33). Interestingly, there is a recurring notion among interviewees that these less attractive positions are more likely to be held by women and that women are overrepresented in externally funded project positions (AT11HE, AT52).

As was mentioned above, many interviewees claim that today it is almost typical or common to start an academic career on an externally funded position in a research project (AT10, AT28MAN, AT12MAN, AT26MAN). Also many recount that their careers started through project work, that employment on a research project was their entry-ticket into academe; for example an Austrian junior in the Humanities claims that: “my professor set the course of my career with this project” (AT38, also DE0113DT).

However, the chances of switching from external positions to a regular university post are considered slim by one interviewee. She claims that it is “very difficult for externally funded project-staff to obtain a regular university or tenure track position” and that she does not know of one appointment out of a project funded position (AT46). However, a university manager states that at her institution “externally funded staff is also considered for the pool of qualification positions” (AT21MAN) and another believes that “third party funded project collaborators have the same chances as university assistants if they complete their doctorate” (AT56, also AT08). Another interviewee claims that “sometimes a university position opens up afterwards, but there are also people who work on externally funded positions for years and who are frustrated because they cannot get out”, they get stuck in a “Project-hamster wheel” (AT35). Generally, career chances outside the tenure-track are considered slim and they are decreasing (AT41). “Knowledge workers in the precariate” have little chances for extended, stable employment. The majority of universities offers no career perspectives for externally funded project staff. “Most of the time project workers drop out of the system after their positions expire” (AT37).

The (current) lack of career models for these academics is deplored by several interviewees, some suggest creating a continuous career prospect for externally funded staff by creating permanent positions on the basis of external funds (AT08, AT12MAN). However, this structure implies the constant pressure of having to successfully acquire funding in order to keep staff which can also be detrimental to the quality of research as one academic argues:

The strong focus on external funds and the required specialization is not always conducive to the quality of research. [...] In more strictly academic fields (basic research) academic staff should be employed by the university. (AT06)

It is also deplored that while working on a research-project it is harder to concentrate on publications and scientific performance. Working simultaneously on a project is time-consuming and leaves little room for publications or for finishing larger projects, such as the dissertation or habilitation (AT55, AT30, AT12MAN).

However, there are advantages to project work. One interviewee claims that in her current position as a university assistant she has less time for her own publications now than she did as a project worker due to her increasing involvement in the administrative affairs of the department, some also mention a certain independence as an advantage. On the other hand, this independence can translate to a feeling of isolation experienced by many project workers who are not integrated into the university structures and thus have to work alone (AT30). One interviewee feels he “lives in a vacuum”, he is “on his own and gets no feedback from his professional environment” (AT02). Another interviewee – an external lecturer – deplores that “neither at my department nor on higher levels is there any interest in my career. There are no staff reviews or interviews with [. . . I] feel like a lone fighter” (AT10).

The relation or hierarchical differentiation between externally funded and regular university staff depends to a large degree on the role external funds play at the institution (AT26MAN). It seems that where a department relies heavily on external funds, hierarchies are flatter and differences less pronounced. Some claim that “there are no strong differences in roles between externally funded and university funded staff” (AT01) and many project workers who were interviewed talk about being well integrated into the departmental exchange and decision-making process (AT33). Still, one project worker mentioned that despite his being integrated into the department he still feels “like someone who is exploited” (AT10). Another project worker even claimed that “there is a two class society between externally funded staff and staff funded through the university budget” (AT55). And a university professor who works in a department with a heavy focus on externally funded staff admits while there is generally a good integration of externally funded staff, “in times of crisis the difference between university and externally funded staff becomes noticeable” (AT16MAN).

Regarding the differences of tasks between externally funded and core staff one Austrian interviewee claims that “the difference between externally funded project staff and university positions is the obligation to teach” (AT23). However, in a German interview it was repeatedly mentioned that third-party funded staff is increasingly involved in teaching and is thus taking on the core tasks of university staff as well (DE0127BK).

#### **2.4.2 Cross-Employment**

As was outlined in the previous chapters, obtaining an academic position is not easy. Even if one manages to gain employment at a university, these employment contracts are often part-time. In order to make ends meet, many academics thus

have to take on additional employment. This phenomenon, which is increasingly observed, is also being conceptualised as “cross-employment” (or multi-employment) in higher education (see Campbell 2011; see furthermore Campbell and Carayannis 2013, p. 68). Having two or more jobs in different environments can also be beneficial both for the individual as well as for the involved organisations. Seen this way, “cross-employment” refers to an academic scholar or researcher who is employed (at the same time) by more than one organisation either only within higher education or across higher and non-higher education. Cross-employment offers simultaneously hybrid (parallel) academic and non-academic career opportunities to individuals (in a trans-sectoral and trans-disciplinary format). It facilitates ‘parallel careers’ for individuals (knowledge workers) across a diversity of organizations and sectors, “thus also a simultaneous operating in parallel in organizations with different rationales and innovation cultures” (Carayannis and Campbell 2012: 24; see in addition Campbell and Carayannis 2012). In the interviews conducted, questions about cross-employment were raised particularly in the countries of Austria and Finland. In the following, these answers are being reviewed and summarized.

In Austria, there is a certain disagreement how common or uncommon cross-employment actually is. External lecturers (socially more junior) are being regarded as one typical category of academic staff to which cross-employment applies. Complementary competences (sometimes practical competences) of external lecturers may add to their teaching qualities. Cross-employment also appears to be more common in certain disciplines, such as the medical and technical field, as well as the arts (AT59). On the other hand, there is also a need to develop cross-employment more in specific directions, for example the private industry: this still “has to be developed” (AT21MAN). Asserted advantages of cross-employment are: broader perspectives and an advancement of competences in relation to practical knowledge and practical experiences; a mutual reinforcement of complementary competences; potentials for a higher job security and a better (aggregate) salary; a dislike against only one employment form, when, for example, one interviewee underscored that she never wanted to “work only and fully for one institution” (AT60, social sciences).

Disadvantages of cross-employment mentioned by Austrian interviewees are: stressful adaptations to different environments (e.g., hierarchies outside of university can be more strict); tensions across different fields of engagement; risks of over-work; de facto a working time which is more than a mere summing-together of different part-time jobs; cross-employment may finally lead to a career-track outside of university – skepticisms raised underscored that “there is no part-time academic career” (AT44) or “this is practically impossible because research is a full-time job” (AT59).

In Finland, the assessment of the extent of cross-employment also differed. The degree of cross-employment varies across disciplines. It was mentioned that university and non-university work would have to be balanced with each other, and non-university activities should have some expression of connectedness to university activity: “Non-academic cross-employment is good for social interaction and

perhaps also funding. But sometimes people do it too much, for instance some researchers who have a degree in medicine, who are full time researchers, but still work a lot as medical practitioners” (FIJW80). The rise in numbers of academic researchers implies that there is more competition for the available professorships, so cross-employment may increasingly highlight *professional non-professorial* career tracks within higher education that are more likely to be achieved.

The following advantages are being mentioned and emphasized for cross-employment in Finland: according to the opinion of some of the interviewees, cross-employment has not been regarded as being problematic so far; cooperation between universities and firms (enterprises) is being reinforced, also the successful creation of new spin-offs; the encouragement and promotion of dissemination of knowledge from higher education institutions to institutions outside of higher education; cross-employment can be the source for new ideas; through cross-employment, the academic staff creates and accesses experiences outside of universities (higher education), leading to a more realistic perception and conceptualization of trends in the “real working life” (FILP27); cross-employment can benefit the working life outside of universities; the bonus of aggregation of different incomes and sources of income; cross-employment may foster cross-institutional responsibilities within research networks; cross-employment supports the networking, network-building and formation of more cooperation between university and non-university organizations; cross-employment assists higher education institutions in their social interaction with their (social) environments and adds to the so-called “third mission” activities of universities; there are now more opportunities for researchers outside of universities to cooperate with universities.

Disadvantages of cross-employment mentioned in the Finnish interviews are: work pressures (for example, pressures to raise external funds) often do not realistically allow for cross-employment, leading, in fact, in some areas even to a decline of cross-employment; cross-employment may contribute to a further distribution of short-term contracts; reporting demands for project-based research or for the application of research money have increased, allowing for less alternative activities; a distraction from core university work, with the potential of an outward mobility of academic staff, pushing them out-of-university; university-external cross-employment may face serious constraints in some fields.

In summary, there appears to be a certain impression that a majority of the interviewees in Finland viewed cross-employment positively, whereas the responses of the Austrian interviewees were more mixed and more balanced in this regard.

## 2.5 Juniors and Seniors – A Hierarchical Relationship?

This section goes into particulars about the relationship between senior and junior academics and its effect on the career promotion of the latter. Firstly, some examples of the status quo in several countries are given, followed by a list of

structural factors which seem to lead to a more egalitarian staff relationship. Furthermore, the role of mentorship and a structurally determined rivalry between status groups are discussed.

### ***2.5.1 The Status Quo – A Mix of Strong and Flat Hierarchies***

The tenor of interviewees' statements favours a formalised, more egalitarian senior-junior relationship over a traditionally hierarchical one. The latter is often characterized by long-term dependence of junior staff on professors. An Austrian interviewee frames the optimal senior-junior relationship as follows: "Instead of separated academic estates, there should be a faculty, and the differences and hierarchies should be evened out. Within faculty, there should be differentiation according to function, not according to traditional status criteria" (AT25). However, the translation into practice seems to lag behind. Obviously, in several countries both the traditional and a flatter hierarchical model coexist with different variations between them. In Poland, for example, where recent university reforms have still not been effective, interviewees criticise a plenitude of power and non-transparency of decisions by an "academic oligarchy" which "is not interested in changing the existing system because it benefits them and only them" (PL17). The system is described as "feudal, hierarchical and old-fashioned" (PL12). More egalitarian relationships are identified in institutions founded after the change of the political system in the late 1980s (PL30), at institutes "established in a democratic country in the spirit of freedom", where "no sharp distinction between senior and junior academics" is observed (PL18). Despite a generally critical attitude toward the system, a number of young Polish academics describe their own relationship to the professor as appropriate.

In other countries, experiences also differ. A Finnish professor identifies long-established flat hierarchies in her field, contrary to other fields with traditionally "very hierarchical structures" (FILP17, Humanities). Likewise, in some cases in Austria, personal structures are perceived as "very authoritarian", correlating with a strong dependency on professors' goodwill (AT48, Humanities). More egalitarian relationships are found, for example, at smaller institutes where "teamwork prevails" (AT57, Engineering), or at younger institutes, where the "progressive, dynamic and social attitude of the centre's head" has an impact on the relationship between team members. "Hierarchies are not set in stone" at such institutes (AT45, Physical sciences). In general, the relationship between senior and junior academics is seen as hanging on the respective department, possibly the discipline, and principally the personality of the professor – "determined by human factors", as outlined by a respondent. He can "name professors who, without any shame and hesitation, take advantage of their doctoral students [and] use them as servants in professional and private life because doctoral students have no alternative". On the other hand he knows "professors who developed a solid partnership with their junior colleagues" (PL14).

### 2.5.2 *Structural Changes – Towards a More Egalitarian Relationship*

On the basis of interviewees' considerations, structural factors which impact flatter hierarchies can be summarised.

(A) *Change of generations*: In consequence of changing personal structures, a new generation of professors gets promoted which takes up a more egalitarian attitude (CH1HE). The younger professors are not yet established and are therefore interested in collaboration (CH51). A Polish manager describes a new generation of professors who are "more relaxed, flexible and less hierarchically oriented" (PL1). Just having become a professor, one interviewee claims not to see "any difference between junior and senior status". (PL9, Life sciences)

(B) *New career structures*: Foreseeable career paths with predefined procedures and qualifying steps enhance independence of the non-professorial staff. New career models include comparative evaluations and reviews take place in a relatively earlier career phase. This allows more autonomy at a younger academic age. In the words of an interviewee, these developments are "in contrast to the chair model in Germany, and also to the Austrian tradition where someone is selected in a mysterious fashion to carry a professor's briefcase and write papers for him for ten years, then, magically, he is endowed with the aura of an ordinary academic" (AT44). In Germany, the new junior professors are more autonomous; however, they also get less support from (full) professors. "It's really nobody's business anymore. They are responsible for themselves" (0308HH). But also in increasingly meritocratic systems, dependence endures to a certain extent. Juniors' career steps require seniors' consent. In Austria, an interviewee explains that at his university "seniors in their role as mentors" write progress reports on assistant professors, "who, if they fulfil their qualification agreements, in turn receive permanent positions" (AT44). From Ireland, a "performance management and development system" is reported:

"Each increment you get, your boss has to sign off and say that you are performing satisfactorily". However, the interviewee adds that in practice the system is weakened and progression "is still automatic." (IE49)

Across all countries, the main problem seems to be the severe shortage of available tenure track positions. At Austrian universities, for example, the number of tenure track positions available depends on the commitment and the negotiation skills of the head of department in bargaining with university management. Thus, a large number of departments still do not have tenure tracks positions.

(C) *Independence through international experience*: During the post-doctoral phase at the latest, international experience is increasingly expected. This development is seen as another factor leading to more independence of junior academics:

The early opportunity through scholarships to go abroad has become important, so you don't 'need to be a slave and do henchman jobs for your professor, while you are writing for your habilitation.' (0607RSK)

(D) *Competition for external funding*: At institutions that rely on acquisition of external funding, the traditionally hierarchical one-way dependence of junior academics yields in some way to a mutual dependence with a structured split of working tasks between seniors and juniors. Competition for national and European project funding is rising and interviewed professors report being expected from their professional environment to acquire external funding. "Academic careers have changed. Professors have to apply for funding for PhD students". (FILP4) On the other hand, it is junior staff's assignment to carry out the project work. The division of responsibilities between senior and junior academics was taken up by several interviewees: "Juniors carry out projects, while the responsibility of seniors is project acquisition" (AT60). "Project acquisition depends on seniors, they have the lead. Juniors contribute by writing, but project initiation and finalisation lies with seniors. This works well and juniors can learn a lot" (AT56). A Swiss interviewee responds in the same tenor:

The professor manages the group, i.e. gets the funding, hires the PhDs and the post-docs, submit the papers to the journals, etc., and the PhDs and post-docs do the experiments. (CH29)

From professors' point of view, the co-operation is described similarly:

Juniors must try to get to know relevant people and they have to learn to work scientifically. This knowledge should be passed on to them by seniors. Seniors, on the other hand, need juniors to work on scientific projects, in order to establish their research fields. (AT47)

Most of the interviewees stressed the mutual benefit from this form of cooperation and a positive effect on the senior-junior relationship.

### **2.5.3 Mentoring – A Steady Fundamental Element**

Regardless of a more rigid or flatter hierarchy, mentoring maintains a central importance in the relationship between senior and junior academics. From the perspective of senior academics, "the most important element in an academic career is to come across the right mentor and work hard in research. This pattern has not changed very much." (PL1MAN). In the personal careers of many professors of both the elder and the younger generation, mentoring played "a very important role". Based on their own experiences, "support and promotion of junior faculty" are seen as the "most important" functions of senior academics (AT46). Support from professors' point of view consists in encouraging juniors' research and application for funding (IE34, IE22). Moreover, the status of a mentor as a role

model for juniors learning how to teach was stressed (IE4). In Croatia, mentorship has recently taken on greater significance. “Every year reports on the progress of junior researchers are provided [by their mentors]; that constitutes a better system” (HR37).

From junior academics’ perspective, mentors are important “to gain access to the academic system. Young academics have to create networks they can rely on during the transitional period after the PhD. Good professors pave the way for publications” (AT51). A good relationship with the supervisor is characterised as “not very hierarchical”, providing good opportunities “to exchange” (CH23), to write articles together with the professor (CH41), to participate in the professor’s national and international contacts (AT25) and to get relevant information concerning available university positions (PL19) and career advancement (HR45). Moreover, the involvement in – European – projects is specified (CH50).

Needless to say, so far not all interviewed academics in junior positions can share these experiences. They do not receive sufficient supervision in their doctorate (AT48). The relationship with the supervisor can be difficult when professors have a lot of projects, a lot of PhD students, and are “overloaded”. The quality of the relationship suffers at times from a stagnant information flow (AT23). An Irish junior academic voices similar criticism, perceiving a

clear division between senior and junior staff. The senior staff can hold all the information and not disseminate it; therefore younger staff, even though they have the energy and they make so many efforts to be creative, mightn’t always be in the ‘know how’ and miss opportunities. (IE37)

It should not go unmentioned that some interviewees see a connection between egalitarian or flatter hierarchical structures and a feeling of being left alone concerning their career promotion. An Austrian junior academic describes the senior-junior-relationship at her institute, where

collegiality is promoted by institutional structures, and even pre-docs can submit project ideas and implement them. However, due to the egalitarian structure at the institute, there is almost no mentoring for younger academics. (AT35, Social sciences)

## 2.5.4 *Rivalry Between Academic Status Groups*

Interviewees’ responses accentuate classical and new forms of inner-institutional rivalry and competition between academic status groups.

(A) *Supremacy of the professoriate*: “There is still a clear separation between the professoriate and all other staff. Professors refuse to be grouped together with older assistants” (AT49). Repeatedly, even a strong division between habilitated academics and full professors was mentioned. “A habilitation does not automatically provide senior status within the organization. In formal terms it does, but

one must become a full-professor and gain respect by other full-professors [...] to be regarded as senior academic”; since “informal hierarchy is much more important than formal degrees” (PL5). “As a *Privatdozent* you are nothing, as a professor you get everything and you can do everything”, stresses also a Swiss respondent (CH28).

- (B) *Lack of solidarity and “atomisation” among academic staff below the professoriate*: The strong hierarchical structure at the top level is perpetuated at the non-professorial levels. “Some seniors prevent juniors from getting ahead. Senior researchers (non-professorial staff with habilitation that do not yet hold a professorship) are still working on their careers; they compete with juniors. Permanent positions relax the relationship between seniors and juniors.” Only seniors in secure positions can “act as mentors” as they “do not have to concentrate on their own careers” (AT15). Due to budgetary constraints and increasing competition, individualisation and a lack of solidarity are observed. “Everyone is focused on her/his own individual career and does not care about the others. . . . Instead of developing research projects some academic focus on blocking the development of others” (PL41, also AT49).
- (C) *Generational rivalry* is dramatised by some interviewees as a “generation clash” based on a lack of available tenure track or senior positions and rising performance pressure on junior academics:

Currently two generations are ‘clashing’: seniors in permanent positions and juniors ‘that perform incredibly well’. The old generation is slowly stepping down, the young generation is very performance oriented. (AT52, also CH30)

A higher performance level of the younger generation can upset the elders:

Lecturers nowadays tend to have more qualifications; you need a PhD or at least nearly completing one. From personal experience I see a barrier between senior lecturers who have a trade’s background, and who feel threatened by the junior staff, who have qualifications, are research active and are publishing. (IE50HEP)

### Summary

The road to tenure or permanent employment at a university is rocky. Young academics are faced with increasingly competitive environments as many aspiring academics compete for few available posts. In general, the PhD is the first requirement to enter an academic career. Structured doctoral programmes have recently been established in several countries. They are intended to provide a more stable working situation while completing the dissertation. However, the access to these programmes is highly selective. Many PhD-candidates who are employed as pre-doctoral assistants mention a high teaching workload which delays the completion of their thesis. Also, they are faced with the dilemma that teaching does not count equally in academic performance. Publications and conference participation as well as

(continued)

international experience are valued more. Nevertheless, interviewees are under the impression that the number of PhD-graduates has increased over the last years.

After completion of the PhD the most difficult and critical phase of an academic career begins: The postdoctoral phase emerges as a double bottleneck in most of the EuroAC countries: at the stage of entering it after the PhD in trying to obtain a postdoctoral position and at the stage of leaving it by securing permanent, tenured employment. Interviewees clearly state that the number of available postdoctoral positions does not match the growing number of PhD-graduates. There is fierce competition for the few available posts. It is in the postdoctoral phase that precarious working conditions occur most frequently as postdoctoral positions are mostly offered on a fixed-term basis. Further, many interviewees are under the impression that there has been an increase of fixed-term employment contracts at universities in recent years. The high uncertainty and risk associated with an academic career is highlighted in the interviews. In countries with a chair-system, the only way to tenure was via a “call” or appointment to full professor, this usually took place between the age of 40 and 50. In these countries recent attempts to provide structure to the somewhat chaotic and long postdoctoral phase have been introduced, most notably in the form of a tenure-track. This model foresees a clearly outlined career path towards tenure based on the fulfillment of previously defined criteria. While the tenure-track is generally welcomed by the interviewed academics, they claim that only a very limited number of such positions currently exist. One of the most interesting and crucial aspects seems to be that the decision for or against an academic career is ideally taken earlier in the new model, around the age of 30 and shortly after the completion of the PhD. On the one hand, the uncertainty and risky nature of the postdoctoral phase is thus mitigated as the long phases of precarious fixed-term employment are cut short, however, it could be argued that in this model the university closes its gates earlier as the decisive selection process takes place at a younger age: “All others are temporalized staff”.

Regarding the role of university assistants, on the one hand, a trend towards earlier independence of assistants as opposed to a hierarchical subordination to professors can be observed. On the other hand, old structures seem to endure in the division of labour at universities.

International mobility represents an increasingly expected qualification step during the post-doctoral phase. Especially Swiss interviewees, but also Finnish, Austrian and Croatian academics stress that longer-term stays abroad are vital requirements for career progress. Not least, the lack of post-doctoral positions and the strong competition for tenured positions force young academics to enhance their profile by international experience. Often, post-doctoral mobility is only intended temporarily to advance an academic career

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in the home country. Networking and accumulating social capital are mentioned as the most beneficial effects, followed by academic independence and an increase of self-confidence, to be one's "own master". As adverse impacts of mobility-requirements interviewees mention a loss of time for completing a post-doctoral degree, the neglect of job opportunities in the home country, and, especially for women, difficulties in reconciling longer-term mobility and family.

Whether externally funded project work represents an alternative career model in academe remains doubtful as the precarity and inherent uncertainty of these positions are heightened due to the fixed-term nature of project funding. If at all, long-term careers on the basis of third-party funding seem possible only in those disciplines that rely heavily on external funds. However, for pre-doctoral researchers working on a research project seems to be an increasingly common entry point into an academic career.

Cross-employment – whether seen as an additional asset or a necessary compromise – is a reality emerging, and it seems important to closely look at the institutional and individual benefits of this phenomenon.

Taking account of the strongly hierarchical structures which generations of young academics traditionally have been subjected to, the relationship between senior and junior academics and its influence on the latter's career advancement was discussed as a last point. To sum up, the tenor of interviewees' statements favours a formalised, more egalitarian senior-junior relationship over a traditionally hierarchical one. Several structural changes prospectively favouring flatter hierarchies have been identified. A generation change of professors, new career models, international experience in an early career stage and cross-generational efforts for external project funding, little by little seem to even out older hierarchical structures. Increasing self-responsibility of young researchers is appreciated by many interviewees as long as mentoring still maintains its central importance in the relationship between senior and junior academics.

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