Talent Guideline

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"I don't care who they are,
I just want the best person."

Project Number:	785907	Project Title:	Human Brain Project SGA 2
Document Title:	Talent Guideline: "I don't care who they are, I just want the best person."		
Document Filename:	HBP_GL_Recruiting		
Document Type:	Guideline		
Work Package(s):	WP 11.2		
Dissemination Level:	PU = Public		
Planned Delivery Date:	SGA2 M7 / Dec 2018		
Actual Delivery Date:	SGA2 M7 / Dec 2018; updated May 2019; editorial review 07.12.2019. Last update: September 2020.		
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Editorial Review:	scribbr.com		

Abstract:	This guideline is intended to support reviewers in considering unconscious bias and diversity management when evaluating CVs, recruiting new staff and interviewing candidates. **Step-by-step suggestions and tools** are provided for each level in the process to improve diversity and equality in recruiting, that is: job advertisements, interpretation of CVs, job interviews, guidance for applicants.
Keywords:	Recruiting, unconscious bias, academia, diversity, equal opportunities.
Target Users/Readers:	All HBP members involved in recruitment and hiring, applicants for jobs

Quote on title page: A. Stewart, V. Valian (2018): An Inclusive Academy. Achieving Diversity and Excellence, MIT Press, p. 71

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1. The Rationale for Diversity & Equality in Recruiting

Diversity and **equality** are increasingly recognized as beneficial for research and society (see WE-ARE-HBP Guideline Diversity & Gender Sensitive Research Projects). In complex tasks, a diverse team may achieve better outcomes than a homogenous group of 'the best people in a field' (Stewart, Valian 2018, p. 43ff). A diverse workforce and, equal opportunities for job candidates is therefore not only a question of Responsible Research and Innovation (see RRI - Horizon 2020) but also an important ingredient of excellence.

Many universities and research institutions have therefore developed programs, action plans and guidelines to provide support and to ensure high standards in the recruitment process. (e.g. the University of Helsinki - Equality and Diversity Plan 2017–2018). To create an effective and transparent process that ensures equal opportunities for each applicant, some efforts are necessary for planning and implementation, which includes addressing **unconscious biases** influencing our decisions based on previous experiences and schemas (see Koch, D'Mello, Sackett 2015 for an overview).

We cannot eliminate biases, but we can reduce their influence and optimise our decision making.

This document is based on a working paper written in German (Grasenick, 2010).

Diversity and unconscious bias in short

The term diversity comprises the manifold traits, characteristics and differences between human subjects based on various dimensions. Some of these traits are inherent (e.g., sex, ethnicity, sexual orientation, body composition, physiology, age), some are acquired (e.g., skills, knowledge, technological literacy) and others are context-related (e.g., different mobility needs in private and working context, social and economic background, working and living environment, lifestyle). The European Union aims to prevent discrimination on grounds of racial or ethnic origin, religion or belief, disability, age or sexual orientation and sex (see also http://ec.europa.eu/justice/discrimination/).

Not all these aspects can be covered in detail in this guideline. But a collection of Papers, Tools and Publications provides further insights.

What is unconscious bias?

We are all affected by unconscious biases in different ways without noticing it, for example, when we judge an individual not only by his/her performance but also by his/her affiliation to a group, presumed or actual. Bias can view specific groups as positive, while others are seen more negatively, regardless of the individual within that group. In general, unconscious biases indicate that human judgement is not neutral, but instead, it is based on prior experience and predetermined associations and preferences (see for an overview Staats et al. 2017).

During the selection process, scientific leaders, evaluators and juries are provided with information intended to guarantee a comprehensive comparison of applicants. Based on this, the purpose of the HBP Talent Guidelines is to:

- **to improve the comparability and thus equal opportunities of the candidates,**
- **to enable the evaluators to make a better and multi-dimensional assessment,**
- **to ensure that the evaluation is based not only on past performance, but also on a person's potential in relation to the requirements of a vacant position.**

1.1 Step-by-step suggestions and tools

This guideline aims to support reviewers in considering unconscious bias and diversity management when evaluating CVs, recruiting new staff and interviewing candidates. **Systematic suggestions and tools** are provided for each level in the process to improve diversity and equality in recruiting:

Advertising

The first step in the selection procedure is to define the job vacancy and to create the public **advertisement,** including the job requirements. The fundament of a fair and transparent selection procedure is established in this step. The form of the advertisements as well as the networks and channels used for promotion also influence the diversity of the pool of available potential candidates.

Interpretation of CVs

The second crucial step is the **interpretation of the CVs** of potential candidates. Achievements in a scientific context generally expressed in terms of publications, invitations to address conferences, awards and external funding received and lectures. However, the conditions under which these were achieved may vary significantly and furthermore depend on employment contracts and family obligations. Alternatives to these performance indicators are presented in this guideline.

Job Interviews

This guideline addresses unconscious bias in **selection committees** and **job interviews**. The focus is on the preparation of these tasks and a fair and transparent evaluation of the experiences and potential of the candidates.

Applicants

Finally, the **guideline for applicants** provides a structure of CVs supporting an equality-oriented evaluation.

2. Job Advertisements

A clear description of the vacant position and the job advertisement are an important starting point of a recruiting procedure. However, time is limited, and candidates are difficult to evaluate. In addition, the description of the open position sometimes focuses too specifically on a field of expertise or, in other cases, is too vague. The wording in job advertisements describing the expected qualities influences who feels invited and who will apply, to a greater degree than one might expect. Advertisements are generally distributed via personal networks. Unfortunately, these practices narrow the pool of possible candidates and the diversity of your prospective team.

You can reduce unconscious bias and improve your advertising strategy by simple adaptions, such as the following:

- Stay focused on a **few main qualifications** and requirements in the job advertisement
- Use different **types of language** to address different groups of potential candidates and reduce unconscious bias
- **Rethink your networks** and dissemination strategies to find new groups of potential candidates
- Improve mobility of (female) scientists by providing information about d**ual-career options and support programmes**.

2.1 Stay focused

Before a job advertisement is published, the vacant position(s) should be defined in as many details as possible for internal use. Distinguish the duties that are related to the job as well as candidate **requirements**. It is recommended to already develop the **structure** of the later process of **interpreting CVs** and **job interviews** at this stage. This process should always build on **fair, transparent and specified criteria**. For the set of criteria, see "Guideline for Selection Committee and Job Interviews".

Define the methods and application requirements. A standard CV template provided to possible candidates can help to create a fair and comparable setting. Try to work as a team and, if possible, involve the HR department of your institution or establish a professional hiring management.

Surprisingly, the **number of qualifications** and **requirements** listed in the job description may affect the ratio of women and men who intend to apply. Women tend to fulfil more listed requirements before applying, while men are satisfied to fulfil only a few requirements (Bohnet 2016; Nobel 2016). Similar effects can be observed when requirements are stated vaguely. Research suggests that women tend to be less confident and more self-critical regarding their own competences (Sonnert, Holton 1995; Blanch, Hall, Roter, Frankel, 2008). Therefore, female candidates might consider more carefully whether they meet all the requirements and are less likely to apply in the case of imprecise descriptions (LERU 2018). Thus, to prevent gender bias in job advertisements, focus on what you expect from the new team member.

2.2 Language and Bias

The content of job advertisements, as well as the type of language and design of description, strongly influences the pool of applicants.

In a comprehensive study, Gaucher, Friesen, and Kay (2011) analysed the different types of **gendered language** used in job advertisements and their effects on the gender ratio. According to the study, women tend to use a more communal style of language, while men tend to use a more agentic form of communication. For example, words such as "active", "compete*", "decision", "innovation", "logic" and "superior" will address more men, while women are likely to pay more attention to words associated with social and emotional work, such as "connect*", "cooperate", "empathy", "kinship" and "support".

Unconscious gender bias can also be discovered in job advertisements in **different fields and branches** that are more dominated by men or women. In male-dominated branches, job advertisements use more agentic wording and thus establish institutional standards for unconscious gender bias. Changing a "masculine", agentic form of communication to a more communal style will potentially increase the share of women candidates. In a women-dominated sector or branch, the use of a communal language style will not address male candidates specifically. However, the observed effects are far less pronounced this way around. (Gaucher, Friesen, Kay 2011).

> To minimize unconscious gender bias in job advertisements, rethink the wording used. **Work as a team** when drafting advertisements and strive to include different personal styles of languages, different fields of occupations and branches, gender, age, etc. Finally, consider testing your advertisements with simple online tools that analyse how many gender-biased words were used, for example, http://gender-decoder.katmatfield.com/

2.3 Rethink networks and pools

While the design and content of the job advertisement can influence the pool of potential candidates, the distribution methods also play an essential role. Your goal is to find the best candidate for the job – a large pool of suitable candidates will support you in doing so.

Limiting the search and advertisement to your established networks and channels will possibly neglect under-represented groups in your field or team. In contrast, **heterogenization of your advertising** strategy will expand the pool of potential candidates (LERU, 2018 and AURA).

Use advertising possibilities in online media as well as print media that are not specialised for your field and not traditionally used. This will give under-represented groups a better chance to take notice of the advertisement, which will help you to discover talents that are not part of established networks.

In case women are underrepresented in your pool of candidates and you are searching for female scientists and speakers, online platforms might provide support. For example:

- https://anneslist.net/ - for female systems neuroscientists
- https://500womenscientists.org/request-a-scientist - across the globe, various fields
- http://www.academia-net.org/ - leading Women Scientists
- https://epws.org/ - European Platform of Women Scientists linked with EC policy

After and during these first steps, it might be helpful to **evaluate your search strategies** and adapt them, if necessary. New channels are difficult to establish but will help further develop and improve your team and work.

2.4 Mobility and support

A high grade of **international mobility** is required in academia, especially for higher positions. A study from 2012 shows that women who graduated from universities in Switzerland are less likely to move to Anglo-American areas for scientific purposes than men are (Leemann, Boes, 2012).

Multiple reasons have been identified to limit the mobility of women. The following are examples of how to improve mobility for international scientific careers, especially for the benefit of women:

> **Flexible hours, part-time job options, flexible working models and remote working possibilities** are helpful for both men and women, but women will respond more positively to these offers and that might increase their mobility. Other programs such as local **affordable childcare** and **concierge services** can also make a difference for potential candidates, especially female scientists (Martinez et al. 2007).
>
> In addition, **dual-career options** should be considered to improve the mobility options of potential candidates. While 50% of men estimate that their scientific career is more important than their partner is, only 20% of women scientists think so (Schiebinger, Henderson, Gilmartin, 2008). Therefore, especially women scientists might benefit from a dual career opportunity.
>
> **Ask your institution** what measures and programs are in place and include this relevant information in your job advertisements.

2.5 In Short

Diversity and gender bias can be already included in the description and advertisement of the vacant position. To describe and advertise the job vacancy so that it minimizes gender bias, you can consider the following suggestions:

- A short **introduction of your organisation** / institution and your workgroup will help possible candidates to orientate themselves
- Clearly identify **essential skills and abilities**, but limit their number
- Keep **preferred / optional criteria** to a minimum and clearly label them as such
- Describe the **type of the position** (level, fulltime / part-time / freelancer, team membership) and the specific duties of the job
- **Explicitly mention policies** regarding flexible working hours and longer interruptions (parental leave, family obligations, etc.)
- Include short references to programs and support of your institution for **child care, concierge services, dual-career options**, etc.
- Try to avoid gender-biased language
- Describe the **method of application** (such as available online interfaces, use of standard forms of CVs, documents that must be included in the application, contact details for queries)
- **Deadlines** are helpful and create equal opportunities. If possible, provide additional information about the period within which applicants can expect the first response
- **Rethink your network** for advertisements, use advertising possibilities in widespread open online-media and prints
- Explicitly **invite under-represented groups** in your field of research

3. Guideline for Evaluating CVs

Our understanding of science has evolved, as has the selection and evaluation process. Today, **different career models** are available in science fields, while diversity in teams has become more important for successful research (see Guideline for Diversity & Gender Sensitive Research Projects). The peer-review procedure is a tried and tested one, not only in the context of publication but also for selecting job applicants. However, it has repeatedly been the subject of critical discussions, as it cannot always guarantee the selection of the best candidate. One reason for this is that only certain facets of scientific achievements have been recognised due to the presentation of accomplishments in CVs, whereas other aspects of particular importance for the position at hand are given little consideration (e.g. experience in team leadership and knowledge transfers).

To **improve team diversity**, the method of interpretation of CVs and skills is crucial. Therefore, this guideline includes suggestions for implementing diversity and equality in the recruitment process during the selection of potential candidates. It includes three main steps:

- Provide a **structured standard CV format** for the application process that will make applications more comparable
- Consider **criteria beyond science** for the selection of potential candidates
- Reflect on the previous **framework conditions and achievements** of the candidate and consider different career models

Application-oriented research makes increasingly comprehensive demands	
Traditional	**Modern**
Focus on individual performance	Team performance, interdisciplinarity
Number of publications, impact factor	Innovation and bandwidth, best exploitation of opportunities, open research
Personal connection to scientific mentor ("Crown Prince Model")	Diverse networks and target groups, transparency and equal opportunities
Pre-defined career steps	Different career models and development paths
The understanding of science has evolved. Selection and evaluation procedures must comply with new requirements	

3.1 Structured Formats for CVs

In order to support a balanced and fair evaluation of all candidates in the best possible way, CVs should be written in a structured standard format that includes:

- A list of different types of **contributions** or the entire range of a person's contributions to scientific work and results.
- Details on the **framework conditions** under which scientific work has been carried out and the time that the person has so far been available for research. This allows estimating the candidate's potential for scientific and management qualities in the future based on former work and conditions.
- A report on **extracurricular competencies** relevant to the research project.

To implement a structured standard format for CVs, an **online interface** and **templates** can be provided to applicants. Ensure that the interface provides the opportunity to reflect diverse career paths of applicants and to include extracurricular competences. Missing information in the written CV can be complemented by further inquiries with the candidate or can be clarified later in the job interview (see Guideline Selection Committee and Job Interviews).

3.2 Criteria Beyond Science

In many cases, considering exclusively scientific achievements is not enough to select the most suitable candidate. Competences that are not originally linked with science may also have an impact. Considering **criteria beyond science** can give you the opportunity to improve the performance of the team as a whole. A high diversity of abilities can in some instances be more important for a team than a homogenous set of excellent skills (Cooke, Hilton 2015, Nielsen, et al. 2017).

Based on their research, Chamorro-Premuzic et al. differentiate three properties, or what they call "qualities", which are equally important to predict how well potential candidates actually contribute to the development of a team, project, university or organisation: "Ability", "Social Skills" and "Drive" (Chamorro-Premuzic, et al. 2017).

- **"Ability"** summarises cognitive abilities and the motivation to acquire further competences and subject-related knowledge, which can best be tested through work samples.
- **"Social skills"** are essential for working successfully not only in a team but also in general with colleagues, superiors and cooperation partners. The ability to manage oneself, in other words, to deal constructively with stress, contradictory requirements, etc., was also classified as social competence. In contrast to professional skills, the focus, in this case, is on the emotional and social intelligence of the candidates.
- For Chamorro-Premuzic et. al, **"drive"** is the work ethic that is brought in, the will and motivation to work hard and to try to do everything to actually complete a task well. Ambition and the willingness to leave one's own comfort zone play an important role here, without which social skills may solely serve self-interest. Behaviour in certain situations can be a good indicator of these skills.
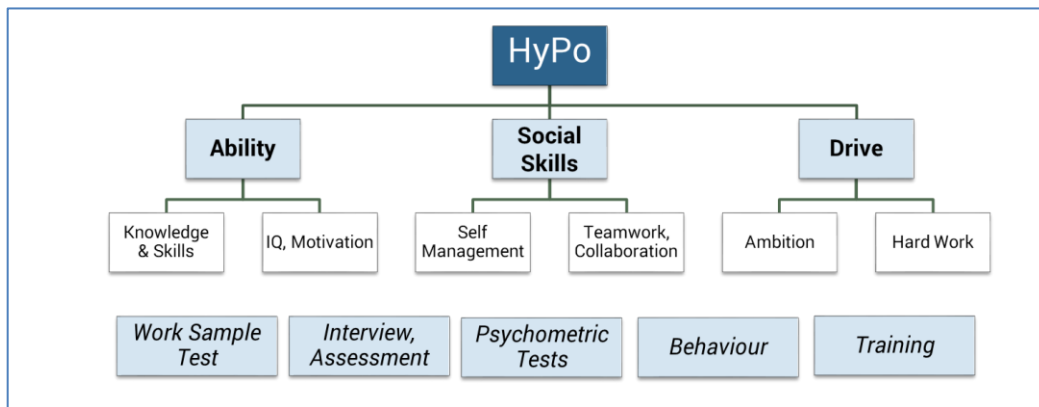
Figure 1: Measurable qualities of high potentials (HyPo)

Source: own representation, based on Chamorro-Premuzic, et al. 2017

3.3 Framework and performance of scientific work

Junior candidates often have outstanding potential. This potential, however, is often underestimated because "classical indicators" for **scientific excellence** (such as numbers of publications, invited conference talks, awards and external funding received, or lectures) are related to the position a person has already held. Thus, seniority and contacts often have a more decisive influence than the actual qualification and reduce the opportunities for junior scientists to demonstrate that they are suitable candidates.

Another important point when assessing the scope of the scientific oeuvre is the consideration of the **framework conditions** under which a person has achieved scientific outcomes and the time that the person has been able to use for research so far. For the purpose of standardisation, the achievements should be put in relation to the available resources during the given period. This can also be taken into account by preferring the "scientific age" instead of the chronological age for the evaluation of candidates. The scientific age is the individual age of the candidate in her/his field, considering breaks and obstructions in the scientific career due to framework conditions (precarious employment, part-time work, work and study etc.), education systems and programmes with different periods until obtaining degrees, pregnancy, parental leave, childcare, longer serious illness, military and civil service, disabilities, etc. (DFG 2015, LERU 2018).

Another "classical indicator" for scientific excellence is the **h-index**: It measures the number of publications which have been cited at least h-times. However, the h-index does not consider books, which play a more important role in humanities, e.g., and is thus not comparable across different scientific disciplines (Besselaar/Sandstroem, 2017).

Additionally, scientific productivity is measured in writing papers only (not considering teaching qualities, etc.). This discriminates scientists who work part-time due to caring obligations for family members (e.g. children, elderly people) as they do not have the same amount of time to produce papers (Brink/Benschop, 2011). On average, women publish less which is related to the fact that in many cultures, care

work is distributed unequally at the expense of women. However, less publications also lead to a lower academic position (Besselaar/Sandstroem, 2017). Therefore, it has been argued that productivity gaps must be considered, and curriculum vitae must be normalized by crediting gaps, focusing on productive periods and considering available resources when taking decisions on open positions, research funding or leading roles in scientific teams. Quantitative numbers should only be the basis for qualitative, expert assessment that is able to consider a range of relevant information for such gaps.

For candidates who might be rejected due to (possibly superficially) too little scientific experience, you can use the following questionnaire to review the decision:	
Is it possible to deduce from the CV the time that the person has been able to use for research? Can the general framework conditions be deduced under which emphasised achievements have been accomplished?	
Is there any evidence that an academic oeuvre was created against the background of temporary part-time contracts, and not in a largely stable multi-year position?	
Could the presented "track record" also be read as an indication of the ability to derive maximum scientific benefit from given difficult framework conditions?	
Were there career interruptions that had an impact on the list of publications, but not necessarily on the person's performance and the quality of the work?	
Has the person contributed to the development of science (special merits in teaching and knowledge transfer, student support, etc.)?	
Does the person have significant non-university experience which could be useful to the open position, but which is not immediately reflected in an extended list of publications?	

3.4 From the CV to the interview

The questions above are not only be used to interpret CVs but also as a **tool for job interviews**. CVs generally give the reader only a static image of the candidate.

Try to clarify under which **circumstances scientific milestones** were achieved. If you want to test the abilities of the candidate apart from outstanding scientific achievements, provide relevant, real-life scenarios to reveal how candidates work and think. Supplement interviews with behavioural and situational questions, rather than just asking about achieved milestones or number of publications. For more details, see the Guideline for Selection Committee and Job Interviews.

4. Selection Committee and Job Interviews

Unconscious biases play a role during the whole process of recruitment, even in the selection of the selection committee. Whether a decision is made by one person, by a team or a committee, selecting new team members needs preparation. Simple methods, applied consistently in the job interviews, will allow you to gain more comparable information about candidates and will give you a better understanding of their skills.

This guideline provides suggestions to improve decision-making and focuses on the prevention of unconscious biases in the selection process:

- To compile a fair and **balanced shortlist** to invite candidates for the interview, use defined selection criteria
- Nomination of **a selection committee** with different backgrounds, age, sex / gender, etc. will help to reduce unconscious bias. The members of this committee need adequate **information** and must be notified about their role in the interview process.
- **Preparation** for a structured interview is suggested to reduce unconscious bias and provide **comparable results of the evaluation.** Set your **selection criteria** before the interviews start.
- The **interview process** itself should be based on **a set of questions**, while every candidate should be evaluated based on the established selection criteria.

4.1 Preparation: structured interview

At the outset, review the job requirements you advertised to prepare yourself for the interview and the final decision. Based on the required skills and necessary tasks, compile the selection criteria. These criteria should be weighted, and the absolute minimum requirements can be defined at this level.

Develop and use a **structured set of interview questions**. This step takes time but guarantees that every candidate must answer the same questions. Additionally, structured interviews are more effective and accurate than unstructured interviews are. Structured interviews are still affected by different biases, but far less than unstructured interviews (Aamodt, Brecher, Kutcher, et al. 2006). The questions should target **essential criteria and skills** as described in the job advertisement and in your **selection criteria**. Try to create precise questions that address only one fact. Think about how much time is available for each candidate's interview and then estimate the number of questions you can ask. Focus your questions on the **prediction of future job performance** of the candidates, as well as on their qualifications and potential, in addition to milestones they achieved in the past. To test the **abilities of the candidate** apart from outstanding scientific achievements, provide relevant, real-life scenarios to reveal how candidates work and think. If possible, ask for work samples of the applicants. Try to supplement your interview with **behavioural and situational questions**, rather than just asking about already achieved milestones. The selection criteria and the structured interview should **focus on the suitability, performance (in the past and potential for future performance), qualification**, etc. Interruptions in the candidate's career, family, and other obligations, etc. should not be valued negatively.

4.2 Balance your shortlist

To compile the **shortlist**, you can consult the selection committee (see below) that will also support the interview process and the final decision. If committee support is not possible at this point, use a team to compile the shortlist. Be sure to choose members with different backgrounds and consider the gender-balance of this team to avoid unconscious bias.

First, if there are many candidates, exclude those who do not fulfil the absolute minimum requirements as listed in the selection criteria. Second, use the weighted essential criteria and skills. **Score each candidate against these criteria** and then establish a **rank order**. Do not compare candidates against other candidates.

Only consider information that is included in the documents provided by the candidate. Do not assume additional skills or experience if not mentioned. If necessary, you can ask the candidates for additional information or documents.

If not already determined, decide how many candidates will be invited for the job interview. The interview process will require a decent amount of time to give every candidate a fair chance, so think about your **time budget**.

Your **final shortlist** should also match the original gender balance of the candidate pool. If this is not the case, re-evaluate your weighted selection criteria and look for indications that could create a disadvantage for specific groups and genders. You may also consider a separated ranking for women and men to ensure including the underrepresented group of your candidate pool in the shortlist. For your next recruiting, revise the style of the advertisements and reflect on the interpretation of CVs (see Guidelines "Job Advertisements" and "Evaluating CVs").

Once the shortlist is ready, invite the respective candidates for interviews. Provide the same information about the interview process to every candidate. High travel costs might discourage candidates from far away. To increase mobility, provide the opportunity for interviews via telephone, Skype, or similar. To ensure a fair process, use the same committee, provide the same information and questions to the candidate and try to adapt the setting as close as possible to the personal interviews when using communication technology for the interview process.

4.3 Select the team and committee for recruitment

Teamwork is trumps – also in the selection of new team members. Therefore, in general, **selection committees** are used to improve recruiting decisions and enable a transparent and fair process. Preparation is needed to ensure that this committee works efficiently and to avoid unconscious bias.

First, the composition of the committee will also influence the selected candidate. Nominating selection committee members with different backgrounds, ages, fields, sex/gender, etc. will enable **multiple views on the skills** of the candidates and thus reduce different biases. A **chair** should be nominated who has a good overview of the entire recruitment process. The role of the chair should be defined according to, for example, under which circumstances she/he can make critical decisions. This could be the case, for instance, when the committee could not reach agreement based on majority vote. The chair can be elected from among the committee, provided by your institutional HR department or can be a representative of equality/gender offices, etc.

Second, the **members of the committee** need **good briefing** and **information** – because a diverse committee alone does not reduce bias (LERU 2018). Before the interviews, they should be provided with detailed information on the specific job description and related tasks as well as on the potential candidates. Additionally, it is recommended to clarify the interview plan in a briefing. This includes information about the set of questions, and by whom and at what time a question will be asked. Make sure that all members understand their role and understand how selection criteria are to be valued and weighted for the final decision.

Third, before the interviews start, clarify whether any member of the committee has a **family or non-work connection** with one of the candidates. If this is the case, it can undermine a fair and equal recruiting process. The chair or the committee should decide prior to the interviews whether the member concerned can still participate in the selection committee.

Last, the members of the committee should be informed about **unconscious bias in recruiting** and how to prevent it. If bias is noticed in the process, committee members should discuss this and reflect on decisions. A **representative for equality or a gender officer** can be part of the selection committee or can be consulted as an observer / supporter / supervisor.

Your selection committee is briefed and ready – the interviews can start.

4.4 The interview process

Try to provide a **comfortable environment** for candidates. Eliminate distractions and interruptions. Make sure candidates are provided with water or other drinks. Pay attention to the time available for each individual candidate. Too many interviews in one day or too many delays during the day can cause significantly shortened time slots for candidates who have an appointment late in the day. (For details on the interview and reviewing process and different methods, see AURA, Grote 2016)

After a brief introduction of the selection committee members, the timetable for the interview, an overview of the vacant job, etc., it is time for starting the interview with the prepared set of questions. Allow **enough time** for the candidate to think about the question and to answer it in full length and in detail. **Stick to your set of questions**, but in some cases, follow-up questions will help if something is unclear or lacking specifics. If the candidate cannot give an answer immediately, it is an option to ask the same question again later in the interview process.

If possible, every member of the committee should take **short notes** on each candidate. The candidate should be evaluated based on the set of selection criteria. Avoid comparisons between candidates. Rather than ranking the candidates immediately after each interview, create and present the ranking after all interviews have been completed. To support the decision of the committee and ensure the process is transparent and fair, use a **form sheet** based on the **selection criteria** (a "candidate scorecard").

Compare and discuss the ranking (based on the specific qualifications and criteria) between the members of selection committees. In addition, reserve some time for feedback and open discussion to allow the committee members to share observations and critique. Maintain protocols for questions of candidates as well for the improvement of further recruitment actions. If possible, additional detailed feedback can be given to rejected candidates.

5. Guideline for Applicants

In the **selection process**, the reviewers use your CV to ensure a **fair and comprehensive assessment**. The purpose of this guideline is:

- to enable the experts to better **assess your competences** and
- to improve the comparability of candidates.

The **information** you provide is analysed with the following objectives in mind:

- **Presentation** of the entire range of a person's contributions to the **development of science**.
- **Description of the framework conditions** under which scientific work has been carried out so far (e.g. resources that have been available for research, other non-scientific obligations, pregnancy, parental leave, childcare, longer serious illness).
- Display of extracurricular competencies relevant to the selection procedure.

Therefore, please check whether all relevant information can be found in your application documents. **Enclose references** of the colleagues who can prove the corresponding competencies, if necessary. If you personally do not have specific knowledge and skills that you consider important for the advertised position, describe in the application how you will acquire the competences.

Training and Employment

Check whether the following **information** is included in your application documents:

- Which **organizational conditions** were relevant for you? Were you employed full-time or part-time (what percentage)? Were there times when you did freelance work?
- Which **institutions** did you work for and in what function? Which important tasks went beyond scientific activities (e.g. leading a research team)?
- Are your **training courses** clearly listed and described in scope and content? Have you acquired, for example, project management skills, knowledge on leading or interacting in scientific teams?

Research

Check whether the following information is included in your application documents:

- **Milestones** in your career in terms of networking and (interdisciplinary) collaboration.
- Your most innovative **ideas, achievements, contributions** in the scientific field (if not shown in the application)
- Your most important (research) **cooperations** and **contacts**. Please name contact persons in the research area who can be contacted for references.

Projects

Check whether your application documents show the following:

- **Project dimensions** (duration, financial resources, number of people involved, for cooperative projects: involved institutions)
- Total amount of **third-party funding** (only include those third-party funding projects where you played a significant role in the application process).
- Your **functions** in the projects, in other words, your personal contributions to the implementation (including scientific or budget responsibility, team development, etc.).

Awards

Check whether your application documents show the following:

- Memberships, expert opinions, functions in (university) committees, etc.
- If applicable, also provide information from the **private sector** or from **honorary work** (e.g. awards for civil engagements, in the course of social club activities, sports, etc.).

Management Skills

- Check whether the information on previous education and employment, previous research, projects, and awards indicate your management skills.
- The **number** of diploma/master **theses supervised** by you and the proportion of these carried out within the framework of third party funded projects. Also, indicate the number of dissertations supervised (in the context of third-party funded projects). What were the most important experiences you gained?
- List important **activities** concerning the **teaching** and **transfer** of scientific findings to a non-specialist audience. Please also specify the respective target group.
- In your opinion, what are the most important **experiences** that you bring to the open position, apart from your professional skills? (management experience, e.g. organisation of conferences, lecture series, project handling, etc.; university committee work; management tasks in associations or social clubs)
- Describe your **special skills** and provide examples of how these skills have contributed to success in projects, joint research and publications.

Publications

- Please check whether there are **publications** that are relevant to you but not yet included in the list.
- Was there a **time** when you were most **productive**? If so, please specify for this period: Number as well as the title and name of the journal, etc. of the scientific publications in your most productive phase or in a period of continuous employment in research. Please also indicate the respective period and the extent of employment.

Interruptions

Interruptions and periods of part-time occupation is frequently the rule rather than the exception. Interruptions are often considered disadvantage in job applications and affect wages. However, the type of career interruptions, such as unemployment, parental leave or part-time work influences statistically this impact (Gerst, Grund 2017). If there are interruptions in your professional career, please indicate the period and, if necessary and if you want to share this information, the reasons for the interruption. This will help to interpret your CV and will show your performance in different fields and during different occupations and interruptions.

Are there any interruptions in your professional career that you want to share?	
Time period	
Non-university practical experience	
Private obligations	
Other reasons for interruptions	

6. Literature used and further material

6.1 Scientific Papers, Tools & Publications

Title	Short Description
Aamodt M.G., Brecher E.G., Kutcher E.J., Bragger J.D. (2006). Do structured interviews eliminate bias? A meta-analytic comparison of structured and unstructured interviews, Poster presented at the annual meeting of the Society for Industrial-Organizational Psychology, May 2006	A short overview about research on interview and bias showing that structured interviews can reduce unconscious bias, but not eliminate it.
Agerström J., Rooth DO. (2011). The role of automatic obesity stereotypes in real hiring discrimination in: J. Appl. Psychol. 2011 Jul; 96(4):790-805. DOI: 10.1037/a0021594.	This study examined whether automatic stereotypes captured by the implicit association test (IAT) can predict real hiring discrimination against the obese. Discriminatory behaviour was quantified by the extent to which the hiring managers invited normal-weight versus obese applicants to a job interview. The study showed that hiring managers had negative obesity stereotypes and were less likely to invite obese applicants for an interview.
AURA (Association of Universities for Research in Astronomy) – A Guide to Best Practices in Recruitment and Selection. Enriching Diversity. Exemplifying Excellence. http://www.aura-astronomy.org/diversity/documents/AURA%20Recruitment%20Guide%20-%20Final.pdf	Comprehensive step-by-step guideline for unconscious bias in the whole process of recruitment, especially for the interviewing process. Large appendices for best practices policies, additional readings, examples and worksheets from practice, etc.
Bacock, L., Laschever, S. (2003). Women don't ask: Negotiation and the gender divide. Princeton, New Jersey: Princeton University Press.	This work is bringing back the individual perspective on the gender divide in science and work, showing women (and others) opportunities for their improvement in job and science. "Women Don't Ask shows women how to reframe their interactions and more accurately evaluate their opportunities. It teaches them how to ask for what they want in ways that feel comfortable and possible, taking into account the impact of asking on their relationships."
van den Besselaar, P., Sandström, U. (2017): Vicious circles of gender bias, lower positions, and lower performance: Gender differences in scholarly productivity and impact. PLoS ONE 12(8): e0183301. https://doi.org/10.1371/journal.pone.0183301	Van den Besselaar and Sandström analyze a dataset of WoS-publications from 47.000 Swedish researchers from 2008 to 2011. Their findings are, among others, that women are less productive and rather overrepresented in lower academic positions. They offer several explanations for this situation.

Blanch, D.C., Hall, J.A., Roter, D.L., & Frankel, R.M. (2008). Medical student gender and issues of confidence. Patient Education and Counseling, 72(3), 374-381. doi: 10.1016/j.pec.2008.05.021. Epub 2008 Jul 24.	Study on the behaviour of medical students at Indiana University School of medicine during a clinical examination. Female medical students were viewed as significantly less confident than male medical students during examinations. This article suggests that medical educators should focus on the issue of students' confidence, especially for female students to obtain comparable results.
Bohnet, I. (2016). What Works: Gender Equality by Design. Harvard University Press.	"Gender equality is a moral and a business imperative". To overcome unconscious bias, Bohnet presents research-based solutions and tools to improve diversity and equality in teaching, workplace, HR management, governments, etc.
van den Brink, M., Benschop, Y. (2011): Gender practices in the construction of academic excellence: Sheep with five legs. Organization, Vol. 19, No. 4, p. 507-524. DOI: 10.1177/1350508411414293	Van den Brink and Benschop deconstruct the notion of academic excellence, interpreting it as a social construct that is inherently gendered. Their paper is based on an empirical study of professorial appointments in the Netherlands.
Chamorro-Premuzic T., Adler S., Kaiser R.B. (2017). What Science Says About Identifying High-Potential Employees, Harvard Business Review https://hbr.org/2017/10/	Article summarizing how high-potential can be identified according to their "qualities" in different fields, including ability for the job, social skills and drive (the will and motivation to work hard).
Gerst B., Grund C. (2017). Career Interruptions and Current Earnings: The Role of Interruption Type, Compensation Component, and Gender, IZA DP No. 10713 http://ftp.iza.org/dp10713.pdf	This study examines how career interruptions and subsequent wages of employees are related. Based on individual panel data of middle managers from the German chemical sector, the influence of different interruptions on earning is analysed.
Isaac, C., Lee, B., Carnes, M. (2009). Interventions That Affect Gender Bias in Hiring: A Systematic Review, in: Acad Med. 2009 Oct; 84(10): 1440–1446.DOI:10.1097/ACM.0b013e3181b6ba00	A systematic review of experimental studies from 1973-2008 displaying the main focus of past research regarding Gender bias in recruitment and employment. It also provides an overview of actions that can reduce gender bias.
Cooke N. J., Hilton M. L. (2015). Enhancing Effectiveness of Team Science, National Research Council Washington, DC: The National Academies Press.	Report focusing on the new challenge of complex modern scientific research, which can be challenged by teamwork and teambuilding. This report discusses and integrates the available research to provide guidance for practice to assembling a team, improving leadership, education and professional development for science teams and groups.
DFG (2015). Individueller Karriereverlauf statt Lebensalter / Allgemeine Informationen zum Umgang mit Diversity in der Antragsbearbeitung http://www.dfg.de/foerderung/grundlagen_rahmenbedingungen/diversity_wissenschaft/individuelle_karriere/index.html http://www.dfg.de/foerderung/grundlagen_rahmenbedingungen/diversity_wissenschaft/diversity_allg/index.html	Outline of policy regarding individual career paths and research funding in the DFG (German Research Foundation) considering framework conditions and interruptions, such as pregnancy, parental leave, child care, disabilities, military and alternative service, etc.

DiTomaso, N., Post, C., Smith, D.R., Farris, G.F., & Cordero, R. (2007). Effects of structural position on allocation and evaluation decisions for scientists and engineers. Administrative Science Quarterly, 52: 175-207.	Study on bias in science and engineering arguing that effects in evaluation are independent of who is doing the rating (gender/sex, ethnicity, race, etc.).
European Union (2015). Report of the Working group of the steering group of human resources management under the European Research Area on Open, Transparent and Merit-based Recruitment of Researchers (OTM–R), 03.2015 https://cdn1.euraxess.org/sites/default/files/policy_library/otm-r-finaldoc_0.pdf	This Report and Guideline offers suggestions for improvements in the recruitment and job advertisement for researchers, institutions, a country's research system, etc. The goal is to guarantee equal opportunities and access for all, develop an international portfolio (cooperation, competition, mobility) and make research careers more attractive.
Gaucher, D., Friesen, J., & Kay, A. C. (2011). Evidence That Gendered Wording in Job Advertisements Exists and Sustains Gender Inequality. In: Journal of Personality and Social Psychology. DOI: 10.1037/a0022530 https://www.hw.ac.uk/services/docs/gendered-wording-in-job-ads.pdf	Empirical research on institutional-level mechanisms that reinforce and perpetuate existing group-based inequalities, focusing on the wording in advertisements on different levels and fields.
Grasenick, K. (2010). Zurück in die Zukunft: Zur Verbesserung von Auswahlverfahren geförderter Forschung, Working Paper https://www.convelop.com/wp-content/uploads/2011/08/zurueck_in_die_zukunft.pdf	Working paper to address new types of knowledge production in science. Focussing on public research funding programs in Austria and how criteria beyond science should be taken into consideration. Provides a compendium with lead questions regarding selection procedures.
Grote, G. (2016). HBR TOOLS PERFORMANCE REVIEWS. Harvard Business Review. https://hbr.org/product/hbr-tools-performance-reviews/TLPRF1-ZIP-ENG	Short guideline for reviewing performances in the past and present for potential candidates.
Harvard Business Review (2016a). YOU AT WORK HIRING AND KEEPING THE RIGHT PEOPLE. Article collection https://hbr.org/product/you-at-work-hiring-and-keeping-the-right-people/BPHKRP-PDF-ENG	Exploring different levels and difficulties in the process of recruitment and HR management with short but detailed articles.
Harvard Business Review (2016b), THE LATEST RESEARCH DIVERSITY. https://hbr.org/product/the-latest-research-diversity/DIVRES-PDF-ENG	This collection of articles discusses diversity in different views and on different levels, including gender, race, institutional factors, HR management and diversity, LGBT, etc.
Hill C., Corbett C., Rose A. St. (2010). Why So Few? Women in Science, Technology, Engineering and Mathematics, AAUW https://www.aauw.org/research/why-so-few/	"This study tackles this puzzling question and presents a picture of what we know—and what is still to be understood—about girls and women in scientific fields." Providing substantial data for women in STEM as well as discussion about research.

Koch A. J., D'Mello S. D., Sackett P. R. (2015). A Meta-Analysis of Gender Stereotypes and Bias in Experimental Simulations of Employment Decision Making, in: Journal of Applied Psychology 2015, Vol. 100, No. 1, 128–161. http://dx.doi.org/10.1037/a0036734	Meta-Analysis especially analysing studies for working and recruitment and bias. Also offers practical implications based on research, including diversity management, educational models for diversity as well as organizational tools.
Leemann R.J. & Boes S. (2012). Institutionalisierung von Mobilität und Internationalität in wissenschaftlichen Laufbahnen: Neue Barrieren für Frauen auf dem Weg an die Spitze? In: Beaufays S., Engels A., Kahlert H. (eds) Einfach Spitze? Neue Geschlechterperspektiven auf Karrieren in der Wissenschaft. Frankfurt a.M., New York: Campus, pp. 174-203.	Article about the difficulties in mobility and international careers in science, especially for women.
LERU (LEAGUE OF EUROPEAN RESEARCH UNIVERSITIES) (2018). Implicit bias in academia: A challenge to the meritocratic principle and to women's careers – And what to do about it, ADVICE PAPER No.23 - JANUARY 2018	Paper on the impact of implicit gender bias on working conditions as well as on recruitment and career paths. Provides examples for practice to minimize unconscious bias on different levels in the process of recruitment, based on current research on diversity and gender.
Martinez, E. D. et al. (2007). Falling off the academic bandwagon. Women are more likely to quit at the postdoc to principal investigator transition. In: EMBO reports. Vol. 8 (11). p. 977–981. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2247379/	Report on the ratio of women and men in scientific careers on different levels. It is argued that women often abandon their scientific careers between postdoc and tenure-tracks position. Lists support options that are likely to help especially women to stay on track, underpinned with data.
McNeil, L., and M. Sher. (1999). The dual-career-couple problem. Physics Today. College Park, MD: American Institute of Physics.	Article showing the limitations and possibilities of dual-career models.
Nielsen M. W., Alegria S., Börjeson L., Etzkowitz H., Falk-Krzesinski H. J., Joshi A., Leahey E., Smith-Doerr L., Woolley A. W., Schiebinger L (2017). Gender diversity leads to better science, in: PNAS, issue 8, February 21, 2017 114:1740–1742 10.1073/pnas.1700616114	Paper showing that under the right conditions and circumstances, teams benefit from various types of diversity, including scientific discipline, work experience, gender, ethnicity, and nationality. Shows "mechanisms for innovation" and specifies why gender diversity matters for scientific discovery and how to manage diversity to maximize benefits.
Nobel, C. (2016). How To Take Gender Bias Out Of Your Job Ads. Forbes https://www.forbes.com/sites/hbsworkingknowledge/2016/12/14/how-to-take-gender-bias-out-of-your-job-ads/#ba2e7431024c	Narrative article to improve job advertisements and limit gender bias. Based on the work of Bohnet (2016).
van Ommeren J., de Vries R. E., Russo G., van Ommeren M. (2005). Context in selection of men and women in hiring decisions: gender composition of the	Study showing bias in the applicant pool for both men and women if one group is highly underrepresented.

applicant pool. Psychol Rep. Apr;96(2):349-60.	
Ross, H. (2008). Proven Strategies for Addressing Unconscious Bias in the Workplace. In: CDO Insights, Vol. 2, Issue 5. http://www.cookross.com/docs/UnconsciousBias.pdf	A short introduction to unconscious bias on different levels and 10 ways to combat hidden bias in companies.
Schiebinger, L., Davies Henderson, A. D. & Gilmartin, S. K. (2008). Dual-career academic couples. What universities need to know. Stanford, CA.: The Michelle R. Clayman Institute for Gender Research. https://stanford.app.box.com/s/y5bicy7o3cxwtmgy22iu	Comprehensive guideline and best-practice article about insertional efforts by universities to implement and manage dual-career models. Additionally provides quantitative data on different levels important to understand gender and equality in scientific careers.
Sonnert, G., & Holton, G.J. (1995). Who succeeds in science?: the gender dimension . New Brunswick NJ: Rutgers University Press.	Based on biographical research of successful women and men in science, this book provides qualitative and quantitative data for the characteristics of these successful scientists. It also shows different career models between women and men in science.
Staats C., Capatosto K., Tenney L., Mam S. (2017). STATE OF THE SCIENCE: IMPLICIT BIAS REVIEW, Kirwan Institute. http://kirwaninstitute.osu.edu/wp-content/uploads/2017/11/2017-SOTS-final-draft-02.pdf	Overview of unconscious bias as well a comprehensive collection of actual research on different forms of bias.
Stewart A., Valian V. (2018): An Inclusive Academy. Achieving Diversity and Excellence, Cambridge, London: MIT Press	Diversity and inclusion should be ideal in science and society. However, Stewart and Valian show how diversity is also an ingredient in satisfying collaborations, innovation and scientific excellence. Stewart and Valian provide practical advice for overcoming obstacles to inclusion.

6.2 Online Tools and Databases

Title	Short Description
Athena SWAN Charter https://www.ecu.ac.uk/equality-charters/athena-swan/	Example and charter of how women can be supported in science, engineering and technology, as well in the arts, humanities, social sciences, business law, etc. Collections of examples of good practice. Awards for institutions, faculties and departments for good practice initiatives.
Databases for active recruitment and hiring of women in science	Highlights female systems neuroscientists https://anneslist.net/ Request a women scientist; for conferences, speakers, projects, etc. https://500womenscientists.org/request-a-scientist AcademiaNet: Profiles of leading women scientists http://www.academia-net.org/

	European Platform of Women Scientists https://epws.org/
Gender Decoder for Job Ads http://gender-decoder.katmatfield.com/	Online tool to check your job advertisement for unconscious gender bias. This tool uses the list of gender-coded words from the paper of Gaucher, Friesen, Kay (2011)
Eve and evidence: what research tells us about gender equality http://curt-rice.com/2015/03/08/eve-evidence-research-tells-us-gender-equality/	Overview of the research about gender equality, including links to further articles and guidelines.
Project Implicit. Online self-test on unconscious bias in different fields https://implicit.harvard.edu/implicit/index.jsp	Tests on bias in gender-career and gender- science (and many other fields)
RRI (Responsible Research and Innovation) agenda for Horizon 2020 https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation	"Responsible research and innovation is an approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation."
KU Leuven Gender Action Plan KU Leuven 2014 – 2017 https://www.kuleuven.be/diversiteit/pdf/BRO_GENDERACTIE_def_ENG.pdf	The KU Leuven Gender Action Plan shows their practice and progress since gender action was implemented, especially dealing with gender-bias in recruitment and career.
Ruprecht-Karls University of Heidelberg. Online tutorial for gender-bias in recruitment (German) https://www.uni-heidelberg.de/gleichstellungsbeauftragte/karriere/onlinetutorial_genderbias.html	Comprehensive online tutorial for gender bias in recruiting and beyond.
Unconscious bias, Adapted by Professor Uta Frith DBE FBA FMedSci FRS, The Royal Society https://royalsociety.org/~/media/policy/Publications/2015/unconscious-bias-briefing-2015.pdf	Overview about Unconscious bias and suggestions to avoid it.
University of Edinburgh Equality and Diversity Program https://www.ed.ac.uk/equality-diversity	Providing Equality and Diversity Strategy, Outcomes, Action Plans and information on equality and diversity.
University of Helsinki, Equality and Diversity Plan 2017-2018 https://www.helsinki.fi/sites/default/files/atoms/files/the_university_of_helsinki_equality_plan_2017_2018.pdf	The University of Helsinki Equality and Diversity Plan 2017–2018.

Human Brain Project

Unifying our understanding of the human brain.