

# Gender Equality in Academia and Research

## Why change must be structural

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### What is the problem/issue?

As [She Figures](#) , published by the European Commission shows, research and innovation (R & I) is highly segregated by gender and marked by considerable gender gaps.

Women and men tend to concentrate in certain scientific fields ([horizontal segregation](#)). For example, while women are more likely to be found in fields such as social sciences and humanities, men are more inclined to study, teach and/or research topics related to engineering or technology. In addition, top positions are more frequently occupied by men ([vertical segregation](#)) and [evidence shows](#) that resources distributed through research funding are not equally accessible to researchers of all genders.

In addition, the significant sex/[gender dimension often seems to be disregarded in the approach to and content and analysis](#) of research and teaching. The result is that the viewpoints, experiences and needs of half the population risk being overlooked or dismissed. This also applies to other intersecting inequalities or discriminations, which in turn leads to innovations, products, services and policies that are less than optimal because they are targeted at and serve only a certain proportion of society. To better address these issues, recent research funding programmes, such as Horizon Europe, are starting to demand the integration into research proposals of sex/gender/intersectional analysis as a criterion for research quality.

### **What needs to be done?**

Gender inequalities are deeply ingrained not only in formal organisational policies, processes and procedures, but also in informal practices, values and habits of organisations and their members. The strategic goal of introducing a gender equality plan (GEP) is to integrate gender equality into the regular rules, procedures and practices of a research organisation. Successful implementation of a GEP will lead to the transformation of an institution, thus also impacting on the organisational culture. It will become part of ongoing procedures and will impact the entire organisational system and culture. A GEP is therefore a strategy whose ultimate aim is to become dispensable and become part of the regular rules that gender-equal research organisations follow.

To achieve this, a successful GEP needs to work at different levels to be effective and transformational: it needs to address the whole organisation and the organisational structures, procedures and culture that (re)produce gender and other intersectional inequalities. It is crucial to identify and act upon the different mechanisms that need to be changed through comprehensive and holistic approaches. Such institutional change brings benefits to the organisation as a whole and to society at large.

For more insights, read the European Commission's report [Structural Change in Research Institutions – Enhancing excellence, gender equality and efficiency in research and innovation](#).

Let's have a **closer look at some of the issues that are at stake**, and which of them tend to (re)produce inequalities.

### **Masculine image of research and innovation**

From an early age, we learn to associate science with men. Stereotypically, a 'scientist' has the face of a man, with the exception of fields with a higher proportion of women; there the stereotypes about scientists are more congruent with those about women. Even in countries where women represent approximately half of the nation's science majors and employed researchers, men still tend to be more associated with science than women. Because women also share the stereotypes about the masculine image of science, this can lead to a perceived 'lack of fit' by women, who then choose to work in a field already populated by a lot of women, to leave the R & I field or to not enter it at all, even though they are appropriately educated and trained. This contributes to the abovementioned horizontal and vertical segregation and a lack of role models in specific disciplines and research fields and positions.

### **Unconscious or implicit gender bias**

Prejudiced measures or thoughts based on the gender-based perception that women are not equal to men in rights and dignity are called gender bias. Unconscious or implicit gender bias is critical and problematic when it is at play in the assessment and evaluation of people (e.g. for election to posts or fellowships, or the granting of awards) because it **impedes an objective and fair judgement**. It is a main cause of gender inequalities in R & I. Furthermore, men often benefit from positive bias as they are presumed to have higher levels of competence and performance than their women colleagues, especially in disciplines traditionally dominated by men.

Although R & I is perceived as a field based on meritocratic principles, research on implicit bias shows that this is not entirely true, as selection and promotion processes are influenced by gender bias and other forms of bias. In addition, **implicit bias also affects research funding bodies and their decision-making processes, as these processes** are often characterised by the same conditions that allow bias to manifest: time pressure, ambiguous assessment criteria, and evaluation of people instead of proposals and ideas. However, not all discrimination and disadvantages result from unconscious bias, as there is evidence that open discrimination and bias are still present and relevant.

[Take a test to learn more about your own unconscious bias!](#)  This test helps to reveal our unconscious biases and how they drive our daily decisions or how we assess and treat others. The results will help you to take specific actions to behave differently in professional and personal settings and when interacting with others.

### **Workplace culture and climate that are not gender-neutral (chilly climate)**

The workplace climate affects productivity, job satisfaction and intentions to leave or stay at an organisation. Although progress towards an equal representation of women and men in R & I is visible, R & I remains a field that is largely dominated by men, which is characterised by a masculinised workplace culture and climate where women do not feel accepted or that they belong, and may even feel isolated if they are exposed to harassment, microaggressions, ignorant and dismissive behaviour, bullying or incivility. Gender-based violence and sexual harassment are prevalent and largely under-reported in higher education institutions and research organisations. When such behaviour is not recognised as a serious problem, it deeply impacts individuals' lives and well-being, and influences their decision to leave the field of R & I. See the results of the EU-funded project [UniSAFE](#)  for more details and empirical evidence on the prevalence of gender-based violence and sexual harassment in R & I in Europe

Furthermore, the culture of R & I is often perceived as competitive, output focused and even toxic by women and also by other groups. Other important aspects of workplace culture and climate are the inequitable distribution of tasks and support, with women often being made responsible for administrative or teaching activities (academic housework), which keeps them from research work and leads to them receiving less (informal) support for career progression. These everyday experiences of unfair and offensive treatment are described by the term 'chilly climate'.

However, workplace climate and culture are not necessarily uniform throughout an organisation and can vary between different departments, institutes or research groups. Leadership has a large impact on workplace culture and climate and can shape the tone of communication and behaviour and change the distribution of tasks, support and resources.

### **Work–life conflict and career inflexibility**

Career progression and success in R & I are based on a model that assumes that researchers and employees working in this field do not have any other responsibilities, commitments and interests besides their work, that is, no household duties, care responsibilities or other social commitments and interests. These ideal workers – mostly men – are not distracted, are available for work most of the time and can work long hours. Academic careers are still based on this model, even though more and more women are entering the profession and are leaving because their lives and careers do not match these requirements.

The careers of women are more often characterised by career breaks, reduced working time and reduced productivity in terms of research papers. Women and people with non-traditional career patterns often progress more slowly in their careers and leave R & I organisations at higher rates. It is evident that the work–life conflict influences the career progression of women and men differently: tenured women faculty are less likely than their men peers to have children in the household, are more likely to have fewer children than they would have wanted, and are more likely to do more housework and childcare when they return from work. But men and people with other gender identities are also affected by the demands of a career in R & I. This includes those who would like to be more involved in care and household responsibilities, those who are restrained in their working capacities due to health-related issues or those who are seeking personal fulfilment outside work. The image of R & I as bearing high costs due to increased work–life conflicts may stop people from entering the R & I field and lead them to seek other opportunities where they can develop their talents and pursue their careers. This is why the research sector ultimately loses qualified personnel.

### **Gender-blind and gender-biased research and training**

Much research is still [gender-blind](#) or [gender-biased](#), and research organisations and higher education institutions do not take the sex/gender dimension as a cross-cutting issue into account in the training of future generations of researchers and professionals. Therefore, a lot of scientific knowledge and innovations have not been produced using a sex-/gender-sensitive or intersectional approach or methodology. This negatively impacts the quality of research results and technologies based on such results. This happens, for instance, when research results are extrapolated to the population as a whole, without due consideration of the sample composition. For example, in medical research, often only male animals are used in preclinical research on new drugs (see the case study '[Prescription drugs: Analyzing sex and gender](#)' of the 'Gendered innovations' project). But there are also examples and good practices from other disciplines or fields of technology (such as artificial intelligence, machine learning, robotics, urban planning and transport technologies and agricultural technologies) that show why considering a sex/gender analysis in R & I processes is important and leads to more valid results. See the Gendered Innovations reports [1](#) and [2](#), published by the European Commission, for more detailed information.

Sex and gender are fundamental determinants of the organisation of life and society. Therefore, recognising and taking these differences into account is paramount in scientific knowledge creation and should be reflected in research funding programmes, R & I content, and outreach and dissemination activities. Recently, journals have adopted the [sex and gender equity in research \(SAGER\) guidelines](#) [↗](#), which aim to guide authors on how to convey sex and gender information in the reporting of study design, data analyses, results and the interpretation of findings. Furthermore, in Horizon Europe, the integration of a [sex/gender analysis is a cross-cutting issue and a component of the excellence criteria for all proposals in all calls](#). For more information, see the section on the sex/gender dimension in research and teaching in the [gender equality in academia and research \(GEAR\) action toolbox](#).

## **COVID-19**

The impact of the COVID-19 pandemic on gender equality in R & I is being discussed among different members and stakeholders of the R & I community. At the time of updating the GEAR tool (2021), the COVID-19 pandemic was far from over and it seemed too early to fully assess the impact of COVID-19 on gender equality in R & I in Europe. However, there are several issues that should be observed closely as they have the potential to widen the gender gap in R & I in the future.

- 1** There is evidence that women have taken over the major share of additional family care and education responsibilities during the COVID-19 pandemic and related lockdown measures, resulting in less time for carrying out research, writing publications and writing research proposals.
- 2** There is evidence that the COVID-19 pandemic has led to a deprioritisation of gender equality objectives and work due to time constraints and being overloaded with other activities.
- 3** There is evidence that there has been an unequal division between women and men of responsibility for, and work in, moving the delivery of teaching and support for students online, contributing to less time for research.
- 4** The impact of the COVID-19 pandemic may be different for staff of different seniority levels and contract types, and hence for genders who are over- or under-represented at particular seniority levels and in particular contract types.
- 5** The new modes of working and collaborating through online tools need to be reflected on to see if they reproduce already existing gender inequalities or even produce new inequalities in R & I organisations. There is evidence that women are interrupted even

more by colleagues in online conversations than in face-to-face situations.

- 6 Research on COVID-19 and its impact on public health, society and the economy should integrate a sex, gender and intersectional analysis to collect evidence for developing gender-sensitive policy responses.

In order to view **videos and webinars** or further **tools and resources** on the topics in this section, switch between the respective tabs. Otherwise, click below to continue to the next section about **rationales for promoting gender equality in R & I**, which may provide you with arguments to convince your management and colleagues to support your efforts.