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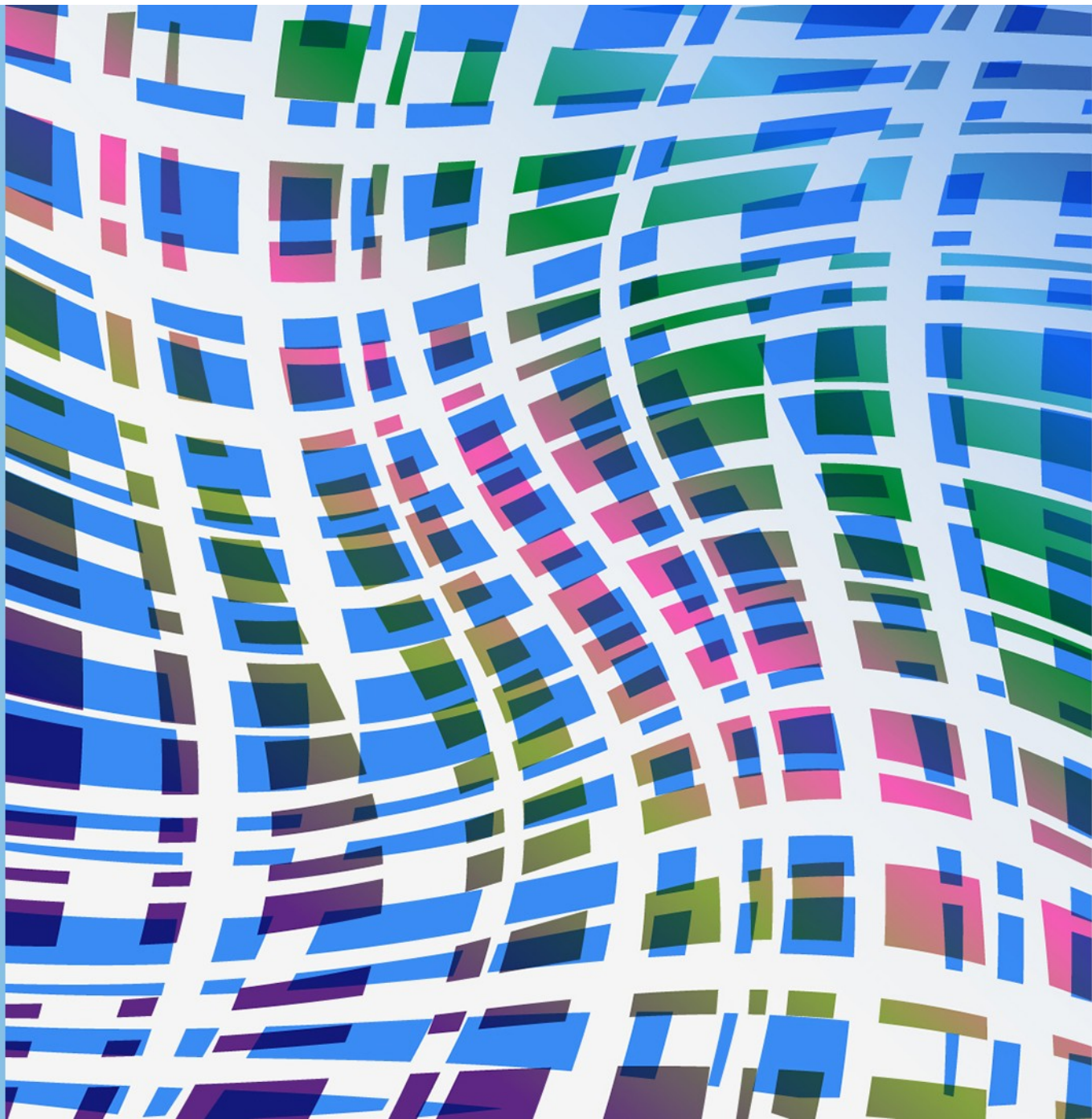
Research Synthesis 5

Policy Setting and Implementation

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Description of the Problem

In 2012, the ERA Communication "A Reinforced European Research Area Partnership for Excellence and Growth" established gender equality as one of five priorities for achieving the objective of a common research area in Europe. The ERA (European Research Area) Communication states that gender equality and gender mainstreaming in research are needed "to end the waste of talent which we cannot afford and to diversify views and approaches in research and foster excellence" (EC, 2012b:4).

It invites Member States to create a favourable legal and policy environment, and provide incentives to:

- dismantle barriers including legal barriers to the recruitment, retention and career progression of female researchers whilst ensuring compliance with EU law on gender equality;
- tackle gender imbalances in decision making processes;
- bolster the gender dimension in research programmes (EC, 2012b:12).

Research organisations are invited to implement institutional change specifically focusing on human resources management, funding, decision-making and research programmes by carrying out Gender Equality Plans which should aim to:

- carry out impact assessments / audits of procedures and practices to identify gender bias and other forms of gendered inequality;
- implement innovative strategies to tackle bias;
- establish targets and monitor progress via indicators (EC, 2012b:13).

Member States are seen as key partners in the effective implementation of institutional change by creating a conducive legal and political environment, and by providing incentives for change. They are therefore invited to engage in partnerships with funding agencies, research organisations and universities to foster cultural and institutional change.

Most features and issues addressed in national policy making environments with regard to gender and science are not based on legal provisions – they result from long-term or medium-term strategic orientations and "policy instruments falling in the

realm of 'soft law' restricted to recommendations, resolutions, action programmes and road maps" (EC, 2012a:24).

Strategies in specific policy fields can be assigned to three main complementary types of instruments based on characteristics of steering, policies and strategies (Bothfeld & Rouault, 2015):

- Hierarchical steering: based on direct objectives forced by regulation and impacts directly on foreseen change; defines mandatory goals of gender equality measures (e.g. quota);
- Procedural steering: based on indirect objectives, incentives, cooperation or regulation and has an indirect-structural impact; no concrete pre-defined goals, but concrete institutionalization of procedures (e.g. gender equality plans, implementation of gender equality offices, equality officers);
- Evaluative steering: based on indirect objectives, voluntary self-commitment, elaborate problems and defines strategy to address them, and has a latent impact through cultural change and learning (e.g. monitoring and reporting duty, audits to make visible gender bias and create awareness).

The mere existence of hierarchical, procedural and evaluative steering instruments does not guarantee their effectiveness. Steering instruments are more effective when they are deliberately combined (Bothfeld & Rouault, 2015:28). For example, as a result of the combination of hierarchical, procedural and evaluative steering instruments in Norway, a 40% quota for women in corporate boards of public limited companies has been successfully pushed through (ibid).

This shows that hierarchical steering instruments can be highly effective, if additional procedural and evaluative instruments are also implemented (Lipinsky et. al., 2015:9). National policies in the field of gender and science often pursue mixed approaches and vary between hierarchical steering, procedural steering and, in fewer countries, evaluative steering.

This research synthesis will look at the key steering strategies used by Member States for institutional change and those in place in three main areas: recruitment, promotion and re-entry; the gender dimension in research content; and gender balance in decision-making. It will attempt to identify the types of steering mechanisms used in each of these areas and the presence of these policies

throughout different Member States. This synthesis is mainly based on systematic research carried out in this field: the European Commission's 2014 report "Gender Equality Policies in Public Research" – based on a survey among members of the Helsinki Group on Gender in Research and Innovation, 2013 (EC, 2014a); the ERA Facts and Figures (2014) Report (EC, 2015), and the GenPORT Policy Environment Report (Lipinsky et al., 2015).

Recent and New Insights from Research

Institutional Change

The push for institutional change has been driven through a combination of legislation and "soft" measures in Member States, principally through two main procedural steering mechanisms: Gender Equality Plans (GEPs) and gender equality officers.

Supportive measures are obligatory in some member states, while they are not obligatory in others. Gender equality plans are mandatory by law in universities in AT, ES and NO. Whilst in DK, SE, IS and FI the law requires that all workplaces over a certain size develop gender action plans. In Germany women support actions are required by law, but gender equality plans are not obligatory (cf. Bergman/ Rustad, 2013:25 cited in EC, 2014:19). According to EIGE (2016), supportive measures for the implementation of gender equality plans are in place in BE, CY, DE, FI, PT, SE, SK, and UK (EIGE, 2016:7). Of course there is great variation between institutions' GEPs in terms of the extent of these plans and degree of implementation (ibid). According to the results of the ERA survey 2014, 64% of respondent research performing organisations (RPOs) implement a gender equality plan – there is however great variation between countries. In AT, DE, FI, FR, MT, the NL, SE, and UK the share of RPOs which have adopted gender equality plans is above 80%.[1] (EC, 2015:29).

The legal institutionalisation of gender equality officers is not widespread. Only four countries have binding provisions on the implementation of gender equality officers (AT, DE, IS) or gender units (ES) (Lipinsky et al., 2015), though their responsibilities and authority varies greatly.

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[1] ERA survey in 2014 among RPOs which employ 515,000 researchers (around 20% of total EU researchers)

Member States can play a key role in the push for institutional change in RPOs and research funding organisations (RFOs) in a variety of different ways- by fostering a favourable legal and political context for institutional change (through legal provisions, policies or strategies) or by incentivising its uptake (EC, 2014:12). This proves to be an effective approach as the ERA Progress Report 2014 highlights the "significant correlations between measures taken at RPO level including GEPs and the existence of national laws, strategies and/ or incentives to foster institutional change" (EC, 2014b:6).

One effective approach to steering institutional change has been carried out through measures linking gender equality performance in RPOs to research funding (EC, 2014a):

- Performance agreements with the government, as in AT, LU and FI; in DK some universities have also included gender equality in their development contracts with the Ministry;
- Assessment of gender equality concepts and grading of institutions, as in Germany by the German Research Foundation;
- Linking funding of biomedical research to structural change performance in the United Kingdom by using the Athena Swan charter;
- Relevant measures also in associated countries – i.e. the establishment of the Committee for Gender Balance in Research and the Creation of the Gender Equality Award by the research council in Norway (EC, 2014a:18).

The Norwegian and Irish Research Councils provide good examples of taking a holistic approach to evaluation. The former includes recruiting female scientists to research teams, gender balance of principal investigators and gender in research content – it has also developed a monitoring system for those relevant projects (EC, 2014a:36). The Irish Research Council has produced a gender strategy and action plan, 2013-2020, which covers Supporting Gender Equality in Researcher Careers, Integrations of Sex/ Gender Analysis of Research Content, and Internal Gender Proofing.

Another approach is concerned with providing incentives to RPOs to recruit and promote female academics to middle and mostly senior positions, which include as an eligibility criterion the implementation of a gender equality plan (Programme for

Senior Professors in Germany, ASPASIA in the Netherlands, and BALANSE in Norway); in other cases incentives are linked to a benchmark (i.e. Denmark, with the award of additional chairs in certain universities) (EC, 2014a:25).

Recruitment, Retention and Career Progression

Equal opportunities legislation can affect the participation of women in science by preventing and sanctioning discrimination based on sex, gender identity, or sexual orientation in recruitment and promotion procedures. Legal conditions can vary according to academic level (from PhD to full professor) for recruitment, employment and promotion processes (EC, 2014a:11). Legislation relating to equal pay and the reduction of the wage gap are also important tools in the push for gender equality in science. Various countries have additionally included equal opportunity issues into the specific legislation that regulates higher education, including the financing of universities (Rees, 2002). Whilst, in Austria women have to be appointed if they are as equally qualified as their male competitors (Lipinsky et al., 2015:17).

As a result of the shift towards greater institutional autonomy, RPOs are increasingly seeing the benefits of adopting "soft" measures to improve recruitment, promotion, leaves and absences policies – as well as the work climate. In terms of recruitment of female researchers in public research, the Commission identified specific support in the following Member States: AT, BE, DE, DK, EL, ES, HR, NL, SE, UK (EC, 2015:29/30). Regarding the implementation of recruitment and promotion policies for female researchers, an average of 59% of ERA respondent RPOs are implementing recruitment and promotion policies. There is however great variation between countries (EC, 2015).

There are two main strategies to include gender equality in institutional recruitment practices: through gender equality plans or charters and concordats; these define a set of principles that organisations sign up to and comply with (EC, 2014a:35). This type of strategic response takes an evaluative or procedural steering approach and examples of such tools include the European Charter for Researchers and Code of Conduct for their Recruitment, UK Concordat to support the Career Development of Researchers, the League of European Research Universities' (LERU) commitment to act against gender bias, and the Athena Swan charter (EC, 2014a:11). The general aim of these is to make "existing career thresholds and procedures"' more transparent and gender aware (ibid). In some countries, the government has set

targets for recruitment and promotion. For example, in Germany RPOs are encouraged to implement the cascade model which relates the actual ratio of a career stage to the target ratio for the next career stage (EC, 2014a:26).

As regarding career breaks and re-entry, various actions have been taken by RFOs, for example, research projects can be extended and additional funding can be provided for substitute staff whilst periods of leave can be taken into account in career evaluation (EE, DE, FI, HU, IE, MT, IS, and CH) (EC, 2014a:28). In Poland, the funding agency allows projects to be extended in the case of principal investigators taking parental leave (EC, 2014a:33). Public funding and other policies for childcare, health, and care giving create different necessities and opportunities for universities to address these.

Decision-Making

In 1999, the European Commission set a 40% target of the under-represented sex in all committees, advisory groups and panels, which was recently reinforced by its commitment in the ERA research and innovation sectors. Targets and quotas are used to counteract gender imbalance in decision-making bodies which in effect is a hierarchical steering mechanism. In some countries, these are backed up by policies which establish clear rules for the composition of selection panels (EC, 2014a:11). In some countries legislation has been developed, for example, the Nordic and some Southern EU member states in particular employ quotas and targets to encourage gender balance more generally in public decision-making bodies and scientific committees (Rees, 2002). This legislation has had a significant effect on the proportion of women in senior university and research institute committees, research councils, selection

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panels etc (Rees, 2002; Castaño et al., 2010). In 2009 in Austria the quota regulation of 40% of women on university decision-bodies – is beginning to bear fruit: "18 of 22 universities now meet the 40% female quota for the rectorate, and only one lies under the 40% quota for university council. Far more women now also sit on other commissions than was the case four years ago: while in 2010 46% of all

appointment boards were made up of at least 40% of women, the same figure applied in 2012 to two-thirds of all appointment boards" (Wroblewski et al., 2015:5).

Gender Dimension in Research Content

Gender dimension in research content can refer to (1) Gender Studies/ Women's Studies as a distinct discipline, (2) gender research, which is an extensive interdisciplinary research area, both with various forms of institutionalisation (professorships, institutes, centres, networks) across Europe and globally, and (3) the issue of gender perspectives in research more generally, which integrates an analysis of sex-gender factors as primary variables, as well as of the very concepts and variables that are taken for granted in research, and of the interconnectedness of gender with power asymmetries in study design. Gender Studies/Women's Studies has been taught in most European countries for decades and gender research is conducted in some form in most European countries (e.g. Rees, 2002; EC, 2008). Horizon 2020 gave an important push for integrating the gender dimension into research content– that could "unlock the creative potential of sex and gender analysis in research and innovation" (Pollitzer et al., 2015). There is, however, a real danger that this momentum dries up and gender as an innovation driver is lost as it becomes subsumed under the Responsible Research and Innovation (RRI) agenda (ibid). Some countries have policies on the integration of gender dimension in curricula (BE, FI, HR, and SI) which of course is important in educating and training future generations of researchers (EIGE, 2016:4).

The number of Member States that include the gender dimension in research content and programmes is increasing but levels of implementation "remains insufficiently supported" (EC, 2015:28). The Commission identified that provisions for the inclusion of the gender dimension in research contents/ programmes are in place in ten Member States (AT, DE, DK, ES, FR, IE, IT, NL, SE, SK) (EC, 2015:33). Different steering mechanisms can be used to include the gender dimension in research content. For example, hierarchical steering can be used by linking the gender dimension to research funding, the gender dimension can also be addressed by gender equality plans (procedural steering) and through monitoring (evaluative steering).

However, the results from the ERA survey 2014 also highlight that in only a few countries research funders support the inclusion of the gender dimension in research

contents/ programmes. In only eight countries was the gender dimension frequently integrated into research content according to respondent funders (EC, 2015:33). The gender dimension can be incorporated in various ways – through consideration of gender in content during grant applications (Austrian Research Funding Agencies FFG and FWF) grant evaluations (Research Council of Norway and Irish Research Council), and reporting guidelines (EC, 2014a:36).

In Austria there has also been a push to integrate the gender dimension beyond the university context. Austrian research funders (FWF and FFG) along with the Technology Agency of the City of Vienna (ZIT) have introduced gender criteria into their research grant application process – both in terms of including the gender dimension in content and demonstrating how gender equality is promoted throughout their institution (Wroblewski et al., 2015:4).

Implications for Policy

A variety of different strategies are being pursued in the field of gender and science in the push for greater gender equality in recruitment and promotion, the inclusion of the gender dimension in research content and integrating women in decision-making processes throughout Europe. In Austria hierarchical, procedural, and evaluative steering instruments are effective simultaneously, in order to put forward gender equality in higher education institutions. Among a variety of instruments a fixed female quota of 40% in decision-making bodies of research performing organisations (hierarchical steering), the implementation of working groups for gender equality and action plans for the career advancement of women at all Austrian universities (procedural steering), and the introduction of outcome-oriented gender budgeting based on performance (evaluative steering) are being successfully combined (Lipinsky et al., 2015:41-44).

Despite the rich mix of policy strategies that are being developed – the gap between 'proactive' and 'relatively inactive' countries is widening as regards gender equality policies in research. In 2009 17 member states (BG, CY, CZ, EE, FR, GR, HR, HU, IL, IT, LT, LU, LV, MT, PL, PT, SI, SK, TR) were identified as least reactive to gender equality policies – these were defined as "lower innovation" academic systems (EC, 2008:21). In contrast "higher innovation" academic systems were characterised as "global leaders" in terms of gender equality policy implementation (DK, IS, NO, and SE). Another group of countries was seen as 'proactive' (AT, BE (Flanders), DE, IE,

NL, ES, CH, and UK) (ibid). Implementing joint efforts to address this growing gap is of key relevance in order to bring about institutional change in the European research area.

This highlights the importance of knowledge transfer among policy makers in this field. There is a wide variety of strategies, initiatives, policy instruments and specific measures that may be applied and put in practice by governments and funding agencies to foster institutional change. These need to be more widely known. Relevant research stakeholders such as LERU and Science Europe have highlighted the need to promote an effective sharing of practice and mutual learning, as well as a realistic assessment of what is effective and works in different national contexts and what is transferrable.

The mere presence of policy strategies and initiatives does not ensure effective implementation. Research from Austria suggests that making some measures more binding and/ or introducing sanctions for non-adherence to equality goals may strengthen implementation (Wroblewski et al., 2015). This highlights that effective coordination between governments, funding agencies and RPOs is required to foster long-term institutional change in research.

Member States can provide incentives for gender equality in science in various ways – for example, through including gender equality in contracts between RPOs and Ministries and by explicitly including gender equality as one criterion to funding.

The EC commissioned report on structural change highlights that one of the main problems as to "why progress has been so slow for gender equality in research despite all the knowledge available on gender to inform policy and actions, is that many universities and research institutions lack the capacity and experience to analyse and transform the rich and often complex knowledge into specific gender management applicable to their structures and procedures" (EC, 2012a:19).

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Examples of capacity building on gender and science at the European level include the genSET capacity building workshops and related documents, and genSET recommendations of science leaders. Online toolkits and handbooks to integrate gender equality into institutional structures have been put in place within research projects that address structural change, such as INTEGER[2], FESTA[3], and GARCIA[4].

The German Research Foundation (DFG) has also introduced an online toolbox with examples of gender equality measures at German higher education institutions[5]. The GEAR action toolbox by EIGE, promoting gender equality in academia and research, provides activities and instruments for various stages of the implementation process of GEPs[6]. At the national level, a good example of long-term systematic national capacity building is the Norwegian Committee of Gender Balance in Research recently renamed to Committee for Gender Balance and Diversity in Research.

Member States can actively encourage gender training for managers and staff. This is regarded as essential to build the capacity to put mainstreaming strategies into practice. Gender knowledge and reflection is required in order to understand what and why something should be done and which skills are necessary in order to put the proposed measures in place. The institutionalization of gender equality offices with gender experts involved promises a continuity of gender equality measures. Gender expertise located in university structures paves the way for long term change processes. Without this knowledge and these skills, the process of structural change in favour of gender equality will be in danger of coming to a halt.

Policy Setting and Implementation – The U.S. Perspective

Gender equality plans are not required in U.S. universities. There are a number of legal frameworks that apply to universities, including the Equal Pay Act of 1963. The Federal Civil Rights Act of 1964 provides the legal foundation for antidiscrimination laws for employment (Title VII) and for education (Title IX). And the Federal Family and Medical Leave Act of 1994 provides employees of larger employers the right for three month unpaid leave to care for one's own health issues or care for family members including children, spouses and parents. Several state level antidiscrimination and equal pay laws also apply. However, political and legal challenges towards uni-

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[2] http://www.integer-tools-for-action.eu/en
[3] http://www.festa-europa.eu/
[4] http://garciaproject.eu/
[5] http://www.instrumentenkasten.dfg.de/index_en.html
[6] http://eige.europa.eu/gender-mainstreaming/tools-methods/gear/action-toolbox

versity measures in anti-discrimination and affirmative action have created an environment of "considerable legal ambiguity," generating insecurities for universities about how far they can or should go in implementing the antidiscrimination laws (Sturm 2006:249). And a discussion on quotas, for example, is unimaginable.

Institutions of higher education have created Equal Employment Opportunity offices to file (statistical data) reports, monitor hiring processes, take in-house grievances etc. In the 1960s universities created women's centres predominantly concerned with students. Since 2001, the National Science Foundation has funded institutional transformation change projects in over 60 universities that have created offices that focus on the advancement of women professors.

The Science and Engineering Equal Opportunity Act (SEEO) of 1980 further stipulated a specific legal mandate for the National Science Foundation to address gender and other diversity concerns which is charged to prepare bi-annual statistical reports on the STEM workforce. And combatting potential bias in peer evaluations for funding decisions, the National Science Foundation now includes gender and diversity training of peer reviewers. Public funding and other policies for childcare, health, and care giving leaves create different necessities and opportunities for universities to address these. For example, while the US has a federally mandated three month unpaid leave for employees (for one's own health or care giving) and limited paid leave for mother's after giving birth, universities have experimented with policies on paid leave (also for fathers), as well as recognizing care responsibilities (even to other family members) in tenure evaluations allowing to extend evaluation periods for tenure. Most recently family leaves can also extend the length of National Science Foundation funded research projects and additional funding for family members to spend time abroad.

NIH has institutionalized standards for gender inclusivity in the content of research. In the 1980s the National Institutes of Health suggested with increasing vigor that women be included in research on health in numbers representing their share of the relevant population, but only in 1993 did Congress actually mandate that NIH-funded research collect and report statistics on the inclusion of both women and minorities in clinical research, beginning in 1997. New standards announced in 2014 extend this mandate to equal inclusion of female laboratory animals and tissue samples from female bodies. In sum, the US has built a legal framework for gender inclusion in university research and teaching that rests on both the anti-discrimination norms of the Civil Rights Act and the active consideration of gender to promote inclusion that Title IX demanded.

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Note: The present document gives a brief overview of recent research findings regarding *Policy Setting and Implementation*. Further research syntheses on (1) Education and Training, (2) Academic and Science Careers, (3) Institutional Practices and Processes, (4) Gender in Research Content and Knowledge Production, and (6) Historical Perspectives and Future Scenarios are available at www.genderportal.eu

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