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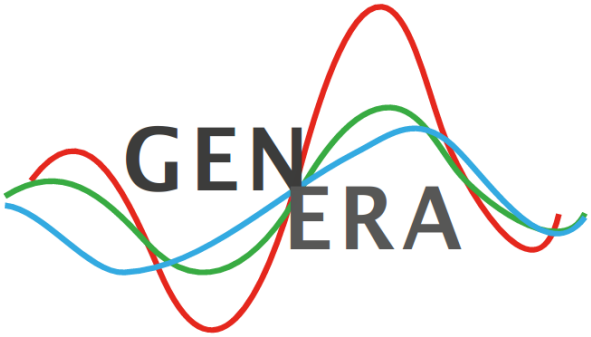

Gender Equality Network in the European Research Area Performing in Physics

GENERA FIELDS OF ACTION

Work Package	2-4
Responsible Beneficiary	Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V. Joanneum Research
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Preliminary considerations and definitions

The following serves as a **preliminary, common baseline for our understanding of the fields of action and gender equality within GENERA**. Depending on how we understand both gender and gender equality, our perspective on the importance of specific aspects of gender equality, as well as our assessment of measures as 'good' will shift. To ensure that we all have the same understanding, the following definitions provide some very broad ideas to guide our thinking.

Sex & Gender

For the purpose of the GENERA project **distinguishing between sex and gender is crucial**, as it allows for a more **nuanced understanding of gendered power relations and gender inequalities**. For instance regarding data collection and analysis, it is important to understand the difference between sex-disaggregated data and gender statistics. Only when understood and interpreted within the context of gendered societies, organizations, and institutions, can sex-disaggregated data become gender statistics (Humbert, Ivaškaitė-Tamošiūnė, Oetke & Paats, 2015, p. 8).

Sex refers to the biological differences between women and men based on primary and secondary sexual characteristics (Humbert, Ivaškaitė-Tamošiūnė, Oetke & Paats, 2015, p. 8). It is important to note however, that while biological sex is often understood as the biological condition of being either 'male' or 'female' – implying a binary – this is not necessarily the case (e.g. intersex individuals).

Gender refers to the socially constructed, historically, culturally, and spatially specific meaning attached to the perceived binary distinction between the sexes; in other words 'femininity' and 'masculinity' (Humbert et al., 2015). Contrary to popular perception, gender does not describe binary categories, but has to be seen as fluid. Understanding gender as "something fluid, something continuously changing, not an inherent characteristic of a person" (Danielsson, 2012, p. 27) helps question the power structures underlying our societies.

Gender Equality

Gender equality means different things to different people and can thus be interpreted in many different ways. Commonly, a distinction is made between three different approaches. Gender Equality can refer to making women equal to men (**sameness-approach**), it can focus on highlighting women as a separate group with inherent qualities that need to be supported (**difference approach**) or it can refer to changing the way gender influences our society by transforming gender relations and cultures, thus inherently changing the status quo (**transformative-approach**) (Rees, 2006; Verloo & Lombardo, 2007; Munday, 2009). In order to build effective gender equality plans, we need to establish what exactly we want them to achieve. In other words: How do we imagine gender equality to look like in physics?

GENERA aims at inspiring structural institutional and cultural change to make gender equality a reality in the field of physics. As such, GENERA aims at addressing the European Research Areas goals of mainstreaming gender in research, resolving implicit biases and removing barriers to women's access to scientific careers. The first approach, focussing on making women equal to men, does not satisfy these aims, as the dimension of biases and imbalanced power relations is not considered. The second does not provide a good fit either. While measures supporting women as a 'group' certainly are an important aspect of counteracting present and past structural inequalities, emphasizing women's difference comes with the risk of further stereotypes. Furthermore, as objectivity is key in the natural sciences such as physics, emphasizing women's difference as a claim to equality, will likely be rejected by both female and male physicists, as they feel that differences in abilities do not exist and as a consequence, differences in (work) treatment should not exist. It follows that a transformative approach and understanding of gender equality, targeting culture and practices as a way to achieve the needed transformation within the field, is the most valuable approach. Moreover, it allows us to question the underlying dynamics hindering women in their career progressions, enabling a more holistic approach to gender equality.

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GENERA: Fields and Sub-fields of Action

#	Field of Action	(Preliminary) Definition	Sub-field of Action	(Preliminary) Definition
1	**Structural Integration of Gender Equality**	Effective cultural and organizational change towards gender equality warrants well-thought out policies and the structural integration of gender equality within an organization. In order for policies to be effective, they need to be targeted, evidence-based and sustainable, while the aim to reach gender equality has to be woven into all aspects of the organization, including the composition of decision-making bodies. This refers not only to sex-equal membership, but also to the integration of gender-aware actors in such bodies.	**Policies**	…refers to all policies aiming at achieving transformative change towards gender equality directly and indirectly. Policies include all strategies, courses or principles of action and objectives relating to gender equality adopted by an organization.
			Monitoring	…refers to the presence of effective monitoring systems implemented in an organization to assess where actions are still needed and whether the adopted policies have been successful.
			Sustainability	…refers to all measures taken to ensure that gender equality efforts are sustainable, e.g. gender equality being integrated in the organization's long-term planning. In order to yield the desired outcomes, gender equality efforts need to be a long-term commitment, rather than a one-off engagement.
			Composition & Integration	…refers to the sex-equal composition of all relevant boards, bodies and committees and the gender-awareness and ability of their members to address their own biases and make informed decisions. It further includes transparent and fair selection procedures, as well as ensuring that gender equality related boards and committees are equipped with enough power to effect change.
2	**Engaging Leadership**	To ensure that a gender equality plan is successful it needs to be supported by all actors within an organization. It is especially crucial that leaders endorse gender equality as an important goal, signalling that gender equality is a vital aspect of the organization's policy and approach. Furthermore, gender equality concerns all internal actors (e.g. employees) and external actors (e.g. policy makers). These stakeholders' support crucial for the success of any gender equality strategy, as their willingness to embrace the aim of reaching gender equality determines its success.	**Leadership Accountability**	…refers to leadership's accountability for the successes (or failures) of gender equality policies and subsequently whether the aims and targets set were reached. In order for gender equality efforts to be successful, leadership does not only need to be engaged, but also needs to be responsible.
			Stakeholder Engagement	…refers to the involvement of all stakeholders – internal and external – in the organization's gender equality efforts. As gender inequality is an aspect of society, addressing inequalities requires the involvement of all employees (internal stakeholders). External support is also necessary (e.g. policy makers).
3	**Flexibility, Time and Work Life**	Long working hours, high pressure and work-life imbalances are common academia. This can negatively affect productivity and worker satisfaction (Kindman & Jones, 2008). Effective work-life balance policies provide a way to address this. Combined with carefully developed policies addressing the needs of employees with caring responsibilities, work-life balance policies would increase productivity, satisfaction and – with the move away from viewing women as traditionally responsible for care – would help move away from rigid sex-roles. It is crucial, however, that measures are formulated in a way inclusive of all genders to not reinforce persistent stereotypes.	**Work-Life Balance (WLB)**	…refers to time allocated to work and private life falling into a healthy balance. Effective work-life balance policies benefit both employees and employers, as productivity increases and stress-related illnesses are much less likely. Furthermore, they increase overall job satisfaction and can positively influence the lives of employees with caring responsibilities.
			Care & Family Life	…refers to the reconciliation of work and family-life and the support of parents and carers. Work-life balance issues prevalent in academia have an even worse effect on carers, making it crucial to address this dimension. While women are statistically more likely to be involved with care work, increasing the support for all parents might help resolve gender stereotypes.

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#	Field of Action	(Preliminary) Definition	Sub-field of Action	(Preliminary) Definition
4	Presence and Visibility	There is a disproportional underrepresentation of women among researcher and scientific staff (leaky pipeline). Moving up the career ladder, women decrease dramatically and progressively. Addressing the underlying factors contributing to this – such as gender stereotypes – is crucial. In order to increase gender equality within science, it is important to foster a work environment in which all employees can excel. This involves not only the critical assessment of recruitment practices, but also strategies for retention and an analysis of women's attrition. Furthermore, increasing women's visibility and paying attention to equal representation is crucial. Measures in all these categories need to be defined carefully to not victimize female scientists or reinforce gender stereotypes.	Recruitment	…refers to recruitment practices and procedures and the necessity to design these in a transparent and gender sensitive way. This starts with the formulation of job advertisements and ranges to gender awareness and implicit bias training for recruitment panels.
			Retention & Attrition	…refers to the attrition – or gradual decrease along the career line – and retention of women in scientific careers. Assessing the reasons for the attrition and retention of women from all levels of scientific careers is of high importance.
			Advancement	…refers to measures and steps taken to advance and promote those belonging to structurally disadvantaged groups.
			Visibility	…refers to the visibility of women within research and an overall more diverse representation of the field. This can involve gender-sensitive language use within the organization, as well as the visibility of women on the outside of the organization; for instance on the website.
5	Gender-inclusive / Gender-sensitive Organizational Culture	Increasing gender awareness among all members of an organization is necessary in order for effective and lasting change to be possible. Often we are not aware of the gender stereotypes and biases we unconsciously hold and how they influence our interactions with others. Measures to increase gender awareness include the provision of gender/diversity seminars and the introduction of sexual harassment policies. Effectively raising gender awareness and upholding non-discrimination as an important mission within an organization will benefit the working environment, as well as gender equality in the organization overall.	Gender Awareness and Bias	…refers to addressing (implicit) gender biases, which are held by all of us and significantly influence our day to day interactions (even if we are not aware of them). Addressing these and raising awareness is essential in working towards gender equality.
			Non-discrimination	…refers to fostering a work and physics culture free from discrimination. As gender is only one ground for discrimination, supporting a non-discriminatory work culture is essential, to ensure the success of gender equality efforts.
			Deconstructing Excellence	…refers to the way in which our understanding of excellence is gendered. As science is a part of gendered power relations and has long been dominated by men, excellence within science is inherently gendered, for instance through the assumption that time spend on the job is equal to ones dedication to science (Rees, 2011).
6	Gender Dimension in Research and Education	Gender is often not considered as an important aspect of research and education. Even in physics, where gender is not part of the content of the respective research, it still influences research practices. Enhancing knowledge about gender among researchers, as well as including aspects of gender analysis within research practices (where applicable) is vital in ensuring effective cultural change. Another aspect of the gender dimension in research and education is research funding. Addressing biases eminent in research funding practices is another aspect of effective change.	Knowledge	…refers to the dimension of gender knowledge in all areas, spanning the awareness of stakeholders and leaders, as well as the inclusion of gender studies in all university curricular to enhance awareness and sensitivity.
			Research	…refers to the inclusion of gender as a dimension of research contents. It involves the inclusion of methods drawn from gender studies, as well as a critical engagement with the way in which gender influences research.
			Funding	…refers to gender being an important dimension within research funding. Whether a scientist receives funding (for instance via requirements for funding) can be influenced by gender stereotypes or societal expectations.

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Exemplary Issues/Aims/Measures/Instruments within the respective sub-fields

Structural Integration and Policy

Policies

- Gender Mainstreaming
- (Type of and compliance with) National policies (e.g. workers' rights, welfare)
- Gender Equality Plans
- Mission Statement for Gender Equality
- Presence of labour unions; HR representative, appeal body, legal counsel

Monitoring

- Evaluation of gender/HR policies
- Evaluation of organizational culture
- Gender equality monitoring system
- Employee surveys & gender statistics

Sustainability

- Long-term planning
- Setting of aims and targets, which are revised and redefined continuously
- Continuation of efforts when specific goals/targets are reached
- Inclusion of item on meeting agendas to ensure that gender priorities are reflected (e.g. financial planning)

Gender Composition

- Sex-equal composition of all bodies (e.g. boards, teams, committees)
- Ensuring that all bodies are gender-sensitive and aware
- Enhancing the position of GE actors (e.g. through adequate and permanent resources)
- Introducing gender quotas (e.g. in boards, bodies, committees)

Engaging Leadership

Leadership Accountability

- Leadership accountability
- Manager and leader (gender) competence (e.g. leaders' trainings in gender mainstreaming/ gender equality issues)

Stakeholder Engagement

- External Stakeholders' engagement
- Employee awareness and engagement

Flexibility, Time and Work Life

Work-Life Balance (WLB)

- Reasonable working hours, limited overtime and holiday and vacation policies
- Move key meetings to core hours to enable attendance by those with family responsibilities
- Measures addressing the pressure created by the myth of dedication being equal to time spend
- Availability and equal treatment of part-time positions
- Flexitime/flexible schedules
- Telework
- Avoidance of environments that foster creation of "Old-boys clubs" (e.g. meetings held late in the evenings)
- Team and cooperation
- Provision and promotion of leisure, sport/gym and healthcare facilities
- Quality healthcare and mental-health care provisions
- Compensation policies that promote WLB, bonuses, leaves and compensation schemes that reward WLB, acknowledgement of GE and WLB at employee performance reviews

Care & Family Life

- Child-care availability and funding, tailored to physicists' needs
- Average commute time of employees and distances from the workplace to quality kindergartens and schools
- Parental leaves: "father quota"
- Carer/Parent-friendly workplaces (e.g. breastfeeding rooms, 'with-child-offices', breaks)
- Availability of childcare during work-related events (e.g. conferences, workshops)
- Support of the 'dual-earner/dual-carer' family model
- Support of other caring activities (e.g. spouse, relatives)
- Non-discrimination of parents
- Child & family-friendly organizational culture
- Parental leave cover/replacement; alternative assignments available for expecting mothers

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Presence and Visibilitiy

Recruitment

- Transparency of selection procedures
- Monitoring of hiring process (number of women and men at all stages in the recruitment process: searching for candidates, resume screening, interviews, offers, acceptance, selection/hiring committees)
- Career and life planning
- Trainee programmes for potential female leaders
- Gender-balanced/ gender-trained hiring committees
- Promotion of non-discriminatory hiring/admission practices (e.g. anonymized applications)
- Gender-sensitive formulation of advertisements for open positions; publication of adverts in a wide-spectrum of outlets
- Close cooperation between GE/gender mainstreaming officers/HR personnel and all hiring managers
- Equal treatment of part-time work
- Dual Career Schemes

Retention & Attrition

- HR development
- Education and qualification
- Mobility rules and policies of outside hiring
- GE monitoring of the long-run career trajectories (including mobility)
- Ensure research staff are aware of career/professional development options
- Equal pay/Monitoring gender pay gap
- Gender and Career progression (absence/presence of leaky pipeline, sticky floor, glass ceiling, glass escalator, vanish box)
- Job security
- Sex-disaggregated data on attrition at all levels of career and its causes

Advancement

- Women's representation in promotion pools
- Promotion policies and practices (e.g. possibility of stopping the tenure clock at universities due to parental leaves or family leaves)

Visibility

- Role models/ representation (e.g. website)
- Networking/mentoring
- Gender-sensitive language
- Gender-equal speaker lists (internally and externally) at promotional events, conferences, etc.
- Including women in promotional campaigns for scientific career
- Monitoring of practices of reward and compensation and of articles' citation
- Men and women as contributors of collaborative works/ papers.

Gender-inclusive / Gender-sensitive Organizational Culture

Gender Awareness and Bias

- Gender stereotypes and implicit bias training
- Appeal body – HR representative, Gender Equality Officer
- Leadership and employee gender(-awareness) training
- Incorporate implicit bias statements

Non-discrimination

- Zero-Tolerance Sexual Harassment policies
- Policy of overall non-discrimination
- Equal treatment of part-time work and promotion of WLB
- Fair and transparent workload balance across all areas (teaching, research, administration)
- Equal access to resources (e.g. funding, lab space, equipment)

Deconstructing Excellence

- Transparency of selection and promotion criteria
- Pressure (quantity/quality)
- Seminars exploring how excellence expectations are gendered

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Gender Dimension in Research and Education

Knowledge

- Inclusion of gender studies in all curricula
- Double-blind peer review procedures
- Gender awareness training
- Awarding research published in outlets that strive for gender equality (e.g. journals with double-blind peer-review policies)

Research

- Inclusion of gender dimension in research
- Science case for gender equality
- Presence/absence of and policies for eradication of the Matilda effect
- Training in methods of gender analysis and statistics

Funding

- Inclusion of gender-related selection criteria
- Transparency of funding criteria
- Availability and desirability of grant schemes targeted at women, young parents, young female scientists etc.
- Accounting for family career-breaks in funding schemes (e.g. elongation of early-career stage by the duration of maternity/paternity leaves)
- Unconscious bias training for review committees
- Monitoring success rates in funding schemes through sex-disaggregated data

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