Social scientists in biomedical research; Investigating the scientific ecosystem

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SCENTINEL Kickoff meeting

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What's a social scientist (like you or anybody else) doing in a project like that (or any other similar)

"Of All The Gin Joints In All The Towns In The World, She Walks Into Mine" Rick Blaine (Humphrey Bogart) in movie Casablanca.

"Louis, I Think This Is The Beginning Of A Beautiful Friendship." Rick Blaine (Humphrey Bogart) in movie Casablanca.

Some Background issues and concerns


ideas
theory
working
magazines
achievements
business
concepts
publication
applied
work
engineering
Science
perspectives
literacy
education
observation
etymology
politics
measurement
systematic
journal
experiment
process
community
scientific
hypothesis
knowledge
mathematics
law
ambitions
institutions
university
research
fields
paper
concept
history
literature
activity
philosophy
method
scientists
group
form

skeptical
anticipation
decision
truth
indecision
confused
ambivalence
feeling
certainty
query
worry
hesitation
problem
clear
confusion
trouble
ambiguity
mental
unknown
mistrust
questioning
fear
state
choice
distrust
ask
inquiry
mental state
doubt
unclear
convinced
skepticism
investigation
unsureness
suspect
question
doubtful
uncertainty
dilemma
suspicion
uncertainity
uncertain
disbelief
interrogation
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- The moral principles/obligations towards 'others' (participants, animals, the environment, freedom, safety, security etc.) while conducting research
- Codes of ethics, ethics reviews, 'mainstreaming' of ethics considerations……
- But: 'ethics dumping', 'helicopter research' etc.

- The ethos of doing research; a comprehensive framework as to how scientists carry out their work within accepted ethical framework as well as following good scientific practice

Across the Atlantic

ORI Definition of misconduct (1989)

Misconduct in Science means

- fabrication,
- falsification,
- plagiarism, or
- other practices that seriously deviate from those that are commonly accepted within the scientific community for proposing, conducting, or reporting research.

It does not include honest error or honest differences in interpretations or judgments of data (1989)

- ***Fabrication:*** making up results and recording or reporting them
- ***Falsification:*** manipulation of research materials, equipment, or processes or the change or omission of data or results such that the research is not accurately reported, and
- ***Plagiarism:*** the appropriation of another person's ideas, processes, results, or words without giving appropriate credit

The Ryan Commission on Research Integrity (1995)

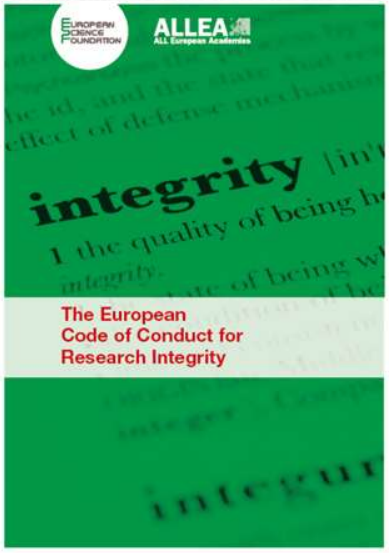
Research misconduct is significant misbehavior that improperly appropriates the intellectual property or contributions of others, that intentionally impedes the progress of research, or that risks corrupting the scientific record or compromising the integrity of scientific practices.

Such behaviors are unethical and unacceptable in proposing, conducting, or reporting research, or in reviewing the proposals or research reports of others.

1. **Research Misconduct**
   - Misappropriation
   - Interference
   - Misrepresentation
2. **Other forms of Professional Misconduct**
   - Obstruction of investigations of Research misconduct
   - Noncompliance with research regulations

Whistleblower Bill of Rights and Responsibilities

In the ‘old’ Continent



- Honesty in communication
- Reliability in performing research
- Objectivity
- Impartiality and independence
- Openness and accessibility
- Duty of care
- Fairness in references and credit
- Responsibility for future scientists and researchers

Principles
- Reliability
- Honesty
- Respect
- Accountability

Good Research Practices
- Research Environment
- Training
- Research Procedures
- Safeguards
- Data Practices and Management
- Publication and Dissemination
- Reviewing, Evaluating and Editing

Violations of Research integrity
- Fabrication
- Falsification
- Plagiarism
- Other unacceptable practices

Let’s focus a bit

Research environment

Research institutions and organizations:

- promote awareness and resource incentives to ensure a culture of research integrity.
- create an environment of mutual respect and **promote values such as equity, diversity, and inclusion**.
- create an environment free from undue pressures on researchers that allows them to work independently and according to the principles of good research practice.
- demonstrate leadership in clear policies and procedures on good research practice and the transparent and proper handling of suspected research misconduct and violations of research integrity
- actively support researchers who receive threats and protect bona fide whistleblowers, taking into account that early career and short-term employed researchers may be particularly vulnerable.
- support appropriate infrastructure for the generation, management, and protection of data and research materials in all their forms that are necessary for reproducibility, traceability, and accountability.

Equity, diversity, inclusion and responsibility for future scientists of researchers

Or is it?

Gender

EKT NATIONAL DOCUMENTATION CENTRE

Access to know

EKT | Services | Publications | News & Information | Contact

Home / Information / News / Women in research and innovation: Persistent underrepresentation despite progress

Women in research and innovation: Persistent underrepresentation despite progress

The National Documentation Centre's (EKT) targeted surveys and publications document the women's contribution to the Greek research and innovation ecosystem, emphasizing the interconnection of statistical indicators with specific public policies and initiatives.

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Gender Equality

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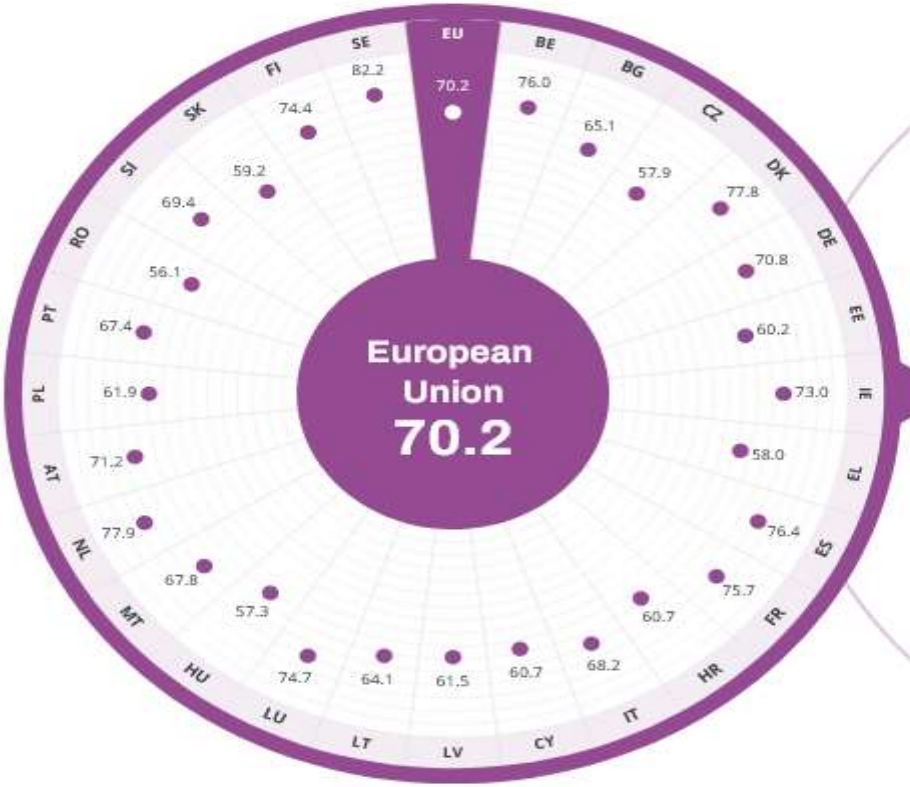
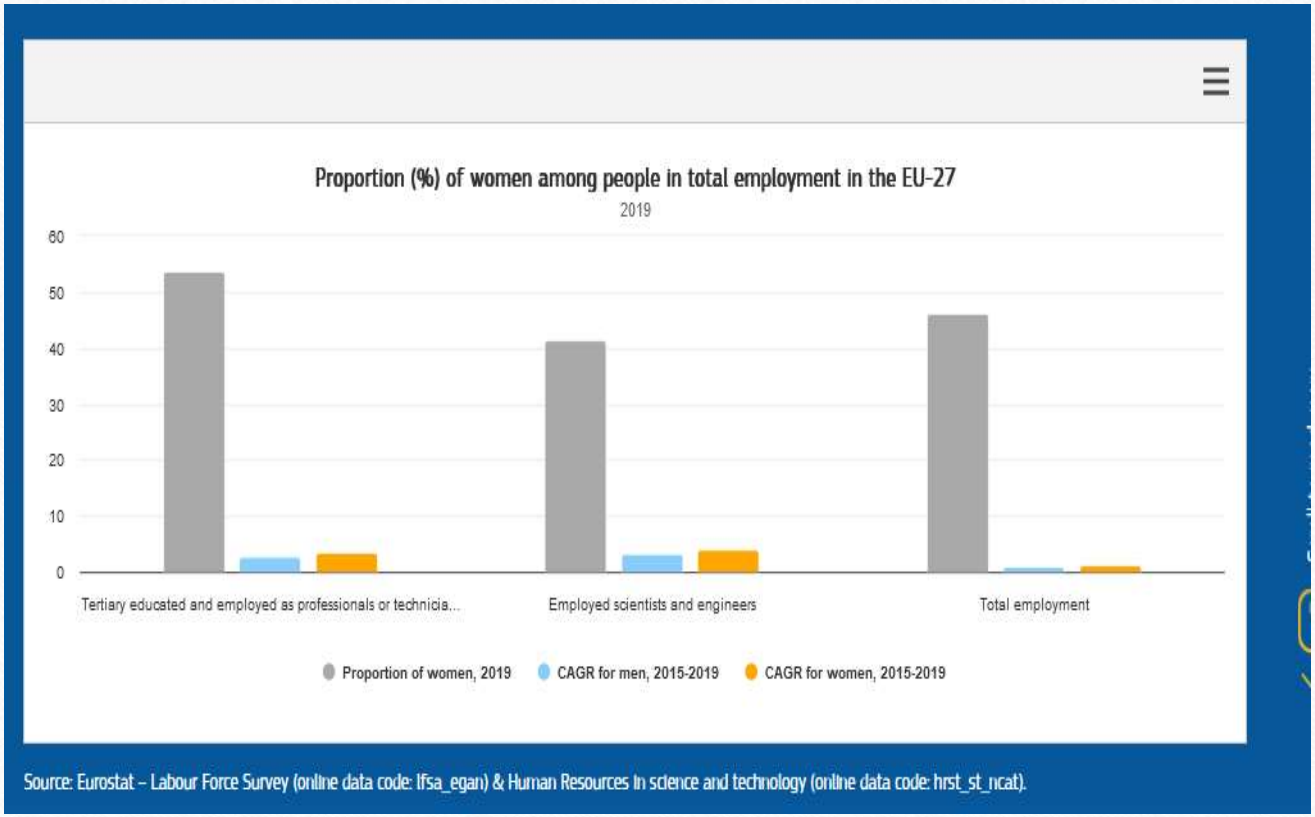
Education

Today there are still differences and inequalities between girls and boys with respect to school organisation and curricula, teaching methods and materials, career guidance, teacher training and most aspects of education.

In particular, the social roles associated with stereotypical representations of femininity and masculinity are often replicated in the education system. These inequalities impact on women and men's economic and social situation. Notably, girls' academic success has not led to the elimination of employment inequalities, the gender pay gap, or inequalities in relation to care work. The educational sector plays a crucial role in shaping gender representations, attitudes and behaviours. Therefore, eradicating formal discrimination in the education system is a first step, as well as the integration of a gender equality perspective into all aspects of education to ensure that the education sector actively promotes gender equality.

European Union in 2023 edition

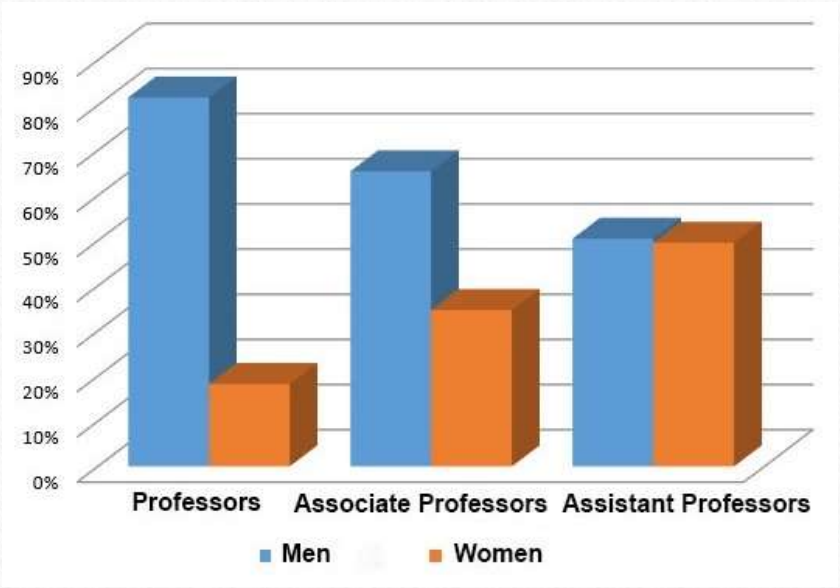




Participation in science and technology (S&T) occupations

- Majority of tertiary-educated population employed as professionals or technicians in the fields of science and technology (HRSTC) at European level (53.7%).
- Less represented among employed scientists and engineers at the European level (41.3%).
- Less than a quarter among self-employed professionals in Science and Engineering (S&E) and Information & Communication Technologies (ICT).


Undergraduates
Social Sciences 36.8 63.2 25.86%
Medicine 46.1 53 5.10%
Sc-Eng 58.4 41.6 35.16%
Philosophy 24.7 75.3 20.77%
Education 15.5 84.5 13.11%
Men Women
Graduates
Social Sciences 32 68 25.10%
Medicine 45.1 54. 6%
Sc-Eng 50.9 49.1 28.9%
Philosophy 19.1 80.9 20.8%
Education 10.1 89.9 19.2%
0 10 20 30 40
Men Women
Post-Graduates
Social Sciencs 41.2 58.8 13.99%
Medicine 32.4 67.6 13.26%
Sc-Eng 55.9 44.1 28.41%
Philosophy 36.7 63.3 33.36%
Education 19.4 80.6 10.98%
Men Women
MSc
Κοινωνικές 38.4 61.6 12.08%
Ιατρική 31.6 68.4 18.8%
ΣΘΕΤΕ 53.2 46.8 40.34%
Φιλοσοφική 33.5 66.5 17.19%
Αγωγής 19.6 80.4 11.59%
Άνδρες Γυναίκες
PhD Candidates
Social Sciences 55.5 44 8.68%
Medicine 50.6 49.4 47.44%
Sc-Eng 59.7 40.3 24.88%
Philosophy 42.8 57.2 13.98%
Education 43.1 56.9 5.02%
Men Women
PhDs
Social Sciencs 53.9 46. 5.44%
Medicine 46.7 53.3 41.38%
Sc-Eng. 57.7 42.3 39.43%
Philosophy 44.9 55.1 8.23%
Education 41.8 58.2 5.52%
Men Women


90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Professors
Associate Professors
Assistant Professors
Men
Women

Key points

- Gender socialization
  - Gendered social roles, expectations, assessment of accomplishments……
- Gender discrimination and gender bias
  - Glass ceiling
- Care responsibilities
  - Lack of balance between personal and professional life

Age-Seniority

"for a scientist to be excellent….[s]*he...has to create…a place for other people to come after him* [her]*"* (focus group participant, project DEFORM)

Multiplicity of tasks/responsibilities

- Senior researchers
  - increasing administrative tasks
  - Student/research supervision/monitoring
  - Securing external funds or ‘funding or famine’
- Mid-career researchers
  - added tasks of science communication, networking etc.
- Young researchers:
  - teaching publishing obligations.
  - **simultaneous work in several research projects**

Quantity vs quality?

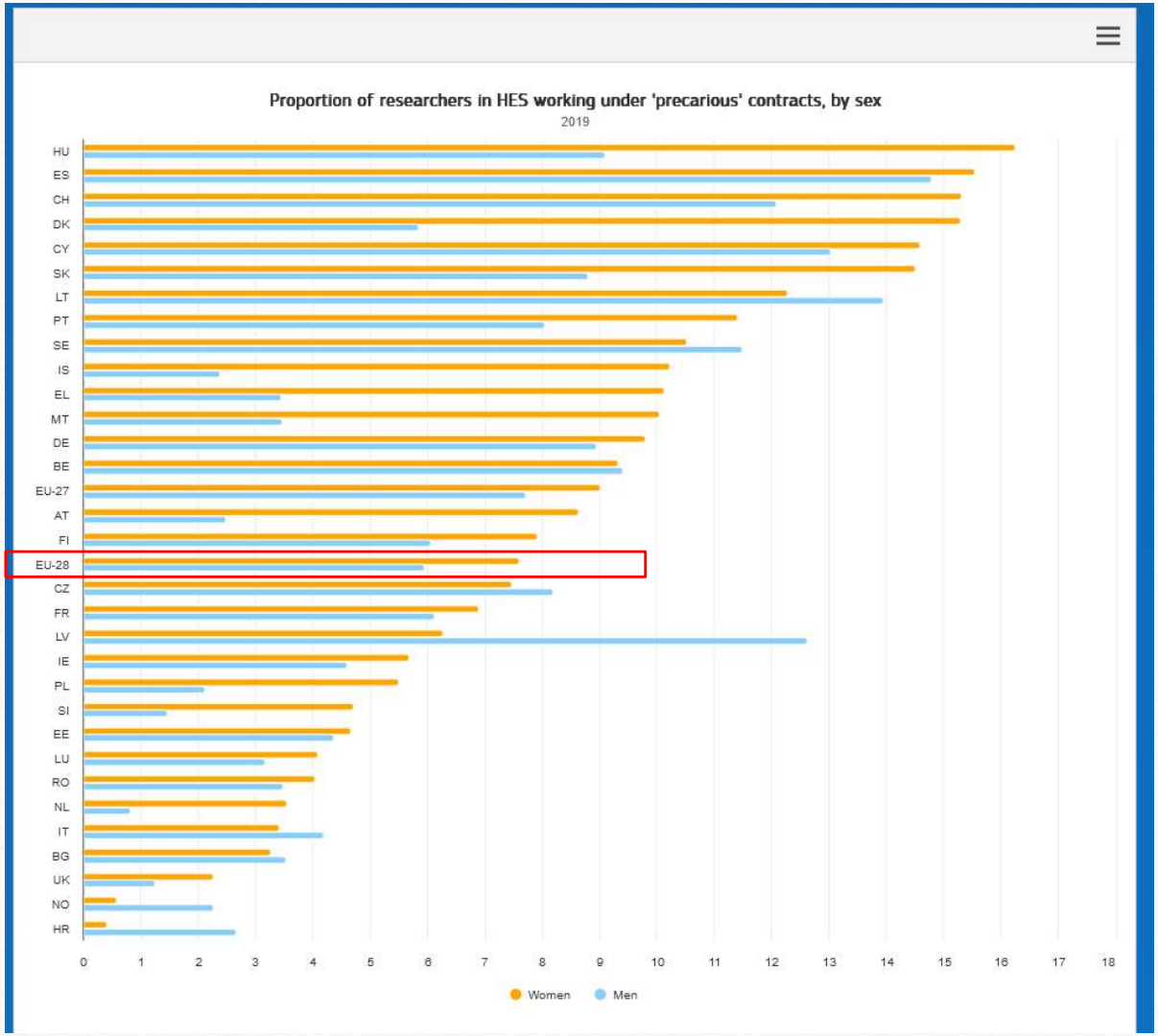
- "When I was doing my PhD…we were trying to repeat experiments, a thousand times…before we went out there to publish something. Now I see that everybody is in a hurry. [they say, it doesn't matter] I'm not going to repeat [the experiment]… Why? Because everybody is under pressure to do…I don't know, a thousand papers a year."

‘Fast’ science and excellence

- “if you want excellent researchers you have to give them time, it takes time…to become an expert on what you do, it takes time…to master procedures, methods, ethics, learn how to supervise, to coordinate teams, and what we see is the exact opposite.”

Precarious working conditions

- "I'm a typical example of…researcher who passes through several precarious contracts and now in my seventh year of post-doc I've possibly experienced all the possible typologies of contract according to [my country's] Law, contracts that usually last at most one year…[but usually they] are much shorter…my last contract was about eight months and then I experienced a couple of months of unemployment…it's a pretty common process here in [my country] and so it's quite hard to proceed with a research project that should be a long term project…we [experience] so many periods of 'stop and go' and unemployment…"



- Higher proportion of women researcherswork part-time and under precarious working contracts in the higher education sector (11.1% for women and 7.2% for men).
- Both women and men more likely to work under precarious contracts at earlier career stages.
- In line with the European Commission's approach to foster institutional change through Gender Equality Plans, in 2020, the majority of research organisations' websites report to have taken measures and actions to strengthen gender equality.

Age-Key points

- Multiplicity of tasks (differential impact)
  - Increasing demands
- Quantification of assessment
- Fast-track science
- Precariousness-lack of job security
- Imbalance between personal and professional life (reduced prospects)

And what about this project?

Within SCENTINEL

- Good science requires an equitable, diverse and inclusive research environment including responsibility for future generation of researchers.

In SCENTINEL we can:

- Map the research environment of raise awareness among young and senior researchers on ethics and integrity of participating partners and institutions in relation to their inclusivity, equity and diversity focusing mostly but not exclusively on women and young researchers.
- Raise awareness (and provide training) in ethics and integrity
- Draft policy recommendations for enhancing good research practices and research integrity or else good science.


Thank you for your attention