

# Diversity and inclusion: a viewpoint

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## Introduction

Diversity and inclusion are popular terms in current policies at both the national and European levels.

Frankly speaking, they have become genuine buzzwords. Both terms are also frequently utilized in science policies. In my opinion, both require a clear definition and explanation to be effective and mutually supportive. First of all, one might ask: how did diversity become a focal point of attention? And who or what should be included?

Efforts toward diversity and inclusion evidently stem from the long history of patriarchal biomedical science. Historically, women's participation in science had been low, and few women have reached decision-making positions. Secondly, one standard person was depicted as the norm in biomedical research: the young, white male, or, in other words, the one-size-fits-all model. This model came under challenge by the turn of the century, after feminist scientists had demonstrated a lack of research on women's health. One could conclude that a double exclusion was at play: a lack of participation of women in science and a lack of interest in women's health. Are diversity and inclusion policies the answer to this double exclusion? My preliminary answer here is no, or at best, only partially. The pitfall I see is that diversity and inclusion policies overlook the importance of doing science differently, by employing innovative methods.

In what follows, I want to highlight the relationship between the two phenomena – fixing the women and fixing the science – by focusing on current policies that have emerged to address women's (and other groups') participation in science on the one side and addressing the integration of sex and gender-related factors into the contents of research and innovation on the other.

## Progress made

As in other sectors of society, policies aimed at promoting the participation of women in science are not new. Take, for example, the longstanding policy of the European Commission (EC) on gender equality, which is

relevant for the field of science and innovation as well. Measures have been taken to encourage women's participation (addressing gender disparities) and to tackle any potential barriers that could hinder their involvement. Additionally, many universities and other institutions have appointed gender equality officers to oversee measures aimed at increasing women's participation and advancement to higher levels. These efforts are carefully monitored by entities such as the 'She Figures' of the EC. The biennial publications provide a range of indicators on gender equality in research and innovation at a pan-European level. They aim to offer an overview of the gender equality situation, utilizing a wide range of indicators to assess the impact and effectiveness of policies implemented in this area.<sup>1</sup>

Redressing the one-size-fits-all model (fixing the science) has evolved into the now widely recognized field of sex and gender-sensitive medicine or sex and gender science. By highlighting *what* was studied (and what was *not* studied) and *how* it was studied, this implied a critique of science and its standard methods, which initially met with resistance. However, the continuously expanding field of sex and gender-sensitive medicine demonstrates that considerable progress has been made.

Today, in the international field of biomedical and health research, two initiatives stand out: diversity and inclusion policies and intersectional research approaches. Both are united in their aim of striving for more inclusive research.

An issue that has triggered my interest for a long time is whether diversifying participation in science via the inclusion of underrepresented groups is adequate enough to address the contents of science, in other words, how science is conducted. In my view, simply "adding women and stirring" cannot be the solution to ensuring the abolition of the one-size-fits-all model in biomedical research. Something else is needed. I believe that moving beyond that model, with innovative methods such as inclusive sex and gender analysis, can produce knowledge that will benefit all members of society.

## Terminology on diversity & inclusion and intersectional approaches

In current policies, the term ‘women’ has frequently been replaced by ‘diversity’, and sex and gender factors are now considered in interaction with factors such as age, socio-economic status (SES), ethnicity, sexual orientation, etc., collectively termed intersectional approaches.

Diversity can be defined as reflecting a reality, for example, the composition of a certain population, country, research group, etc. Inclusion can be considered as a process and, according to its advocates, as a process that makes diversity work.

Intersectional approaches have emerged from the integration of sex and gender analysis into the content of research. It was the result of insights how next to sex and gender, factors like age, ethnicity, SES, sexual orientation etc can also be seen as determinants of a individuals’ health outcome. This approach became known as employing intersectional approaches. The current stance under Horizon Europe is that an inclusive analysis contributes to Research and Innovation (R&I).<sup>2</sup> The current EC gender equality (GE) policy has been re-framed as an ‘inclusive gender equality policy in research and innovation’ (May 2022).<sup>3</sup> Commitment to gender equality and inclusiveness in R&I means: “to promote diversity in R&I and open its *gender policy* to intersections with other social categories such as ethnicity, disability and sexual orientation”.

The EC’s GE policy has always consisted of three objectives:

1. to increase women’s participation in research and innovation,
2. to increase women’s participation in decision-making, and
3. to integrate the gender dimension (i.e., sex and gender analysis) in R&I.

At the start of Horizon Europe in 2021, Commissioner Marya Gabriel stated: “I am determined to step up our efforts on gender equality and support more talented women in research and innovation. I am committed to ensuring that the gender dimension is fully integrated into research and innovation supported by Horizon Europe, and that it is fully acknowledged in the European Research Area”.<sup>4</sup>

## Two initiatives

Considering the three GE objectives above, addressing women’s participation on one hand and the contents of R&I on the other, one could wonder if and how they are related. It is the work by Lorraine Greaves that has been helpful for me in analysing the emerging question: are

diversity and inclusion policies adequate enough to change the one-size-fits-all model in research?

Her article titled *Sex, gender and health: mapping the landscape of research and policy* is very insightful in this respect.<sup>5</sup> She distinguishes *research approaches* on one side and *policy initiatives* on the other. Research approaches, such as an intersectional approach, focus on methods to address specific problems or specific questions, striving for better health outcomes for all. Policy initiatives strive for gender equity, aiming for a more diverse *representation* of underrepresented or minority groups, among others, in research.

Referring to Canadian policies, Greaves states, “Policy initiatives like Sex and Gender Based Analysis+ (SG-BA+) and EDI (Equity, Diversity & Inclusion) are in *no way* replacements for research approaches. They do not replace each other, cannot be conflated, and should not be advanced singularly”. In other words, only changing the research population is not enough. She continues; “To secure the effectiveness of both enterprises, clearer communication and better knowledge exchange are needed”.

As I agree with Greaves, I wonder what can be helpful to avoid the pitfall that EDI policies overshadow the need for innovative research methods in the research field of gender medicine. Concerning research approaches, two clarifications can be insightful: a description of the various research orientations that fall under the umbrella of gender medicine and a thorough understanding of the concept of gender itself.

First, it can be helpful to realize that gender medicine, as a field of research, is not one unified endeavour, but it covers various strands of research. Where many still conceive of gender medicine as looking for differences between women and men, there are many more orientations.

### Various strands of research covered by gender medicine

- *Sex differences research and gender differences research*  
Sex differences research and gender differences research focus on identifying contrasting aspects of male and female bodies that impact health or bodily processes, conditions, diseases, responses to treatment, or even longevity. Gender differences research is similar, in that it typically contrasts social and cultural experiences of men and women, boys and girls, and gender-diverse individuals to derive knowledge.
- *Research on sex- and gender related factors*  
Research on sex-related factors draws our focus not to sex/gender categories per se, but rather to the components, factors, and/or processes associated with sex or gender. This approach explicitly focuses on the processes and elements of sex and gender that drive causal pathways.<sup>6</sup>

- *Research focused on sex/gender interactions*  
Research focused on sex/gender interactions attends to the experiences of being a sexed body in a gendered social context. These approaches recognize and identify ways in which gendered social experiences can influence biological phenomena (and vice versa).
- *Broader intersectional research*  
Broader intersectional approaches recognize that the operation of sex/gender-related factors is not homogeneous across populations or sex or gender categories. They consider the interactions between a range of characteristics such as ability, age, sexual orientation, SES, and race/ethnicity.
- *Research focused on sexual and gender minority populations*  
Research focused on sexual and gender minority populations examines health and social issues of specific relevance for members of these communities. Given historic and ongoing oppression and marginalization of people based on non-normative sexual orientations, sexual identities, and behaviours, as well as non-normative gender identities and expression, there is much evidence documenting adverse health outcomes in both communities.

Adapted from Greaves, 2022.<sup>5</sup>

Another needed clarification concerns the concept of gender. In recent years, it has become narrowly understood as gender identity, partly due to the increased visibility and social recognition of transgender and non-binary individuals, often associated with diversity and inclusion policies and actions. However, conflating gender identity with gender does not serve health research, care, policy, and planning, and impedes the nuanced development of sex and gender science or gender medicine. Gender is much more than just gender identity; as a multidimensional concept, it encompasses gender norms, gender identities, and gender relations, including power relations, as explained in Gendered Innovations 2.<sup>7</sup>

Greaves ends her article with a warning: “Without a shared understanding of the various enterprises aiming at increasing gender and health equity, there is a risk of subsuming or obliterating past gains by newer political and scientific initiatives and goals”.

And continues: “As sex and gender science evolves, more precision is required in discussing and applying concepts; mapping the relationships, purposes and overlaps between research and policy initiatives; and building our collective knowledge of sex- and gender-related factors affecting health. Doing so will deepen our understanding of the important ways in which sex and gender affect health, health care and medicine”.

I am inclined to support her view and would like to add that the critical issue is not so much *who* does the science rather than *how* the science is done. Researchers in the field of sex and gender-sensitive science should remain attentive to current policy landscapes in science. Of course, the debate is much wider than reflected in this viewpoint. But I believe that real inclusive science will only emerge if we employ innovative methods of inclusive sex and gender analysis.

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*Conflicts of interest statement.* The author declares no conflicts of interest.

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