Gender*MoRe

Permanent Documentation and Monitoring
Center for Gender Bias
in Scientific Communication

Project Proposal

Ver. 1.0 [01/09/2024]

University of Modena and Reggio Emilia

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Introduction and abstract	4
Implementation status	5
Scientific background	5
International context	6
National context	8
Local context	9
The Project in detail - 1. From bibliography to the documentary fund	11
Introduction	11
Sources and search strategies	14
Inclusion and exclusion criteria	16
Thematic organization	16
Document acquisition	18
The Project in detail - 2. Quantitative and qualitative analyses	
Introduction	19
Quantitative analysis	19
Qualitative analysis	21
The Project in detail - 3. Public engagement	23
References	25

Introduction and abstract

The Gender*MoRe project aims to establish a permanent center for documentation, study, and dissemination of gender disparities in the world of scientific research and technological innovation at the University of Modena and Reggio Emilia's Library System (UniMoRe). The project's operational core is a thematic bibliography, partly already compiled, that records and classifies by type, disciplinary sector, and geographic area all international publications on gender bias in institutional contexts of technical-scientific knowledge development and validation. The bibliography, already populated with records of documents published from 2018 to today, is freely accessible at bit.ly/Gender-More. The project initially involves acquiring the full text, in electronic or paper format, of all relevant documents identified by bibliographic research and setting up a dedicated open-shelf section at the University Campus's Central Library. After an initial promotion phase and connection to local, national, and international initiatives of similar orientation, the service aims to operate on three parallel fronts: 1) to provide bibliographic consultancy and copies (via ILL/DD) of the documents cited in the bibliography to anyone who requests them for study and research purposes; 2) to complement the University's Gender Budget Report with quantitative analyses on individual productivity, collaboration networks, and the impact of scientific publications, and on the other hand, with qualitative investigations to highlight imbalances arising from bibliometric research evaluation systems; 3) to promote initiatives to raise awareness about the historical evolution of women's roles in science, using cinema as a primary communication channel, starting with a thematic film forum open to all citizens and connected to moments of discussion (seminars, workshops, reading groups), personal testimonials, and guided in-depth paths.

Implementation status

As of January 2024, the project has completed its first step: benchmarking activities, context analysis, identification of activities and their related budget, development of a working timeline. Detailed procedures and involving stakeholders, in terms of numbers, timing, materials, and organizational aspects, have been defined. The first three outputs have already been achieved:

- thematic bibliography, temporarily limited to the period 2018-2024, made available via Zotero cloud (bit.ly/GenderMore);
- · acquisition of the first portion of materials for the open-shelf library section;
- a survey to be administered in 2024 to teachers and researchers for qualitative analysis (an adaptation on *The 2018 Global Survey of Mathematical, Computing* and Natural Scientists)

For a detailed description of the project's three operational fronts, the scientific background, and the international, national, and local context in which it is situated, please refer to the supplementary documentation.

Scientific background

There is ample evidence in sociological, economic, and bibliometric literature of deep and ingrained gender disparities in the places of production and validation of scientific knowledge [1-4]. Despite the quantitative increase in the number and percentage of women active in the scientific field over the last 60 years, the productivity gap, impact, visibility, and consequent career opportunities compared to the male workforce remain evident in most research sectors, especially within STEMM areas (Science, Technology, Engineering, Mathematics, Medicine): women make up only 1/3 of the global scientific

authorship [2]; with equal output, they have shorter [3] and less well-paid careers than men [5]; they encounter more obstacles in accessing stable positions and prestigious workplaces [6]; they are more affected by negative impacts on individual productivity from exceptional events such as the COVID-19 pandemic [7-8]; they are underrepresented in the editorial committees of top journals [9], in scientific academies [10], and in nomimations for international awards [11]; have fewer chances of publishing in top-tier journals [12] and, when they do, receive fewer citations than their male counterparts [13-17], although the gap varies greatly between sectors and geographical areas [18]; they are less involved than men in technology transfer activities [19] and their contribution to collaborative works is typically underestimated [20-24]. Access to competitive research funding is also subject to gender biases, and even the peer review process, which should guarantee universality and objectivity in the validation processes of scientific knowledge, seems to be affected, in many cases, by homophily and strategies of exclusion of the different [25-27]. However, the scenario just outlined is not uniform in space and time: it changes according to geographical and disciplinary contexts; it changes, or can change, depending on political or cultural interventions aimed at curbing the problem; it changes depending on the analysis methodology adopted to study it, to the extent of generating, in some cases, evidence contrary to the very existence (or entity) of the problem. [28-29]. Consequently, any action plan on gender bias in science must start from a comprehensive mapping of the existing situation, both in relation to the relevant scientific literature accumulated in databases and in relation to initiatives implemented or planned, on a local, national, or international scale, to spread awareness of the gender gap and suggest possible strategies to bridge it.

International context

Gender equality is a priority on the agenda of major international organizations committed to promoting cooperation in human rights and the material conditions of

economic, cultural, and scientific progress. In particular, gender equality is one of the 17 Sustainable Development Goals (SDGs) in the United Nations' 2030 Agenda [30] and reducing the gender gap is the focus of Women20 (W20), the official G20 group active since 2015 on gender issues [31]. The transformation of the goal into operational strategic plans is found in the Gender Action Plans of UNICEF and UNESCO, which emphasize themes of universal access to quality education, social inclusivity, and the sharing of skills in an increasingly digital and interconnected world [32-33]. The European Union has also embraced the goal with its 2020-2025 Strategic Plan for Gender Equality, which, in addition to introducing a series of concrete proposals on themes such as pay transparency, violence against women, female representation on boards of directors, and combating gender stereotypes [34], has established the centrality of strategic planning through a specific document, the GEP - Gender Equality Plan, in which institutions must explicitly outline the procedures for identifying gender biases within themselves, the strategies to correct them, and the tools to monitor progress made. Horizon Europe, the European Union's framework program for research and innovation 2021-2027, has made the GEP a necessary prerequisite for access to funding [35], while supporting institutions that intend to adopt such a tool with a dedicated step-bystep guide (GEAR - Gender Equality in Academia and Research) [36]. Following the European directives, the policy papers produced by the Equality, Diversity and Inclusion (EDI) working group of the LERU provide recommendations and examples of good practices to promote and protect gender diversity in research institutions [37-40]. Simultaneously, to support evidence-based political interventions, the United Nations' statistical division has worked on standardizing data collection methodologies and defining a minimum set of indicators suitable for comparative analyses (EDGE project) [41]. The same goal has been pursued by the World Bank [42], the European Institute for Gender Equality [43] and the OECD Gender Initiative, which launched the monitoring of progress towards gender equality through datasets and comparative indicators accessible on the OECD Gender Data Portal [44]. With OECD data, for example, widely used international indicators such as the Social Institutions & Gender Index (SIGI) [45], the World Economic Forum's Global Gender Gap Index [46] and The Economist's Glass Ceiling Index [47] are constructed, while the data collected by the European agency is used to calculate the Gender Equality Index [48]. The reports produced by international organizations using these data and indicators are important because, in addition to disseminating tools approved by the scientific community, they expose analytical models and quantitative standards of reference with which to measure the extent of local progress (or regress). Highlighted, in particular, are: the most recent edition of the UNESCO Science Report [2], along with the working paper by the same organization on the SAGA project (STEM And Gender Advancement) [49]; the synthesis report of the international project GenderInSITE (Gender in Science, Innovation, Technology and Engineering), concluded in 2021 [50]; the biennial She Figures report from the European Commission [51]; and the reports and work packages prepared within the framework of the Gender Gap in Science project, funded by the International Science Council [52].

National context

Gender equality is one of the cross-cutting priorities of all the missions that make up the package of investments and reforms of the National Recovery and Resilience Plan (NRRP). Starting from the PNRR and in line with the guidelines of the European Union, the Ministry of Equal Opportunities has prepared the National Strategy 2021-2026, which involves central administrations, regions, territorial bodies, social partners, and major associative realities in promoting gender equality [53]. Universities are an integral part of this strategy. In recent years, under the impetus of the Single Guarantee Committees for Equal Opportunities, networked in the National Conference of Equality Bodies of Italian Universities, institutions of higher education have begun to equip themselves with *Gender Budget Reports* and *Gender Equality Plans*, drafted

according to the guidelines produced by the same National Conference [54] and by CRUI [55-56]. Broadening the view, there is a fairly dense network in Italy of associations that promote studies and initiatives in favour of gender equality in the world of research: one of the most active is the association Donne e Scienza [57], founded in 2003 and affiliated with the European Platform of Women Scientists (EPWS) [58]. The association's annual conference is one of the convergence and promotion points for the multiplicity of initiatives and projects on gender equality in science launched in Italy [59].

Local context

In line with the developments outlined in the previous sections, the University of Modena and Reggio Emilia has produced its first Gender Budget Report [60] and drafted its own Gender Equality Plan [61] according to the specifications of the Horizon 2020 LeTSGEPs project - Leading Towards Sustainable Gender Equality Plans in Research [62], coordinated by UniMoRe (Prof. Tindara Addabbo). The context analysis conducted in the Gender Budget Report documents the existence of a significant gender gap both at the entry of the academic path for technical-scientific degrees and in the opportunities for contractual stabilization and access of female researchers to the highest roles, competition commissions, financial resources, and governing bodies [60, ch. 2]. On the other hand, these documents highlight the University's strong commitment to designing initiatives and interventions, often in collaboration with local institutions and associations, aimed both at deepening the problem from a scientific point of view and at training/raising awareness among students, staff, and the general public [60, ch. 3]. In the field of research, projects such as Horizon 2020 EQUAL-IST and LeTS-GEPs are noteworthy; the FAR 2019 projects (Gender Stereotypes and Education Gaps in the Economics Field) and PRIN 2020-2022 (The Economics of Culture: Ethnicity, Gender, and Their Interactions); the GE&PA - Gender Equality & Public Administration project, co-financed by the Emilia-Romagna region; the gender-related activities of the departmental and interdepartmental centers CRID (Interdepartmental Research Center on Discriminations and Vulnerabilities), GeR (Genders and Religions), GLIC_D (Gender, Language, and Communication_Digital Laboratory), CPS (University Research Center on Cultures of Peace and Sustainability), CAPP (Center for Analysis of Public Policies). In the field of teaching, the *Digital Girls* project, created by the Department of Engineering Enzo Ferrari of UniMoRe in collaboration with the European Women Management Development (EWMD) association, stands out with the aim of approaching Computer Science in a fun and creative way for high school students in the 3rd and 4th year through free summer camps located in various areas of Emilia Romagna (and online) [63]. Among the public engagement initiatives, the training-action project *For a Gender Equality Alphabet*, coordinated since 2016 by the Municipality of Modena, and carried out by CRID (scientific supervision Prof. Gianfrancesco Zanetti), also in collaboration with the Documentation Center for Women in Modena [64], is noteworthy.

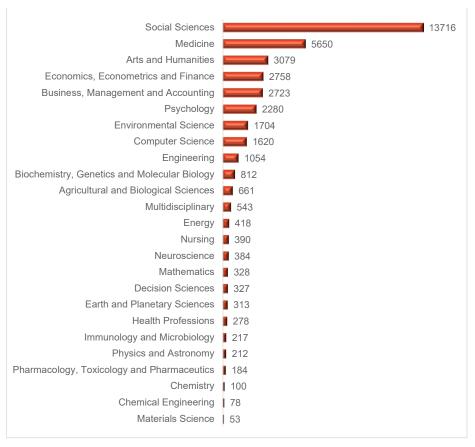


The project in detail - 1. From bibliography to the documentary fund

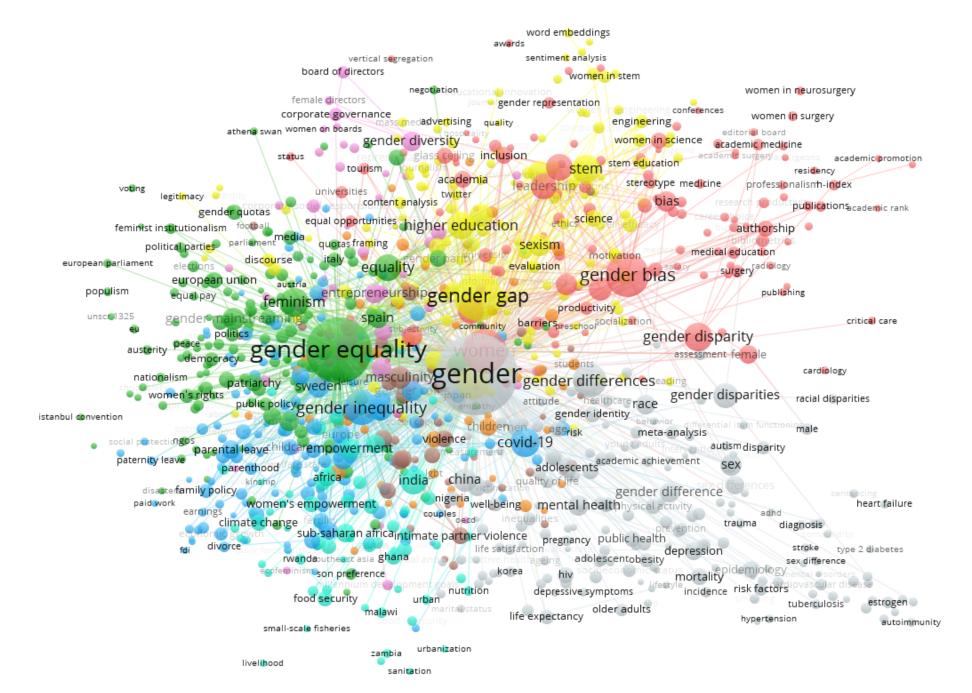
Introduction

The first step in building the documentation center is the recovery of metadata from all publications produced internationally on gender disparity in the scientific communication system. It is therefore a matter of circumscribing, within the overall scientific literature on gender disparities in any context (economic, social, political, family), the subset related to the places of production and validation/evaluation of scientific research. This operation is not trivial. The literature on gender bias in general, in fact, has grown exponentially from the 1980s to today and, given the transversal nature of the problem, has found hospitality in journals of any sector and disciplinary area as well as in generalist and multidisciplinary journals. A simple search in Scopus on title/abstract/keywords fields with the string "gender dispar*" OR "gender gap*" OR "gender equal*" OR "gender parity" OR "gender bias" returned, as of 3/5/2023, over 34000 articles of types article, review, conference papers. 73% of these documents have been published since 2012 in over 7200 different journals assigned to 286 distinct subject categories, mostly belonging to the macroareas depicted in the following chart (limited to macro-areas with at least 50 records).





The quantitative analysis of co-occurrences between keywords in Scopus records from 2012 to today confirms the impossibility of developing a comprehensive search strategy. The co-occurrence map of the most frequent keywords, drawn in VosViewer [65], shows that the documents tend to group into clusters roughly attributable to distinct research areas on the gender gap: the area related to the role of women in science and educational institutions, which is the only one of interest to us in this case (pink, yellow, and fuchsia nodes at the top); the political-institutional area (green nodes on the left); the socio-family area (darker blue nodes at the bottom left) and the area related to the condition of women in developing countries (lighter blue nodes at the bottom left); the medical and psychological area (grey nodes at the bottom right). In the absence of a controlled dictionary, however, the correspondence between keyword clusters and research areas is only approximate. There is in fact no guarantee that a certain set of keywords has been used consistently to identify documents belonging to one area rather than another.



Sources and search strategies

Taking into consideration the preliminary analysis just seen, it was decided not to develop a single search strategy, but to start from a limited set of relevant documents, recovered from the Scopus and MEDLINE/PubMed databases, and to subsequently enrich the initial set both through citation searches and using automatic notification bibliographic services limited to certain sectors and journal groups. The choice to include MEDLINE/PubMed among the primary sources derives from the observation, evident from the chart in figure 1, that a significant portion of recent literature on gender bias is published in biomedical journals. Before proceeding to compile a comprehensive bibliography from a temporal perspective, it was also decided to test the search strategy on the subset of publications from the 2018-2024 period. The result of the test is available at bit.ly/GenderMore. Below are the details of the steps to achieve this result.

Step 1) In Scopus, the query was limited to three categories of documents: 1a) articles published in the main bibliometrics journals containing gender-identifying keywords in the title; 1b) documents in which keywords identifying gender (searched only in the title) and keywords identifying the research areas of bibliometrics, informetrics, and research evaluation (searched in the title, abstract, or keywords field) coexist; 1c) articles published in the three multidisciplinary journals *Nature*, *Science* e *PNAS* containing gender-identifying words in the title. A further filter was imposed on the types, including only articles, reviews, conference papers, and book chapters. This is the initial string:

(TITLE (*gender*) OR TITLE (female*) OR TITLE (wom*) OR TITLE (lgbt*)) AND (SRCTITLE (scientometr*) OR SRCTITLE (informetr*) OR SRCTITLE (bibliometr*) OR SRCTITLE ("quantitative science studies") OR SRCTITLE ("research evaluation") OR ISSN (0036-8075) OR EISSN (1095-9203) OR ISSN (0028-0836) OR EISSN (1095-9203) OR ISSN (0027-8424) OR EISSN (1091-6490) OR TITLE-ABS-KEY (bibliometric*) OR TITLE-ABS-KEY (scientometr*) OR TITLE-ABS-KEY (informetr*))

AND (LIMIT-TO (PUBYEAR, 2023) OR LIMIT-TO (PUBYEAR, 2022) OR LIMIT-TO (PUBYEAR, 2021) OR LIMIT-TO (PUBYEAR, 2020) OR LIMIT-TO (PUBYEAR, 2019) OR LIMIT-TO (PUBYEAR, 2018)) AND (LIMIT-TO (DOCTYPE, "ar") OR LIMIT-TO (DOCTYPE, "cp") OR LIMIT-TO (DOCTYPE, "ch"))

A notification service with this search string was set up to automatically receive any new relevant records added to Scopus periodically.

Step 2) In MEDLINE/PubMed, a very precise search string was set up using the MeSH dictionary and without filtering the types:

(Gender Equity[mesh] OR sexism[mesh]) AND (universities[mesh] OR faculty[MESH] OR medical writing[MESH] OR periodicals as topic[MESH] OR bibliometrics[MESH] OR medical literature[MESH] OR academic performance[MESH]) AND (2018:2023[pdat])

A notification service with this search string was set up to automatically receive any new relevant records added to MEDLINE/PubMed periodically.

Step 3) The records returned from Scopus and PubMed were downloaded, deduplicated, and stored in a local folder via the bibliographic software Zotero, manually removing those not relevant based on metadata, abstract, and (when necessary) full text.

Step 4) The 10 most cited documents retrieved in Scopus were used as seed documents within a citation search in Scopus, Web of Science (WoS), and Google Scholar. The new records, filtered by type, were added to the Zotero library after eliminating the irrelevant ones.

Step 5) A notification service connected to the keyword "gender" was set up on the economic and social sciences repository RePEc, using the *Nep: New Economics Papers* reporting system [66]. The new records were added to the Zotero library after eliminating the irrelevant ones but without any filter on the types (in this way, a certain number of preprints entered the bibliography).

Step 6) A notification service connected to the bibliographic reporting system *Biomed.* news was set up, limited to the *Evaluation of Research* section [67]. The new records were added to the Zotero library after eliminating the irrelevant ones. These are exclusively journal articles in the biomedical area for which no type filter was imposed.

Inclusion and exclusion criteria

All publications dealing only or predominantly with aspects of gender disparity not directly related to the world of scientific research and technological innovation are excluded from the bibliography, such as, for example, labor and wage gaps in public or private entities, access to political positions, medical, educational and psychological aspects, domestic relations. In this initial testing phase, the bibliography includes only documents (mostly journal articles) with abstracts, to facilitate verification of thematic relevance, and with DOI or URL, to allow for locating and retrieving the full text. The final version, covering literature on the topic without chronological or documentary type limits, will also include records of monographs, journal articles, and other types of documents not immediately accessible online.

Thematic organization

Each bibliographic record has been assigned to one or more virtual folders, representing approximately the topic, disciplinary area, or geographic area of the corresponding study. The adopted grid, listed below, is not derived from a pre-existing classification system but is dynamically constructed based on semantic analysis of metadata, abstracts, and (when necessary) the full text of documents imported from various sources.

- 01 Theory = theoretical, historical, or methodological approaches to the problem
- 02 Reviews = global reviews of previous studies (specific reviews of each discipline

are found in the folder of the discipline)

- 03 Global = large-scale quantitative or qualitative surveys, without disciplinary and/or geographic limits
- **04 Institutional** = surveys of individual (or groups of) institutions (universities, research bodies, academies, departments, etc.)
- 05 National = surveys limited to well-defined national boundaries
 - 05.1 Africa
 - 05.2 Asia
 - 05.3 Australia
 - ... etc.
- 06 Discipline & Topic = surveys limited to well-defined disciplinary boundaries
 - 06.1 Accounting
 - 06.2 Actuarial Science
 - 06.3 Agricultural Science
 - ... etc.
- 07 Grants & Awards = surveys on criteria for assigning funding and awards
- 08 Peer Review System = surveys on flaws in the peer review system
- 09 PhD & Post-Doc Level = surveys on the doctoral and post-doctoral journey
- 10 Student Level = surveys on the student journey
- 11 LGBTQ+ = surveys on the LGBTQ+ world

The classification of documents allows not only to appreciate the variety of viewpoints and methodological approaches to the problem in international literature but also to quickly locate relevant publications in each context, on a certain topic or geographical area, and to check their quantitative growth at a glance.

Document acquisition

In the final phase, aspect 1) of the project involves the acquisition, in the most appropriate form for each type and mode of dissemination, of all documents retrieved from the bibliographic search. For monographs, it is also planned to set up a dedicated openshelf space at the central library of the university campus, a space to be enhanced as much as possible during events planned under aspect 3) of public engagement. After a phase of promotion and connection to local, regional, and national realities potentially interested, the document collection thus set up will constitute the starting point for a permanent service of consultation and documentation for the community (academic and non-academic): local and interlibrary loan books will be provided to anyone who requests them, and, within the limits allowed by copyright law, digital copies of any other type of document; at the same time, specialized bibliographic support will be offered to those who, driven by academic (e.g., writing reviews), professional, or personal interests, want to examine in depth the theme of gender disparities in science.



The project in detail - 2. Quantitative and qualitative analyses

Introduction

Research evaluation in Italy is conditioned at all levels and in all institutional contexts by bibliometric indicators. Individual academic careers, for example, are tied to national productivity thresholds within the ASN (National Scientific Qualification), while the reputation and, to some extent, the financial fortunes of universities and departments depend on indicators and algorithms codified within the VQR (Research Quality Assessment). A situation in apparent contrast with the critical attitude towards the mechanical applications of quantitative indicators developed in recent years outside Italy, exemplified by principle declarations like DORA [68], Leiden Manifesto [69] and CoARA [70]. The Gender*MoRe project aims to deepen the reasons for this imbalance from the perspective of gender gaps in individual career evolution, combining the photograph returned by the *Gender Budget* with two further analytical approaches: quantitative analyses based on bibliometric indicators and a qualitative investigation into the obstacles encountered by researchers in their professional growth and the possible negative effects resulting, in this context, from the improper use of bibliometric indicators.

Quantitative Analysis

The University Gender Budget already contains a quantitative analysis of gender distributions within the student, doctoral, academic, and technical-administrative components [60, ch. 2], with particular attention to the career gap of teaching staff and the difficulties in stabilization measured, also in relation to national averages, with the Glass Ceiling Index [47] and the Glass Door Index [71]. This

perspective can be profitably integrated with bibliometric analyses on the scientific output of the male and female components of the University, differentiated by CUN Area and Scientific-Disciplinary Sector (SSD), along four dimensions:

- 1) individual productivity, measured through the number and type of publications produced over a certain time frame;
- networks of collaborations, analyzed both in terms of main authorship (in the STEMM areas) and from the point of view of geographic extension (local, national, international);
- bibliographic impact, measured through the number of citations (raw and normalized)
 and derived indices;
- 4) the visibility and prestige of publication venues, measured with commonly used indices in bibliometric (ISI Impact Factor, CiteScore) and non-bibliometric areas (lists of scientific journals and tier A journals). Where possible, the employed indicators are "normalized" for Scopus/WoS subject categories, thus inherently incorporating a comparison with international averages and distributions.

Where possible, the indicators used are 'normalized' for Scopus/WoS subject categories, thus, by definition, incorporating a comparison with international averages and distributions. An imminent evolution of the CRIS Iris system by Cineca, used to catalogue local scientific output by almost all Italian universities, will further contextualize these indicators by limiting the benchmarking to national borders. Consequently, it will be possible to establish, for bibliometric indices measured on individuals and local groups, how "high" or "low" their value is compared to averages and distributions calculated on all publications with at least one Italian co-author or co-author in the same disciplinary areas. Also, for point 2), thanks to recent developments in algorithms and online disambiguation services, it will be possible to go beyond the simple counting of key positions (first, last, corresponding) in the list of co-authors of scientific articles. By using the APIs of the Genderize.io platform, it will be possible to probabilistically assign a gender to all co-au-

thors of works with at least one UniMoRe affiliation, in order to detect gender imbalances in local, national and international collaboration networks of the University [72]. An intrinsic limitation of such systems, and more generally of the Gender*MoRe project, is the inability to go beyond the male/female distinction in gender analysis to embrace more inclusive definitions (like that of Global Health [73]): this is a structural limit of historical-scientific investigations, due to the fact that the publishing market and, by reflection, bibliographic databases are not yet ready to represent the complexity of the gender construct.

Qualitative analysis

The Bibliometric Office (BO) has been producing very detailed reports on the scientific productivity of the University at both individual and aggregate levels (departments, areas, disciplinary sectors) for several years. The potential use of these reports ranges from supporting governance in individual evaluations (e.g., for promotion and resource distribution purposes) to self-evaluation by the subjects analyzed (e.g., for selecting the best works in a competition). The Gender*More project intends to experiment with two further possible uses of the reports: the first aligned with the indicators' ability to reveal top performers, i.e., female researchers with productivity, impact, visibility statistics far beyond national and international averages; the second, on the contrary, in line with the critical and anti-bibliometric tradition of DORA, Leiden Manifesto, and CoARA. In the first direction, it is planned to interview a sample of teachers/researchers with exceptionally high indices in the STEMM areas to reflectively bring out from their professional and human journey some plausible hypotheses on the factors at the root of academic success in a universe traditionally dominated by gender prejudices and stereotypes. This line of inquiry is consistent, for example, with initiatives aimed at enhancing the visibility of female scientific excellence, such as the L'Oréal-UNESCO Foundation's over twenty-year-old For Women in Science program [74]. On the second front, a survey has been prepared to be administered anonymously to UniMoRe researchers, aimed

at investigating, on the one hand, the obstacles and various constraints that prevent women from finding a work-life/private-family balance conducive to an academic career; on the other hand, the perception of the possible negative effects of bibliometric evaluations on women's professional growth opportunities. The survey, already available online as a Google Form module (https://forms.gle/KnNSDdWb8pJE9Y4j6), is an adaptation of the Global Survey of Mathematical, Computing, and Natural Scientists created as part of the international project Gender Gap in Science [52][75]. The survey, addressed to UniMoRe professors and researchers (FP, AP, UR, FTR), is conducted anonymously. The only required personal data are the CUN Area of affiliation (mandatory) and the Role (optional). The collected data will be used by the Bibliometric Office only for aggregated statistical analysis of the received responses. Under no circumstances will the data be shared with third parties. The duration of the data storage period on the servers of the application used for collection is set at 1 year. The Bibliometric Office is responsible for the protection and preservation of the collected data: any requests for clarification can be addressed to ufficiobibliometrico@unimore.it.



The project in detail - 3. Public engagement

In addition to a dedicated web section on the SBA services site for research (www.pop.unimore.it), the Gender*MoRe project involves a significant commitment to dissemination and awareness activities aimed at both the academic community and external users. At the center of these activities is the creation of a thematic film club featuring a selection of films and documentaries on gender issues, which, also in this case, follows the dual track seen in the previous section: telling the story of female excellence in the scientific world and documenting situations of discomfort, conflict, marginalization. The choice of the cinematic medium to convey the message beyond the walls of academia is consistent with the sensitivity recently shown by UNESCO towards gender equality in cinema [76], and is based on the observation that the way the media represent professions has concrete repercussions on individual career choices and prospects [77-78]. The screenings, free and open to all, will be accompanied by discussion moments with internal and/or external specialists to the University and personal testimonies. Below are the selected titles:

- Hidden Figures (2016) Theodore Melfi
- Picture a Scientist (2020) Sharon Shattuck, Ian Cheney
- Code: Debugging the Gender Gap (2015) Robin Hauser Reynolds
- Scienza: singolare femminile (2009) Sandro Nardi & Alessandro Venè
- Top Secret Rosies: The Female Computers of WWII (2010) LeAnn Erickson
- The Immortal Life of Henrietta Lacks (2017) George C. Wolfe
- Bombshell: The Hedy Lamarr Story (2017) Alexandra Dean
- Radioactive (2019) Marjane Satrapi
- Marie Curie (2016) Marie Noëlle

Complementing the film club, there will be a periodic book club, with monthly meetings also open to the entire citizenship, to promote the bibliographic material that will make up the dedicated open shelf.

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doi:<u>10.1007/978-3-031-21606-0</u>

