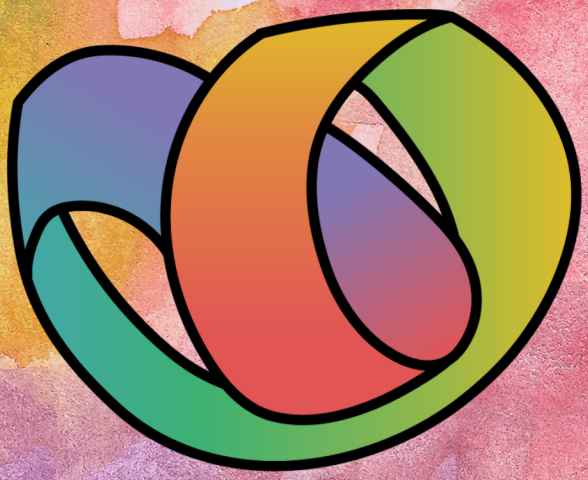

BRIDGES

Bridges between disciplines:
Gender in STEM and Social Sciences

ABSTRACT BOOK

BRIDGES

BRIDGES BETWEEN DISCIPLINES: GENDER IN STEM AND SOCIAL SCIENCES

Online and Onsite
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Keynotes

How anti-trans hate is astroturfed on social media

Bermejo Vega, Jara-Juana
Universidad de Granada, Spain

Tuesday, 13th September 2022, 10:00am - 11:00am

In recent years the use of anti-LGTBQIA+ rhetoric has skyrocketed around the world. In Spain, this has manifested as an increase in transphobic hate speech. Reactionary groups spread narratives of legal insecurity and far-right hoaxes to attack legislation guaranteeing the fundamental rights for trans people. Examples of such groups are "trans-exclusionary feminist" (TERF) groups, far right actors such as VOX and conservative religious groups like the Hazte Oír platform. Anti-trans hatred is used as a wedge issue to increase hate speech against the LGBTQIA+ community, feminism and rights legislation.

In this talk, we will review these issues and present research work where we use quantitative data analysis tools to characterize queerphobic hate networks on Twitter. Using data hoarding tools, such as t-hoarder, we collect data from transphobic Twitter trends. We use graph theoretic methods to find clusters of anti-trans reactionary users spreading anti-trans hate on Twitter. We analyze their behavior and the network structure of these groups. We find that a small and dedicated core of Twitter users displaying inauthentic behavior are responsible for most anti-trans hate on this social media platform. Mimicking alt-right strategies, these reactionary groups astroturf Twitter hashtags and boost them with inauthentic interaction to hijack the Twitter front page. Their behavior constitutes a hazard against trans people, as it can contribute to creating a distorted public opinion against trans rights."

Out with the Old, in with the New: Better Methods and Theories for Studying Gender Identity Development

Fausto-Sterling, Anne
Brown University, USA

Tuesday, 13th September 2022, 6:00pm - 7:00pm

During the past few years a more gender diverse research workforce has started to produce new methods for the study of gender in the fields of health and human development. At the same time, some researchers have begun to construct new theoretical frameworks with which to understand the development of diversity itself. In this talk I will discuss some of the new research trends and present some of the newest theoretical frameworks.

Gender biases and the feminist perspective in evolutionary studies of female reproduction and sexuality

Nuño de la Rosa, Laura
Complutense University of Madrid, Spain

Wednesday, 14th September 2022, 9:00am - 10:00am

Since the decade of the 1980s, the feminist turn has revolutionized philosophical studies of the biology of female sexuality, revealing gender biases in biological research and advancing alternative explanatory models. This talk will inquire into how the feminist perspective has impacted current evolutionary

research on female reproduction and sexual pleasure. My talk will focus on two central case studies in the representation and explanation of female sexuality, namely the origin of pregnancy, and the evolutionary mystery of the female orgasm. I will argue that both the characterization of pregnancy as an evolutionary conflict and the evolutionary speculations on the reproductive role of the female orgasm reflect gender biases in the social expectations of how biology should behave. Recent research in the field of evolutionary developmental biology provides alternative narratives for the evolution of female sexuality and reproduction. On the one hand, these studies emphasize the active, integrated role of females in the origin and evolution of pregnancy. On the other hand, research on the evolutionary origin of the female orgasm tends to individuate female pleasure as a trait decoupled from reproduction. I will conclude that both lines of research met in delineating female sexuality and reproduction as an autonomous evolutionary domain, with major anthropological and social implications for our understanding of the female bodies.

Science for All: Knowledge and Technologies for Inclusive and Sustainable Development through a Gender Lens

Bortz, Gabriela

Universidad Nacional de Quilmes, Argentina & Harvard University, USA

Wednesday, 14th September 2022, 6:00pm - 7:00pm

How can gender perspectives contribute to new science and innovation strategies for inclusive and sustainable development? What do Inclusive Innovation studies bring to enlarge our understanding of gender equality and to promote more egalitarian societies?

In a provocative manner, this talk braids together science, materiality, power, and implicit gender visions to question the biases of knowledge and technologies that shape our daily lives and create exclusion dynamics.

Networks of expertise marked by participation and diversity -tearing down barriers between disciplines, between academic and non-academic actors, involving under-represented actors into S&T decision making-, becomes key to building more inclusive societies and addressing the pressing social and environmental problems of today.

Gender Lens Natural Variation in Gender Expression and Sexuality with Implications for Evolutionary Theory

Roughgarden, Joan

Stanford University, USA & University of Hawaii, USA

Thursday, 15th September 2022, 9:00am - 10:00am

The discovery among animals of extensive variation in gender expression and sexuality refutes a supposition that the gender binary is universal and that homosexuality is rare. In humans too, variation in gender expression and sexual orientation occurs in all cultures and through history. This variation challenges traditional biological explanations of animal behavior, especially explanations that trace to Darwin's theory of sexual selection. Even today, the very definition of sexual selection remains contested. The definition developed in a 2015 US National Evolutionary Synthesis Center (NESCent) workshop that allows for cooperation in mating behavior will be contrasted with a 2021 definition proposed by David Shuker and Charlotta Kvarnemo that foregrounds competition between mates.

The Conditions of Emergence: Primordial Wombs, Feminist Philosophy, and the Origins of Life

Dahiya, Annu

Durham Arts and Humanities Night School, USA

Thursday, 15th September 2022, 6:00pm - 7:00pm

Novel ways to understand the origins of life emerge when concepts that have long been explored within feminist theory—such as embodiment, gestation, and birth—frame and guide scientific research. A central question in origins of life research is how a cellular boundary between "self" and "other"—an interior milieu—initially formed. In certain strands of origins research, scientists argue that "semipermeable compartmentation" or inorganic "primordial wombs" served as gestational sites on the Ancient Earth for cellular life. I examine how the concept of "womb" in contemporary origins research coalesces with, and can potentially reframe, the relation between matter and life within feminist theory. In An Ethics of Sexual Difference and Conversations, Luce Irigaray calls attention to how the biological sciences have been slow to study the permeability of membranes, something she argues has an affinity with "the feminine universe." This paper disentangles "womb" and "gestation" from cis-female embodiment. Rather than an anthropomorphism of the natural world, theorizing the gestation of all of cellular life in an inorganic womb shifts us away from the idea that life evolutionarily began by birthing itself, thereby challenging the idea of autonomy—a kind of self-birthing that requires no "other"—as what can explain life's origins.

Sustainability science and gender issues in the global south

Dangles, Oliver

Centre d'Ecologie Fonctionnelle et Evolutive, France

Friday, 16th September 2022, 9:00am - 10:00am

Sustainability science is viewed as a 'transformative' science, using both inter- and transdisciplinary approaches to address the complex environmental and social issues of the world. Looking at sustainability science through the prism of gender studies can shed light on what is at the heart of this transformative dimension: the questioning of power relations. Here I show how approaches based on a more equitable co-production of knowledge and the ethics of care (i.e. fighting against individualism and marginalisation and promoting collaborative interactions) make it possible to improve the success of sustainability project, by taking examples from the global south. This perspective allows thinking sustainability science via a relational approach, thereby making the critical connections between gender, social equity and environmental issues.

General Session: Taking action for a better Science: plans, platforms, tools and prototypes

Tuesday, 13th September 2022, 11:30am - 12:30pm

Creating new platforms for women researchers through Gendered-innovative research approaches

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Research activities are regarded as currency in an academic environment. Thus, numerous efforts have been developed to facilitate access to infrastructure, funds, and effective collaboration at local and global platforms. However, the outcomes of these methods have been found to benefit only male researchers (application of scientific discovery) and scientists (discovery of scientific theory, concepts, and methods). Thus, it is necessary to conduct an evaluation of gender equality and transformation frameworks to be included during the appropriation of research projects and funds. Various research institutions and councils have made remarkable strides in enforcing women's participation to enhance their careers and contribute to the scientific community. However, as research is expected to shift towards innovation in order to be industry-relevant and benefit all human beings and the entire ecosystems, there are still negative societal attitudes to innovation that prioritize the engagement of men and the exclusion of women as innovation actors. Hence, the study focuses on the investigation of hampering perspectives in ensuring female research participation in innovation through patents, industry-relevant projects, spin-off companies, and products, especially in developing countries. Furthermore, it highlights the gender innovation approach as an effective way to sustain opportunities for gender-sensitive and responsible research. The gender innovation approach has been found to be efficient through the use of three-gender dimension analysis such as participation, outcomes, and impact. Thus, it can provide a new clarity in understanding the role of gender in innovation.

The role of transformation in supporting female undergraduates and postgraduates in an academic environment

Mabuba, Nonhlangabezo {Bezo}; Ramnarain, Dereshni; Makhatha, Mmamooko Elizabeth
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It is essential to prepare female scientists for the advancement of new technologies in our new world. Naturally, women nurture human existence hence they require support in developing science tools that will ensure clean water, provision of natural energy, food growth and sustainable development of the world through science. Mentoring is the most crucial in the early stages of their careers to expose them to important aspects such as communication skills, research planning and execution, entrepreneurial skills, importance of teamwork and bursary support for their studies. The well being of the female students is ensured being referring them to Psychad for counselling and wellbeing. Psychad is a department at the university that ensures that the students are emotionally supported throughout their studies. The students participate in community building activities to be aware of the gaps that need to be bridged through science. Over the last 5 years at the University of Johannesburg, 80% female undergraduates have been trained in local companies to attain skills in quality monitoring of food products, water, building materials, pharmaceuticals. 60% percentage is employed in local companies. In the last five years, 80% female postgraduates obtained skills on research topics such as nanomaterials application on green chemistry, renewable energy, water monitoring and treatment, organometallics synthesis and catalysis. 75% percentage is employed in local and international companies and institutions. Therefore, the support provided to women can be useful in sustaining the world through science, hence it is crucial to prepare women scientists.

Intersectionality – a neglected aspect of Gender Equality Plans

Dahmen-Adkins, Jennifer
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In 2012, gender equality and gender mainstreaming in research were defined as one of six priorities for the European Research Area (ERA), and research institutions were invited to contribute to this goal by implementing gender equality plans (GEPs). To promote this approach, the European Commission (EC) even began to explicitly fund project consortia to design and implement tailored gender equality plans in participating research institutions. These efforts continued in the successor Horizon 2020 program, which ran from 2014 to 2021. The content of the respective gender equality plans in these projects had to be guided by the three gender equality objectives defined for ERA to promote institutional change: 1. removing barriers to the recruitment, retention, and career development of women researchers, 2. working toward a balanced representation of women and men in decision-making processes and bodies, and 3. strengthening the gender dimension in the content of research and innovation. More recently, the wording used by the EC in relation to such intervention measures has changed to "Inclusive Gender Equality Plans". The addition of "inclusive" refers to the consideration of intersectional factors beyond the category of gender. In doing so, the EC is now addressing one of the major limitations of previous gender equality plans: Focusing solely on the category of gender as the cause of structural inequalities in science organizations falls short. Even with numerical gender parity, social inequalities remain that continue to disadvantage certain groups within the science system. To put it exaggeratedly, gender equality plans have so far often supported white women from middle-class or academic family backgrounds in their academic careers, while first-time female academics or academics with a migration history, for example, have often not been the focus of gender equality policies. However, education and social background play a crucial role when it comes to taking up and successfully completing a course of study. In my paper, I will discuss the opportunities and challenges of inclusive equity plans based on data I collected while monitoring two of the transformative implementation projects mentioned above.

Bridging the Fields: gendering a Fundamental Research Project

Bencivenga, Rita; Leone, Cinzia; Colombara, Diego
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In the last few decades, addressing issues of gender balance and equal opportunities among project team members or participants in events organised by the projects has become increasingly widespread and is generally accepted and implemented. However, integrating the gender dimension into research and innovation refers to another set of activities, adopting sex and/or gender analysis through the entire R&I cycle. Indeed, the cycle starts by setting research priorities, defining concepts, formulating research questions, developing methodologies, gathering and analysing sex/gender-disaggregated data, evaluating and reporting results and finally transferring them to markets into products and innovations that will ultimately benefit all citizens and promote gender equality.

In some research fields, while respecting gender balance is accepted, adopting other strategies is still seen as impossible, off-topic, not applicable to specific content and not pertinent to research projects based on hard sciences.

There is currently no accepted idea of how a diversity and gender perspective can be utilised in vast areas of STEM disciplines. Resistance to incorporating a gendered perspective is often formulated by referring to a simplistic vision related to the lack of sex or gender of the object of study.

This paper focuses on an experience within an ongoing Horizon Europe fundamental research project focused on microfabrication, magnetism, electroplating, photovoltaics, and related subjects.

Several steps are planned throughout the project's duration (4 years): from the initial inclusion in the proposal of specific activities connected to gender-related topics to the participation in the kick-off

meeting of experts in gender studies, the integration into the Communication and dissemination plan of specific strategies and references and the planned collection and analysis of disaggregated data about the citizens participating in the outreach tasks organised at Science Festivals.

The experience creates fruitful and positive cross-fertilisation between STEM and Social Sciences, particularly gender and diversity studies. It seeks to represent a possible prototype to be replicated in those projects directly arising from STEM domains, where interdisciplinary exchange and ad hoc actions contributing to closing the gender bias could benefit the research community.

Symposium: Doing intersectional research

Chairs: Antonia Velicu, Julia Jerke

Tuesday, 13th September 2022, 3:00pm - 6:00pm

Operationalizing intersectionality in climate change research: understanding contextual vulnerabilities and differentiated adaptive capacities in a transitioning Maasai pastoral system in southern Kenya.

Marty, Edwige[1,2]; Bullock, Renee[1]; Cashmore, Matthew[2]; Crane, Todd[1]; Eriksen, Siri[2]

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Climate change disproportionately affects and increases risk differently among differentiated social groups. It is also anticipated that the suggested climate change adaptation strategies will reinforce existing patterns of inequalities, making the understanding of differentiated vulnerabilities and abilities to adapt depending on one's social position crucial. In the Kenyan arid and semi-arid pastoral production systems where climatic stressors are increasing in both frequency and severity, socially differentiated adaptation practices are (re)produced through gendered resource access, assets ownership, labour roles and decision-making power among local resource users. Research into understanding gender-based inequalities in the climate change field have nonetheless tended to create a binary or simplified understanding of differences between men and women. Recent critical adaptation feminist scholarship emphasizes the need to better consider the ways vulnerabilities and adaptative capacities are socio-politically (re)produced as well as (re)negotiated through adaptive processes at the intersection of multiple axes of social differences.

Heading calls toward more intersectional and grounded adaptation research, my PhD research developed a qualitative research design that aimed to reveal salient social factors that shape access to key resources and decision-making linked to adaptation processes in two Maasai communal lands in Kajiado county, southern Kenya. As Maasai pastoralists are increasingly diversifying away from traditional pastoral livestock keeping and engaging in alternative activities, the intersectional approach revealed evolving power relations that are linked to changing livelihood practices, labour roles and patterns of resource governance in the face of a changing climate. Using intersectionality as an analytical tool allowed us to go beyond static categories to probe into the context-specific axes of social differences that shape engagement with and impacts of these adaptation processes in the selected field site. In a poster presentation, we describe the ways the interplays of three axes of social differences – namely gender, age, and education levels – were both inductively and deductively selected to interrogate salient social differentiation dynamics linked to adaptation processes. The poster presentation would also include reflections on how the intersectional approach guided the selection of participants, data analysis and writing up as well as the challenges encountered in operationalizing intersectionality in a meaningful way.

Operationalizing intersectionality vis-à-vis gender- and ethnic-based socioeconomic inequalities at substate level

Tomaselli, Alexandra

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This paper aims to present, share, and discuss how intersectionality is conceptualized and operationalized in the research design and methodological approach of a qualitative socio-legal empirically based research project that tackles the intersectional discrimination (Crenshaw, 1989; Collins, 1990) of women and LGBTIAQ+ individuals in their socioeconomic participation, that is, access to employment, education, and social and public services. This paper situates this discussion in two subnational units in Europe (South

Tyrol in Italy and Catalonia in Spain) by considering the intersection of gender and ethnicity but also other social factors, such as age, rural-urban reality, etc.

Also, this paper discusses whether and how to adopt the "intercategorical" approach of intersectionality proposed by McCall (2005) in this type of research projects in order to use social categories in a critical way and to the extent which it allows to explore how inequalities exist between and across (social) groups and thus make comparison among them. Moreover, it proposes to use the "paradigm intersectionality approach" proposed by Hancock (2019) to empirically analyze the complex causalities of specific social inequalities and, at the same time, suggest ideas to transform the legal institutions, which, in the research project, are the socioeconomic policies vis-à-vis women and LGBTIAQ+ in South Tyrol and Catalonia.

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Intersectional inequality in education

Meili, Dario; Günther, Isabel; Harttgen, Kenneth

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Intersectional inequality -- the notion that disparities run along the lines of combinations of salient social groups such as gender or ethnicity -- has become an increasingly prominent concept in the social sciences. Yet, because of the number of possible combinations of groups, embedding intersectionality into the measurement of inequality has proven to be analytically complex. Hence there is little empirical research applying an intersectional framework to measure inequality. We incorporate intersectionality into the measurement of between-group inequalities in educational attainment using DHS data from 40 low- and middle-income countries. Using schooling ratios between lower and higher educated groups as an inequality measure, we show that the intersectional perspective unveils a lot of inequality that remains masked if gender and ethnicity are considered in isolation. Generally, intersectional inequality in education is driven more by ethnic inequality than gender inequality. Further, we develop a novel measure to evaluate the relevance of intersectionality compared to standard approaches of between-group inequality measurement. Finally, we discuss what factors could be driving differences in intersectional inequality, both based on observed and simulated data. We show that intersectional inequality is exceptionally high in contexts with low overall education and when groups with low education are of relatively small size.

Beyond gender (in-)equality: the need for an intersectional lens in Research and Innovation

Risi, Federica[2]; Baptista, Mariana[1]; Jorgensen, Anna[1]; Wild, Tom[1]

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In today's superdiverse urban societies, deprivation and privilege sit at the complex intersections of gender, ethnicity, religion, sexual orientation, and other life opportunities. Our identity markers do not

exist separately from each other but rather are mutually constituted, often informing one another, and converging into multidimensional systems of inequality.

Moving beyond the gender gap, the academic setting can be seen as a microcosm of society where we can unpack the vectors and configurations of compounded discrimination. While gender can be seen as a testbed for dealing with multiple forms of inequality, critical conversations in the Horizon 2020 project Conexus evidence that focusing solely on gender as a dimension of oppression is reductionist at best. As a Research and Innovation (R&I) project bringing together Latin American and European partners to strengthen international cooperation on nature-based solutions (NBS), Conexus spans numerous countries in the global north and south as well as different post-colonial settings. In this context, not only it is essential for the project not to perpetuate compounded inequalities within the next generation of researchers but also for research not to (re-)activate extractive processes of knowledge exchange and production. This obligation is ever more critical in the case of modifications to the built-environment that nature-based solutions usually involve, which amplify the risks of harmful impacts to the socio-ecological make-up of places and communities.

Considering the necessary intersection of gender with other loci of discrimination as both systemic and individual, an intersectional lens is profoundly needed. By assessing gender, equality, diversity and inclusion (GEDI) practices both within individual partner organisations and the project at large, Conexus aims to model inclusive spaces and processes in which diversity is acknowledged, understood, valued, and reflected throughout the research process.

In this context, our research proposes to investigate the role intersectional inequalities play in meaningfully engaging partners as well as local communities in a pan-national research project of North-South cooperation on nature-based solutions. The goal is to extract practical recommendations for the project's management and funders on the necessary conditions for research to be conducted inclusively and to lead to inclusive outcomes.

Changing risks of underemployment in Switzerland: Operationalizations of intersectionality in mixed effects multi-level models

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The risk of work hours underemployment is an often-overlooked aspect of labor market inequality. Underemployed are workers who would prefer to work more hours. Research on underemployment shows that increased job competition, for example in economic crises, and occupational gender segregation is linked to underemployment. In addition, studies document inequalities for different groups of workers and suggest that lower-class workers, women, immigrants, Black and Hispanic/Latinx people in particular are at higher risk of being underemployed. While a major part of this research still focuses on one or two dimensions of inequality, more and more research uses an intersectional lens. However, there is no gold standard on how to operationalize the categories of intersecting dimensions of inequality and the measurement of intersectional effects. In addition, research scarcely analyzed shifts in inequalities within contexts across time. Attempting to fill these gaps, I analyze how the risk of work hour underemployment of different groups of workers changes as competition over jobs and occupational gender segregation change within occupations across time. Using rich data from the Swiss Labor Force Survey and the Swiss Job Market Monitor, I apply mixed multi-level models with three levels (i.e., individual, occupation-time, and occupation) and compare various operationalizations. At this stage of my research, I use citizenship, binary gender, and occupation as an approximation of the triad of race, gender, and class. First findings indicate that the risk of underemployment for women without Swiss citizenship increases significantly when competition for jobs within occupations intensifies. In contrast, analyzes show no effect for men with Swiss citizenship status. The Swiss Labor Force Survey also includes data on resident status, various measures of class, and other dimensions of inequality. I will try out

different operationalizations of intersectional categories and various operationalizations of effects at intersections such as cross-level interactions and separate models. In my presentation, I will talk about the problems I have encountered and how I have addressed these problems.

Uncovering intersectionality in German-speaking academia using a latent class approach

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Even though discrimination in science has been in the focus of research for some time, it is still widely unknown how intersectional discrimination experiences affect scientists and scientific work. Originally conceptualized by Crenshaw (1989), intersectionality was intended to capture the multitude of discrimination. Building on previous inequality research, we implement an extension of the diversity wheel (Gardenswartz & Rowe 1994) in a large-scale survey with 15'778 scientists across all disciplines from Germany, Austria, and Switzerland. We ask whether the researchers have faced disadvantages in their academic careers with respect to characteristics such as gender, age, sexual orientation, ethnic origin, geographic origin, social origin, nationality, language, as well as religion. Almost half of the respondents (46%, n=7'193) state that they have experienced disadvantages at least once in their career, with scientists that identify with the third gender experiencing the most discrimination (71%), followed by women (57%), and men experiencing the least (37%). 57% (n=4'117) of all respondents with such experiences have been discriminated based on more than one diversity dimension, again with women and the third sex being more affected. We conduct a latent class analysis to identify discrimination profiles and observe that many researchers experience disadvantages with respect to both their age and gender. We are further able to identify discrimination profiles that reflect disadvantages based on variations of a migratory background. Lastly, preliminary results show that experiencing discrimination has a strong impact on the everyday life as a scientist. Respondents who report disadvantages report more frequent and more stressful conflicts with co-authors as well as a tougher competition and a less collegial atmosphere, on the one hand, and fewer training and career opportunities on the other hand. Strikingly, these effects are substantially amplified when we consider respondents that have made discrimination experiences based on more than one trait, underlining the importance of research on intersectional discrimination.

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The Stranger at the Table: Reflexivity and Implementing Intersectionality in Family Research

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Intersectionality, or the understanding that individuals experience discrimination in different ways based on their many, intersecting identities, is widely accepted as crucial to the development of new empirical knowledge and anti-discrimination policies. This presentation will focus on the way in which I attempted to use intersectionality as a lens in my research into family practices around risk and trust in social media: how I applied it to the design, data collection, and data analysis of the project, and in the final conclusions I drew from the data. It will explain some of the limitations I encountered while doing so, and it will end with a discussion on how other researchers might plan for those challenges in the future.

I will specifically look at the ways in which I mistakenly thought reflexivity alone would help me make my research intersectional. While it was useful in helping me examine my own "beliefs, judgements and

practices during research" (Finlay, 1998), I will argue that reflexivity should be a starting point, not the entire journey.

References:

Finlay, L. (1998). Reflexivity: An Essential Component for All Research? British Journal of Occupational Therapy, 61(10), 453–456.

Institutional determinants of intersectional inequalities in science

Kozlowski, Diego[1]; Larivière, Vincent[2]; Sugimoto, Cassidy[3]; Monroe-White, Thema[4]

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Unchecked, science and technology serve as regressive economic factors, reinforcing and exacerbating inequality. In the U.S. context, the science and technology workforce (i.e., scholars, innovators, architects, etc.) is not reflective of the broader population exacerbating racial and gender disparities. Nevertheless, science and technology continue to drive human behavior, reinforcing racial bias in all aspects of human lives. This influence is equally powerful in academia: what we know as academics, what we teach, and what study is shaped by algorithms and predictive models. However, science and technology are also shaped by scholars' socially constructed identities of race and gender.

In this study, we investigate harms to science wrought by systemic racism and the benefits derived from the inclusion of minoritized people of color (African-American/Black, and Latina/e/o) in the scientific workforce. Building on prior work (Kozlowski, 2022a, 2022b), we quantify the participation of minoritized individuals in the production of science and how the distribution of labor by institution type creates barriers and pathways to publication output for minoritized groups. These data consist of 5,431,451 articles indexed in the Web of Science (WoS) database and 1,609,107 distinct US first authors from 2008 to 2019. Using author disambiguation algorithms applied to the WoS we reconstruct each individual researcher's publication record, along with their institutional affiliation. Data on institutions are then classified based on Carnegie classifications (i.e., research-intensive, etc.) Preliminary findings suggest that authors vary by intersectional race x gender identity and institution type. Specifically, authors at research-intensive institutions are mostly Asian and White males, while non-research intensive institutions are overrepresented by Latinx Females. Ultimately, these data allow us to interrogate the historical structural and socio-cultural factors that shape scientific knowledge and how institutions facilitate or inhibit contributions by the intersectional race and gender categorizations of authors over time.

References:

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Symposium: Queer Science: LGBTQIA+ perspectives in multidisciplinary research

Chairs: Nicolas Baird, Lee Pivnik

Tuesday, 13th September 2022, 3:30pm - 6:00pm

European higher education institutions challenges: diversity and inclusion in institutional communication.

Vuolo, Nicola[1]; Giles, Sam[2]; Brattoli, Bartolomeo[3]

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What's the role of institutional communication in fostering diversity and inclusion in European higher education institutions (HEIs)? These institutions are called to account for corporate social responsibility in a role that goes beyond the knowledge transfer. They also must deal with the complexities arising from this increased mobility if they want to stay competitive in the international arena.

Society is changing, the new generation is challenging the older one to change the paradigm through which they see reality. HEIs need to adapt their way of communicating to embrace a more connected and diverse world. In fact, communication plays a pivotal role in the shared narrative of how our world is made, influencing people's lives and rights and the future.

In our study we decided to explore the issue of diversity and inclusion in European HEIs' communication practices, focusing on the LGBTQ+ community. Diversity and inclusion issues and opportunities have been studied for more than 80 years by corporations as they came to understand all the possible advantages of a high level of diversity in the workplace. Compared to the private sector, European HEIs are lagging far behind.

We adopted a mixed research method: 18 qualitative interviews were used as an exploratory tool and as a base to build a questionnaire to collect quantitative data. We got 205 valid questionnaires from HEIs based in 11 European countries.

From our research, it emerged that HEIs in different European countries are all trying to deal with the issue of inclusion. However, there is a lot of disparity among European countries on how successfully their higher education institutions are addressing this issue and for how long.

People in these institutions expect the institution's policy announcements to be followed by swift action. They also ask for clear communication guidelines and for diversity training courses.

More comparative studies on how the issue of diversity and inclusion is handled by different institutions in different European countries are needed so that HEIs can learn from each other and guarantee a standard in common policies across Europe to ensure real equality in higher education.

Communities of care and Queer burnout

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The experience of embodying multiple forms of diversity (Ahmed, 2009) in a technical university as a social scientist can at times be overwhelming. Swedish exceptionalism and whiteness are inscribed in Swedish academia (Habel, 2012; Andersson, 2016). This makes Black, Indigenous and People of color stand out among students and scholars, often forced to follow cultural norms (i.e., white majority culture) more carefully risking retaliation or a future career. Sirma Bilge's conceptualizes minoritized groups being used as bait by universities to draw in more diverse students and scholars to signify their excellent diverse university culture (Bilge, 2020).

In teaching engineering students about gender, I have experienced both hopefulness and hopelessness symbolizing the other physically and academically though my Blackness and queerness. The mostly hopeful as students have trusted my lived experience and knowledges. The hopeless when grading essays where your very identity is questioned and mocked. The hierarchies and precarities of academia fuel the fires of burn out and investments in hegemonic patterns. What can be done to prevent and possibly treat racism burn out (Hawkins, 2021) or queer burn out in academia? How can we become more careful in our work and teaching? In this session I will discuss how as an early career academic I have dealt with burnout (my own and others) and built community with peers and students.

References:

Ahmed, S. (2009). Embodying diversity: Problems and paradoxes for Black feminists. Race Ethnicity and Education, 12(1), 41-52.

Bilge, S. (2020). We've joined the table but we're still on the menu. Routledge International Handbook of Contemporary Racisms.

Hawkins, D. F. (2021). A racism burnout: My life as a Black academic. Race and Justice, 11(3), 301-317.

De-fetishising diagnosis. Shaping new gender affirming protocols

Sirigu, Elsa Sale; Meraviglia, Greta

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This presentation aims to trace some historical, political, and cultural trajectories that have led to the institutionalisation of the psychiatric categories that inform medical and legislative approaches to gender nonconformity, both in nosography and in Italian legal gender recognition.

At the beginning of the 20th century, sexual orientation and gender identity started to be defined as distinct concepts. Gender nonconformity began to be treated as a psychopathology that needed to be fixed, formerly by conversion therapies to make people accept the assigned gender at birth, and then by body-modifications aimed at forcing the body back to a binary-based normativity.

This critical analysis will focus on the genealogy and evolution of the clinical category of "transsexuality", and of the standardised protocols designed to treat "gender dysphoria". Psychiatric diagnoses have increasingly become pivotal in defining who can access body modification technologies, and legal recognition of name and gender, as can be seen through an overlook of the Italian context. Italian law 164/1982, which is still in force, represented a huge victory for the transgender movement fourty years ago, as it allowed transgender people to adapt their bodies to their identity, instead of correcting a "deviation". This law embodied a turning point in the national bureaucracy, but it departs from the assumption of a pathological personality, needing diagnosis, psychiatric control, and expert-team evaluations. For a long time, this law also required mandatory irreversible invasive surgeries to "normalize" the body, banned only in 2015 by the Constitutional Court.

The medical-psychiatric model has been recently criticised by trans scholars and movements who have emphasised the plurality of gender identities, bodies, and itineraries.Those movements also advocate for the depathologisation of gender nonconformity, and for procedures based on self-determination, universal access to health care, and legal recognition. Eventually, through a comparative analysis of national and European protocols, this work will explore the diachronic and synchronic axis, highlighting the limits, gaps, and possibilities for new approaches

The self-review of the psychological discipline in transgender studies.

López-Sáez, Miguel Ángel[1]; Angulo-Brunet, Ariadna[2]; Platero, Lucas[1]; Lecuona, Óscar[1]

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Introduction: At present, in the midst of the social debate on access to rights for trans people in Spain, there are hardly any studies that provide robust measures to detect transphobia.

Negative attitudes towards the trans universe not only motivate hate crimes at the social level, but also permeate the discourses of medicine and psychology.

According to the latest study by the European Agency for Fundamental Rights, transgender people are at a crossroads, as they are more in need of psychosocial health care and do not seek it because they do not see it as a safe space. This is especially relevant if we observe how trans people are often more exposed to minority stress and consequently worse mental health.

At present, there is a lack of analysis of attitudes among professionals. In the Spanish context, only one instrument has been adapted and validated, which has a lower sennsibility and some psychometric doubts (Billard, 2018). Therefore, it is necessary to know new tools such as this one that can facilitate an approach to the state of the question.

This paper examines the reliability and validity of the adaptation of the Trans Attitudes and Beliefs Scale, an instrument capable of detecting transphobic positions, including the most subtle attitudes.

Methods: A total of 829 psychology students participated in the adaptation procedure during the 2019-2020 academic year. A confirmatory factor analysis was performed to study the fit of the new scale to the original factor structure (interpersonal comfort, gender identity beliefs, and human value).

Results: Convergent validity tests showed significant correlations and predictive levels with different constructs and sociodemographic variables. The internal consistency of the mean scores was adequate at the global level.

Conclusions: The study showed that the scale is an adequate instrument for the assessment of attitudes toward trans persons, particularly among psychology professionals.

Cuir Menstrual Visuality

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For the present work, it is intended to articulate the power of the (in)discipline to (dis)arm the hegemonic Visuality regimes related to Menstrual Cycle, Queer pedagogies (or “Cuir” resentful from Our América) and Gender studies.

The visuality is made up of all the gestures and moves that our bodies are in complete synchronicity with our thoughts and actions. Everything we say and do by circumstance is made up of gestures that are not our own but are the effect of the signs we ingest every day, thus creating a sensitive dialectic in a chaotic infosphere Berardi (2020). The signs of non-displayable visual communication are seams that represent the apparent linguistic communication, however the factors of our codes are well determined and learned by everything that figuratively or abstractly guides us in our being and being in these worlds Ahmed (2019). Visuality has an intrinsic relationship with gender insofar as it promotes an imagery of sex, gender and bonding, as well as the roles and gestures that each person must adopt in spaces flores (2021) Preciado (2021) Butler (2018) . Paradoxically, in the illusory sensation of seeing everything, we obtain pieces of fragmented truths operated by advanced programs capable of (de)generating what we think we understand through our scopic structure.

In this sense, using the practices made possible by queer pedagogies, here I will work on the relationship that exists between visuality, gender and the menstrual cycle; to bring some questions, questions or instabilities to the ways we see, as well as how we act, and perceive the menstrual cycle.

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flores, v. (2021). Romper el corazón del mundo. Modos fugitivos de hacer teoría. La Libre editora.

Preciado, P. B. (2020). Yo soy el monstruo que os habla: informe para una academia de psicoanalistas (P. B. Preciado, Trans.). Editorial Anagrama.

Reframing traditional narratives of STEM disciplines in/for indigenous communities

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In this lecture, I intend to question the traditional ways of research and teaching in STEM disciplines in order to generate proposals to generate other practices and narratives around science. Although there are diverse approaches and theoretical frameworks within feminism and gender and sexual dissidence studies, most of them neglect the perspectives of racialized communities and in particular indigenous communities. Based on my experience and activism as a queer teacher of STEM disciplines in intercultural bilingual indigenous schools, I intend to use a decolonial feminist approach to think about academic, methodological, and didactic practices in the field of STEM education. This analysis raises questions about 1) what we understand by science, in particular about what science is and how it is taught in socioculturally diverse contexts, 2) the usual topics in science education research, and in particular, the relationship with indigenous communities, 3) the Western scientific worldview as the only valid one, and 4) the curriculum. These questions will help me to highlight how science education continues to be framed in the logic of perpetuation of modern-colonial domination. From these questions, I will raise possible proposals to overcome them and thus be able to modify the bodies of knowledge and ways of knowing in STEM education research and practice.

At the Intersections of Queer and Mathematical Identities

Lynn, Robert[1]; Ataide Pinheiro, Weverton[2]

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Research has shown that Queer students still experience harassment, assault, anti-LGBTQ+ discriminatory policies, unsupportive educators, and toxic school environments. As Waid's (2020) discussed, LGBTQ+ students suffer in formal schooling, and such experiences have serious consequences on the teaching and learning of these students' mathematics. Consequently, being marginalized in school contributes to these students' higher risk of poor academic performance, truancy, and depression (Waid, 2020). The outcome is that disproportionally, LGBTQ+ students choose STEM majors as 40% fewer than their non-LGBTQ+ peers (47%). Therefore, it is crucial to understand the discourses surrounding Queer high school students' perceptions of their identities in contentious times where many social identities are suppressed in the world in general and in the U.S. specifically.

In the present study, we examine the experiences of two U.S. white American transgender Queer high school men (Rob and Tom) in the Teaching of Mathematics for Social Justice (TMSJ). The primary data source was audio-recorded individual and focus group interviews where Rob and Tom shared their

experiences with lessons for the TMSJ taught by the first author of this study. This study aimed to answer the following research questions: How do U.S. high school students' perceptions of their Queer identities intersect with their mathematics identity?

Findings indicate that both Tom and Rob do not see themselves as mathematics doers due to their Queer identities being exclusive to their mathematical identities. On the one hand, Rob believed that Queer folks have historically isolated themselves from the STEMs and claimed other fields, such as the humanities, because white straight cis men historically dominated the STEM fields. On the other hand, Tom argued that the STEM fields are non-welcoming to Queer identities and Queer people choose to be in fields where they can be who they are, and their identities can coexist with them and the field. The findings suggest that STEM fields are exclusionary to Queerness. Therefore, Queer folks do not develop a robust mathematical identity.

References:

Waid, B. E. (2020). Supporting LGBTQ+ students in K-12 mathematics. Mathematics Teacher: Learning and Teaching PK–12, 113(11), 874–884.

The Experiences of Queer High school Students in the Teaching of Mathematics for Social Justice

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In the past generation, gender and sexuality have become a hot topic for mathematics education scholarship (though not as much race). Consequently, a great deal of recent research has shown the importance of addressing issues of gender and sexuality in mathematics education, including studies that have pushed for the teaching of mathematics for social justice (Berry III et al., 2020). This study steps back on the Teaching of Gender and Sexuality Social Justice Mathematics (TGSSJM) studies that argue the importance of queerizing issues of gender and sexuality in the mathematics classroom. This study intended to respond the following research questions: 1. What are the experiences of Queer students during the TGSSJM lessons?; and 2. How are Queer students' experiences with social justice mathematics lessons similar and/or different from each other?

Although the teaching of mathematics for social justice has not been wildly implemented in schools, this study found that Queer high school students had a positive experience and would like to see more of these types of lessons being implemented in their school. Queer high school students agree that these types of lessons will help students learn conceptual mathematics and improve the school climates and educate non-Queer groups about important issues that the Queer community still faces as challenges. The findings also pointed to the importance of ending the social/mathematical divide that has excluded Queer bodies from mathematics. Finally, these finding suggest that discourses guide actions that shape the ways Queer students participate in mathematical spaces. These discourses can be either oppressive and exclude students from mathematics or inclusive and promote students' mathematical identities development as they also develop their Queer identities. As mathematics educators' community, we must find a way to rehumanize the experiences of Queer high school students' experiences in mathematics. Consequently, supporting these students to develop a positive mathematical identity together with these students' Queer identities.

References:

Berry, R. Q., III, Conway, B. M., IV, Lawler, B. R., & Staley, J. W. (2020). High school mathematics les- sons to explore, understand, and respond to social injustice. Thousand Oaks: Corwin Press.

General session: Education and scientific careers: bridging gaps and challenging gender stereotypes

Wednesday, 14th September 2022, 10:00am - 1:30pm

Girls, science and the arts: reimagineering accessible, connected science education in schools

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For girls, conceiving of oneself as a scientist has been argued, sociologically, to be 'unimaginable' (Butler, 1990). Science is typically perceived as 'other', lacking the desirable relational and affective dimensions to feel familiar and 'like me' (Archer et al., 2013). The paucity of women in STEM careers might be considered evidence of this phenomenon. Formal education tends to reflect a gendered view of the arts and sciences. Even in Higher Education, where statistics are most pro-female, only 35% of UK staff in STEM subjects are female.

Our research in UK primary education, where 86% of staff are female and science is rarely a teachers' undergraduate subject specialism, identified a lack of confidence, expertise and positive role modelling of the sciences (Trowsdale, 2020). An integrated STEAM (science, technology, engineering, arts and maths) model is increasingly being recognised as valuable in improving the appeal of STEM subjects, particularly to girls.

Drawing on a five-year study of a unique arts and engineering education project for 9-11 year olds, The Imagineerium, this paper advances this particular model for developing arts-STEM approaches to engage and develop children, affectively and cognitively. Quantitative research affirmed the positive impact of the project on children's understanding of science and design technology, and their improved confidence as capable, creative learners, (Trowsdale, McKenna and Francis, 2019). Qualitative research indicated children's changing attitudes towards and interest in futures involving engineering, technology and science. Our research suggests that the structures and practices inherent in this art-making model for education, the Trowsdale Art-making model for Education (TAME), is reproducible. It fosters relational and personalisable educational practices, where the affective is inherent and the relational commonplace; factors which mattered to participating girls.

References:

Archer, L., DeWitt, J., Osborne, J., Dillon, J., Willis, B. & Wong, B. (2013) 'Not girly, not sexy, not glamorous': primary school girls' and parents' constructions of science aspirations. Pedagogy, Culture & Society, 21(1), 171-194.

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I Watch 'Divas in the Jungle' Too - On the Methodology and Findings of the Danish LEAPS-Project 2018-2021

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For decades, there has been a focus on students' interest in the natural sciences in primary school, and the role of teaching and pedagogy in this connection. The background for this relates to an expected shortage of graduates in the employment areas related to the natural sciences at the Danish labor market.

Furthermore, the UN world goals for sustainable development has strengthened this attention paid to nature, global heating and the development of sustainable societies.

Research projects of different kinds have also been initiated. The theoretical framework used to conceptualize 'interest' differs from project to project, and from methodology to methodology giving an often fragmented view on the 'state of interest in science.

However, researching pupils 'interest' in the sciences appears complex

Some of the research involving Danish pupils concludes that they in some respects have a relatively high interest in the subject (natural sciences), and shows results that are not only different from project to project, but also to some extent contradictory. Some conclude e.g. that some girls have low interest when compared to the boys, while others do not seem to show much difference. It is therefore also relevant to focus on how students' interest in science in general is researched, and what methodological issues arise when researching this. The title of the paper indicates one such challenge illustrating that pupils might understand words such as 'science' - and many other ones - in different – and sometimes surprising and unexpected - ways, which will of course influence the way they answer to questions in surveys or interviews.

A research project conducted by the two authors 2018 – 2022, following a development project at four Danish schools during three years included quantitative as well as quantitative methods. Experiences from this over the four-year period made some of such difficulties and contradictions associated with examining precisely 'interest' visible – and is the theme we will discuss and analyse in this paper, using the following research questions "How do we methodologically investigate pupils' complex interest in science?

Learning to be a scientist or learning science: a STEM education for all?

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A reoccurring feature of science education is that girls tend to disengage from science at every opportunity. Science, engineering and a variety of technical occupations suffer as a result. This is despite of a range of interventions encouraging the engagement of marginalised groups – most notably women and those from working class communities. Longitudinal 'draw a scientist' projects consistently report that primary/elementary school pupils still imagine scientists as white males in white coats. This perception of scientists emerges in early childhood and is difficult to rectify.

Recent educational research has focussed on the value of 'STEAM education' (where arts are used or integrated in teaching Science, Engineering Technology and Mathematics) as a way of addressing such difficulties, and specifically to target younger children. However, a number of reviews of STEAM practice, including by the present authors, identified a lack of conceptualisation and theorisation of STEAM educational practices. Here, we develop a detailed conceptualisation of more exploratory and inquiry-based approaches to STEAM education drawing on the concepts of 'epistemic cultures', 'epistemic practices' and 'epistemic objects'. This sociological language, developed from Knorr-Cetina (1999) and applied to educational settings, focuses attention on the ways researchers act in relation to the objects they are researching. Convincing arguments have been made that this conceptualisation can be used, not only to understand the work of researchers but also, to direct students' learning.

This alternative conception of education focuses on the practices of scientists, engineers, etc. with reference to their socio-cultural dimensions, not simply on learning decontextualised STEM theory. We draw on data and insights from two projects, running over the last 7 years, working with primary/elementary school teachers and their pupils which illustrate this conception. The initial project, The Imagineerium, showed the value of the culture and practice of this approach for children, increasing

their confidence and competence in learning, as well as indicating an increased appetite for science. The latest project, Teach-Make, supports teachers to develop and test new schemes of work in order to bring this approach more centrally into the curriculum.

References:

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To persist or not? How Female Undergraduate Students in STEM majors decide career pathways in China

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Based on the Social Career Cognitive Theory model (SCCT), the purpose of this study was to understand undergraduate female students' STEM career choices and the factors that influenced their decision-making processes in a collectivist cultural environment. Using a qualitative approach and content analysis, the data of twelve semi-structured interviews were collected and analysed. Four key themes, namely contextual factors, outcome expectation, self-efficacy and career pathways, and several subthemes were identified to understand female students' persistence and career development in STEM majors. The findings of this research provide support for the SCCT framework, suggesting that female students' persistence in STEM can be predicted by their self-efficacy, with outcome expectations and contextual factors acting as influencing factors. And the findings also highlight three main observations that should be emphasized by future research, including family factors in a collectivist culture, the impact of sexism on self-efficacy and the way to overcome barriers in a collectivist context. The theoretical contributions and practical recommendations for improving the learning experience of female undergraduate students in STEM fields are discussed.

Women at the Great War at Work: Engineering for Educated Women in Scotland

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Tongland Works of the Galloway Engineering Company, built during the First World War in Scotland was a unique venture not only to carry out war work in engineering, but to train women as professional engineers at the time when women were not allowed into engineering profession. Drawing on archival material, this paper will examine the 'university for women' initiative, which arose at Tongland, the venture whereby women took advantage of opportunities created by war's changing social norms to enter the engineering filed. The Tongland works was an off-shoot of the much larger Arrol-Johnston factory at Heathhall in Dumfries, which manufactured whole aircrafts and lower powered aero engines, made to established designs licensed from Austro-Daimler before the war. The factory later became famous for producing the Galloway car, the 'car for ladies made by others of their sex' under the leadership of engineer Dorothée Pullinger.

The paper will draw as much as possible on first person narratives of women pioneers, those targeted initially to this programme - having a university degree - thinking through how its spaces were constructed and experienced in and through gender performativity, including leadership and supervision. The Galloway Engineering Company was trying to avoid the pitfalls of using unskilled labour and dilutees in complicated work by creating a new workforce initiative of professional female engineers, committed to developing their own engineering career, and in the view of the company, were expected to learn quickly on the job. The paper will examine the working conditions concerning "Engineering for Educated Women" initiative, exploring the relationship between gendered performance and materiality of places of work,

as there was a strong emphasis in the publicity material for Galloway Engineering Company that the Tongland factory was "suitable" for women.

We will draw on untold histories of women working in engineering and related industries, including Dorothee Pullinger, under this apprenticeship venture. And by doing so, making the stories of Girls Engineers visible, attributing names and exposing their contribution. Adopting feminist lens in theorisation of time and space will also shed light on more sensory understanding of Tongland Works venture.

STEM in Russia: Is moving toward gender diversity postponed indefinitely?

Chechik, Elena

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A mass exodus of STEM specialists started after Russia invaded Ukraine on February 24, 2022. According to various estimates, between 70,000 and 200,000, IT workers have already left Russia. A notable phenomenon is the mass relocation of IT companies from Russia to other countries. There is a perception in society that highly qualified IT specialists have already left or are preparing to leave Russia shortly. Officials have made several attempts to stop the exodus. On March 2, 2022, the government announced that "a military deferment will be in effect for those students who will choose IT programs at universities and work for Russian IT companies. Thus, the government promotes the policy of motivating young men to choose IT degrees. It is a subject of a particular study whether such policy is adequate to the goal of the government to stop the outflow of IT specialists in a time of war and sanctions. But with a high probability, we can expect an even greater increase in the gender gap in STEM.

We investigate mentorship between dissertation authors and their mentors in Russia. We look at the proportion of women at different stages of their academic careers in terms of writing a dissertation. We are interested in STEM fields separately and in comparison with non-STEM fields. The dataset includes 45,608 dissertations (2008-2018) from 18 general research areas. We detect that the share of women is lower at later stages of the academic career track, and the depth of this decline varies by field. The lowest proportion of women is in STEM fields. Also, STEM fields themselves are not homogeneous, but more importantly, the subfields within some of the fields are not homogeneous either.

Gendering and Diversifying the UK Research Pipeline

Sheppard, Laura Harriet; Reades, Jonathan; Freeman, Richard P.J.

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Women are systematically underrepresented in academia with only 28% of UK professors identifying as female. Despite more women than men studying at the undergraduate and postgraduate-taught level, fewer women follow a traditional academic career path, with many leaving along the way. Much of the research on this topic is often small-scale qualitative studies which analyse the experiences of a few women, whereas large-scale quantitative research tends to focus on global studies, specific disciplines such as STEM, or the disparities faced by women at the top end of the career ladder in professorships.

Therefore, there is a place for research examining the gender diversity of PhD students, a crucial part of the pipeline, at the meso-scale of the disciplinary, institutional, and departmental levels. Using British Library's E-Thesis Online Service (EThOS), which holds nearly 600,000 completed UK PhD theses, there is a unique opportunity to investigate how the gender balance of PhD researchers has evolved over time as well as across intellectual and geographical space.

Using name-to-gender inferencing algorithms, the gender of each PhD researcher will be inferred from the name associated with the doctoral record, which comes with ethical challenges, biases and

considerations, which I will discuss during this talk. These gender inferencing algorithms (GIAs) enforce a reductionist binary onto PhD researchers, can misgender individuals, do not include non-binary identities and often label Asian names as unknown. As part of this overall PhD project, I examine how we can evaluate and improve the use of GIAs when it is not possible to ask the sample to self-identify their gender (due to having a sample of size of approximately 600,000 people), by using ensemble methods approach and validating the GIA's predictions.

The talk will also discuss the initial findings of the research from the multilevel modelling procedure employed to assess the variation in gender diversity at differing scales within higher education such as disciplines, institutions, and departments to showcase the differences between STEM, Social Science, Arts and Humanities disciplines and departments to assess which patterns emerge.

Radical hospitality: Deconstructing language power structures in academia

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This paper focuses on the notion that linguistic hospitality is needed for academia to become inclusive and intersectional. It contributes to pedagogical discourse and critical feminist studies by arguing the necessity of opening oneself to academic voices needing to be heard. Drawing on Kearney and Fitzpatrick, this process is a narrative bridge which all cross to avoid linguistic imperialism.

Kearney (2021) states we have an ethical responsibility to open boarders, both physical and physic, to the stranger. Arendt's notion of linguistic power (1951), those who have the lingua franca can express themselves and those who do not are disenfranchised, feed into this. Translating from one language, lingua franca, to another, needs balance; relying too heavily on your mother tongue mean context and nuance from the original could be lost; relying too heavily on the original language could reinforce cultural imperialisms that make your mother tongue supine. In treating academic as a lingua franca, disciplinary language becomes a matter of who has the power to translate.

Butler observes that our ethical obligations to strangers, especially those we are joined with through circumstance, extend beyond our personal borders. We need to cross linguistic borders, to ethically create our own radical hospitality embracing the other, making our lingua franca accessible and hospitable without losing our own sense of identity. We must devise actively pluralistic institutions and polices.

This paper uses Kearney and Fitzpartick as a lens to explore the deconstruction of lingua franca barriers, to make academia a place where all voices can flourish pluralistically.

My PhD is research what impact legal digital literacy has on access to justice, using Kearny's work as a foundation.

Attendees will find a novel approach to feminist linguistics, namely that through radical hospitality lingua franca can be broken down and turned into a hospitable bridge over which all can cross both ways.

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An approach to investigate secondary school teachers' gender competence and gender stereotypes in physics

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Teaching in a gender-sensitive way is a challenging task, especially in male-dominated subjects such as physics. Research shows that the design of physics lessons in terms of forms of instruction, interactions, teaching materials and content used is mainly geared towards the interests and needs of boys and can thus disadvantage girls. In particular, these practices can perpetuate gender stereotypes and manifest gender inequities in physics classrooms. Teachers are challenged to counteract gender stereotypes and gender inequalities and to create gender-sensitive learning environments that foster the development of girls' and boys' interest in physics. To this end, they need situation-specific skills that involve perception, interpretation, and decision-making regarding gender-relevant aspects in the classroom. These skills are considered an important component of teachers' gender competence and are of particular interest in the context of overcoming gender disparities in physics education. However, little is known about teachers' gender competence in physics teaching. To pursue this question, this study aims to develop a test instrument that validly measures teachers' situation-specific skills with respect to gender-relevant aspects in physics teaching. In order to combine authenticity of classroom situations with standardization, a vignette test with 16 critical gender-relevant aspects was developed. The vignette test covers critical aspects from four facets of gender-sensitive physics teaching: (1) gender-sensitive forms of instruction, (2) gender-sensitive teaching of physics content, (3) gender-sensitive teaching materials, and (4) gender-sensitive interaction and feedback. In addition, a knowledge test will be used to assess teachers' knowledge of gender-relevant aspects of physics teaching. Furthermore, teachers' gender stereotypes will be investigated in more detail in this context, as it is assumed that these can influence teachers' situation-specific skills. The main study is currently being conducted at five universities of teacher education in Switzerland (n>400). In this contribution, an insight into the instrument construction is given and the preliminary results from the expert survey (n=6) and the pilot study with pre-service teachers are presented.

Study on Research Trajectories in CONICET (Argentina) from a Gender Perspective (1985 -2020)

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The National Science and Technology Council (CONICET) created in 1958, an independent organization under the scope of the Ministry of Science, Technology, and Innovation in Argentina, is present in institutes and universities along in the country. As a promotion agency, CONICET has had in its history a vast doctoral and postdoctoral programme as well as a Scientific Career that covers all fields of knowledge.

CONICET has long term experience in the evaluation of researchers. There are statutory procedures for engagement and promotion. To study the development of the institution, attention has been paid to trends in research assessment as well as differences between disciplines and areas of knowledge. However, only recently focus has been put on how trajectories are developed using "gender" as a variable.

In this framework, since March 2021 we have been engaged in the Project "Trajectories of researchers from CONICET 1985 – 2020". The study focuses on the trajectories of researchers in CONICET from a gender perspective.

This presentation aims to provide information on findings and methods. We will address the STEM fields and in comparison, to the Social Sciences:

- Trends in the number of men and women scientists at CONICET by gender and categories. In general terms, the population has been feminized in the last 15 years. However, trends differ according to areas of knowledge. Some still have male predominance (mathematics, physics, geology, and astronomy).

- Times for promotion in the different categories, identifying gender gaps. Women take more time to promote in all fields, even in those that had not to gender gaps by 1985. As a result, fewer women have access to superior stages of the scientific career.

- Analyse this information in the light of scientific policies held during this period, institutional governance, and evaluation.

Gender and Sexuality in the Science discipline: possible implications of the low production of educational products presented in professional master's programs in southern Brazil.

Borba, Edilce Maria Balbinot[1]; Hussein, Fabiana R Gonçalves e Silva[2]; Mocrosky, Luciane Ferreira[3]; Florczak, Marcos Antonio[4]

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This study shows a survey on educational products elaboration, in professional master's programs, specifically in the Southern region of Brazil, with Gender and Sexuality as theme. Its relevance is justified by debates at schools and the deletion of these terms in official documents that guide the school curriculum based on collective actions and reflections, in broader sense of building a liberating education. Thus, due to the increase in controversies concerning this theme and teaching, this research aims at analyzing the educational products obtained on CAPES platform (Coordination for Higher Education Staff Development) and find out professional programs in the Southern region that consider this theme. So, the applied following keywords were: Gender; Sexuality; Science teaching; Educational products, without setting dates. Of the four obtained educational products, only one, from 2017, presented an approach in education for sexualities and gender diversities, in addition to organic and preventive aspects, which provide several thoughts to the young people concerning women's condition in society, sexual prejudices, sexism and heteronormativity relationships. While products from 2013 and 2014 showed some approaches in organic and preventive aspects. According to the exposed ideas, there is a low production of teaching materials with the theme gender and sexuality, regardless of the aspects raised in those approaches, due to the current social and political context, which implied on educational policies formulation that influence academic production. This is one of several obstacles to an effective implementation of sexual education on the Brazilian education system. The low didactic production impacts on pedagogical practices of Basic and Higher Education and proves that the silencing or deletion of some themes in the school curriculum exposes the importance of Education as a political instrument to develop narratives that can impact future generations.

Symposium: Outreach initiatives to increase gender diversity in science

Chair: Soledad De Esteban-Trivigno

Wednesday, 14^{4h} September 2022, 10:00am - 12:15pm

ICC Project: a window open to the scientific literacy

Calonge García, María Amelia; Fraile Rey, María Aránzazu; Rodríguez Arteche, Iñigo; Ros Magán, Germán

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Actually, the interest in the integrated application of learning of different types has been highlighted in STEAM (English acronym for Science, Technology, Engineering, Arts and Mathematics) Education. In this way the objective of this work is to study the contributions of a STEAM teaching and learning proposal designed by a research group from the University of Alcalá and implemented with 70 students in the 4th year and 45 students in the 5th year of Primary Education.

Two surveys are conducted for teachers and students to explore the consequences after the implementation of the STEAM project and the acquisition of skills.

The results show that both teachers and students value positively the learning of new methodologies and the acquisition of skills. However, some specific critical competencies cannot be achieved because the project involves the typical difficulties of active teaching and learning strategies.

The students show difficulties when establishing debates about their results, communicating their experience and maintaining attention, while the teachers have difficulty conducting the session following a new methodological paradigm, they feel a lack of confidence and they observe that they lack the necessary tools to develop the project independently.

If we focus on the gender variant, we have been able to observe the significant involvement of the girls in all the jobs, although they say they have enjoyed working in a team less than what their male colleagues show.

The girls give a better value to the crafts subject while the boys to the technology subject, although the girls say they have enjoyed creating things with their hands and seeing how they worked, while the specific activities where these skills are revealed are better valued by the boys.

These first results could be related to the lower frequency with which girls play with the technology that is newer to them, but they seem less confident when they have to carry out these tasks. It is important to follow this line of research to find out the reasons for these differences and try to change this trend to guarantee equal opportunities among students regardless of gender.

"Ciencia en colores": an outreach project for a more diverse, open and inclusive science

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We'd like to present the educational project "Ciencia en colores", developed by the ALBA Synchrotron (Sincrotrón ALBA): www.albasynchrotron.es. The ALBA Synchrotron is a complex of electron accelerators, located near Barcelona, and one of the largest research infrastructures in the country.

"Ciencia en colores" is aimed at raising awareness among high school students on the importance of diversity in science (gender, race, capabilities, etc.), their active role and responsibility and the promotion of scientific and technological careers.

The project has been launched in 2022 and offered to 10 high schools in Barcelona in 2022 to students from 12 to 16 years old. It's organised in 2 sessions at the classroom, counting with the participation of scientific and technical staff from the ALBA Synchrotron.

Gamification as an education tool for gender equality in academia: The Talutiga virtual escape room

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On March 8, 2021, International Women's Day, UOC's Equality Unit launched Talutiga Mission, a virtual escape room based on cooperative gamification that, through a fictional story located in the outer space, would raise awareness about gender equality, and specially about the role of women in STEM careers.

The activity's final goal is reaching the unknown planet Talutiga, a challenge that can only be achieved through cooperation. At each level players must solve a puzzle containing subtext about the invisibility of women scientists, the gendered division of labour, the impostor syndrome or the importance of gender equality plans. The virtual game, which was only available through March 2021, had a great impact within the University community (students, faculty and administration, alumni) and beyond. About 2.000 people participated (which means more than 670 games played) and many positive messages were sent to the feedback mailbox.

In this presentation we argue that escape rooms are a powerful tool for the transmission of social justice and equality messages, as information is transmitted through play and affect and therefore, this generates a deeper integration of values. In addition, given that gender equality can generate backlash, we argue that Talutiga's science fiction type of scenario, which is never explicitly linked to gender equality, also allows for a better awareness raising impact. Finally, its virtual nature not only guarantees the possibility of gaming in a pandemic context but also allows for an international participation and interaction between digital players.

Museum on the Wheels – A scientific outreach attempt to eradicate prevailing fanaticism in rural India.

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"Museum on the Wheels – When you cannot come to the museum, the museum comes to you" is a brainchild project of Dr Sanjukta Chakravorti aiming to raise mass awareness about natural history and prevent religious fanaticism in India through a mobile museum hosting fossils and documentaries. Indian subcontinent is diverse and land of Gods. With 33 crores of Gods in Hinduism alone and 79.8% of the population practising Hinduism, 14.2% Islam, 2.3% Christianity, 1.7% Sikhism, 0.7% Buddhism, and 0.4% Jainism, there is no dearth of worship and sanctums. Often natural resources like vertebrate fossils are considered divine elements and are worshipped, thus restricting any further studies on them. Illiteracy especially in rural India, and blind faith resulting from socio-economic constraints are prime causes of it. Of the approximate 121 crore Indians, 83.3 crores live in rural areas while 37.7 crores stay in urban areas and the male literacy rate in India is 81.5% and the female literacy is 64.6%. In rural and urban areas, the literacy percentages are 53.82 and 75.96 respectively. Popular myths and superstitions regarding fossils prevail in rural India. Museum on Wheels aims to dispel these superstitions enabling the students, especially from rural areas and small cities, to distinguish facts from fiction, to know about geological processes, rich fossil contents and the necessity of conserving fossil sites. We aim to reach out to those who cannot visit the museums located in metropolitan cities. Field science and excavation are not very popular among Indian girls. This outreach project led by a woman field scientist inspires more girls to take interest in this field. Regular online sessions are arranged for different schools in regional languages to make the children, the future generations aware of the natural heritage and the importance of conservation. Knowledge of Earth history that is written in the geobiological record should not be a prerogative of the educated only but should also reach those closest to the Earth. Personal communication with village headmen and personal surveys show that our outreach attempts through audio-visual workshops and distribution of booklets create interest.

Outreach initiatives from Latin American: the Interactive and collaborative world Map of the Geographies of Sexualities

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Feminist Geographies and Geographies of Sexualities have been developing since the 1970s in different countries of the world. Although networks for study, political activism, and knowledge production have been created, it has been shown that is still necessary to map its geographical distribution in order to show how scientific productions and events, as well as social and political organizations dedicated to building feminist spaces, are distributed.

In this work, a brief history of Feminist Geographies and the Geographies of Sexualities will be presented. Then, the Interactive and collaborative world Map of the Geographies of Sexualities will be shown as an outreach initiative created in Latin America. The Map shows the location of scientific productions and political actions which are drawn from feminist and sexuality geographies in different areas of the world. The Map is regarded as an invitation to continue strengthening the networks between those who are dedicated to building geographical scientific knowledge and other kinds of spatial knowledge, from gender and or queer perspective. It is a collaborative tool in which any person or group could collaborate by uploading a form with information about their works (such as a book, an article, an event, or a demonstration).

The Interactive and collaborative world Map of the Geographies of Sexualities was created in order to make visible the contributions of feminist geography from any part of the world, because I firmly believe that, from a decolonial perspective, it is necessary to end the hegemony of Anglo-Saxon and global North productions.

Re-imagining STEM from a diversity perspective

Lopez, Diana E.[1]; Juvera Avalos, Janett[2]; Diaz Zepeda, Alejandra[2]; Gutierrez Franco, Elena[2]
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There is global consensus about the need to create spaces for girls and women in STEM. However, in practice these efforts are fractured. On the one hand, the systemic barriers that prevent the normalization of women scientists across the world are exacerbated in contexts dominated by 'machismo' and rigid gender norms, as in the Latin American case. On the other hand, the skills advanced by STEM typically focus on solving global challenges through technological solutions with few areas exploring collaborations with the arts.

Our work advances ‘diversity’ as a theoretical-practical tool to re-imagine the technological and androcentric model of STEM. That is, ‘diversity’ in its broadest sense from heterogeneous methodologies and perspectives to varied technological and artistic resources. Our work takes a feminist stance to advance diverse modes of thinking, conceptualizing and doing STEM in Mexico and in Latin America.

We ask: how artistic photography helps a chemical engineer to advance her career? What is the link between an entomologist and peasant women? How a podcast allows to understand the challenges of a transgender woman scientist? What does robotics have to do with music or statistics with drawing? How does the dialogue between feminist art and technology contribute to dismantle racial biases and normalized sexist practices in research? How can contemporary critical thinking help to redefine who is a ‘scientist’?

We echo Zafra (2013) when she says that "we want to bet for ways of doing, thinking and intervening that are more complex, critical and transdisciplinary.” Based on the voices and experiences of diverse Latin American women, we explore three possible spaces for transformation: at the individual,

community and system levels. Our work seeks to recognize the efforts of Latin American scientists, artists, activists and professionals to transform STEM and, in so doing, to inspire a new generation of Latin American women and girls. Above all, we aim to re-imagine a STEM free from hegemonic discursive frameworks and modes of thinking that inhibit creativity and meaningful collaboration between disciplines and peoples.

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Addressing gender gaps in the STI areas in South America: advances and challenges

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Science, technology and innovation (STI) is an area where gender gaps still persist in Latin America and the Caribbean (LAC) countries. While it is also an area where regional states have concentrated their efforts to reverse this situation, it is relevant to critically review the existing evidence on the improvements generated: where do these policies come from? Who and what drives them? What are the objectives they pursue? In order to explore the advances in our region in addressing gender gaps in the STI areas and the challenges that remain, we analyze two cases. Firstly, the situation of Argentina and Uruguay in terms of gender gaps in the areas of science, technology, engineering and mathematics (STEM), based on the comparative study of the diagnoses resulting from the international project SAGA (STEM and Gender Advancement), promoted by the United Nations Educational, Scientific and Cultural Organization (UNESCO). Secondly, the research and innovation for rural areas in national agricultural research institutes from LAC. In this sense, we provide some interesting examples of approaches to the impacts of scientific research with a gender perspective. As a result, this approach allows us to highlight the importance of including the gender perspective in policy making.

Symposium: Solutions to fight the structural discrimination against women: The case of maternity issues

Chairs: Mar Sobral, Sara Varela

Wednesday, 14th September 2022, 3:00pm - 6:00pm

Visualizing the barriers that mothers in science face, and discussing possible solutions: summarizing the experience from Argentinean academic mothers

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Mothers constitute a particular kind of scientific persona, as they face all the gender related issues that we women face, plus the extra challenges due to caring and raising children. It is time to bring upfront the invisible barriers that mothers face in science advancement and discuss current and possible measures that would help surpass such hurdles. In this talk, first, I will identify the structural and emotional barriers that mothers face and discuss how these may impact on their advancement in science. Then, I will delve into how other aspects such as career stage, economic situation, race, and disabilities of children, can further affect the success of mothers in science. Visualizing the barriers that mothers face is the first step in proposing solutions and to know what to expect and what you will face when you become a mother in science. Solutions to fight the invisible structural discrimination against mothers, and that would increase equality of opportunities: include i) paid maternity leaves ii) contemplate reproductive costs in grant calls, prizes, and promotions, iii) increase onsite day care facilities, provide economic support for day care, iv) add the number of kids in the curriculum vitae, v) provide milk expressing facilities, vi) allow flexible time tables and home office, among other. I will discuss which of these solutions are currently ongoing in the Argentinean Science National Council, CONICET, and Argentinean Science Agency, and which improvements are still needed to have a more inclusive science. Furthermore, I will share my experience as a mother and that of my peers that are mothers (mostly from Argentina, but also from abroad), our needs and suggestions that may help future mothers in science to surpass the barriers found along our academic journey. Finally, I will show which nonprofit organizations and groups in Argentina in particular (and elsewhere too) assess the impact of parenthood in the scientific career.

The impacts of silent motherhood

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The impact of motherhood on a researcher's life and career extends beyond the responsibilities and care of the born children. Silent maternities, those desired and not achieved, while invisible to the eyes of society, can have a strong impact on an academic career due to their physical and psychological repercussions: long term fertility programmes, multiple miscarriages or mortality at birth are some examples. In this talk, I will discuss the factors that hinder the visibility of these situations and their impact on women's careers. I will also discuss why it is important to start making these situations visible and what kind of administrative and institutional measures can be implemented so that the impact of silent motherhood on the CV is not hidden, but taken into consideration when assessing a woman's research career.

Barriers to Motherhood and Discrimination of Female PhD Students in Engineering

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Higher educated women working in academia face a wide range of discrimination during their academic advancement, particularly while they try to harmonise motherhood and professional career. Barriers to motherhood stem from both the neoliberal agenda of universities that have also reached former socialist countries and from the prevailing traditional gender and family norms in the society. Gender-based discrimination has still been one of the most frequent grounds of discrimination in Hungary. Moreover, the proportion of women researchers employed with precarious working contracts is the highest among the EU member states and is three times higher among women with young children than among young fathers. Discrimination and the realization of family and career plans can be particularly challenging for women in high-skilled professions in male-dominated STEM (science, technology, engineering and mathematics) fields. Meanwhile, qualitative studies, particularly in the Central and East European context, are scarce on how fertility intentions, motherhood, and the characteristics of STEM fields intersect in female academics' life. Based on 27 semi-structured interviews, the aim of the presentation is to highlight the different types of discrimination experienced by female PhD students in the field of engineering. We will show how even highly qualified women face contractual segregation, biased evaluations, sexism, and the devaluation of women's knowledge in their chilly masculine environment. These factors generate a high labour market and academic uncertainty and send the message that STEM fields hardly support the harmonisation of motherhood and career. Results offer several intervention points for stakeholders.

Maternity issues related to the attendance at scientific conferences

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Attendance at scientific conferences is vital for academic researchers and their career development. Not only for being updated on the last advances in a specific scientific field, but conferences are also a perfect arena for the exchange of ideas, personal interaction and networking. This is especially important for young scientists that are searching for new positions or interested in enriching scientific collaborations. Although parenthood is a challenging change of life phase for all academics, there is an increased difficulty for nursing mothers to attend scientific conferences, which is known as the "baby penalty". Having a recently-born baby creates a clear handicap for traveling long distances or attending talks for long days. If the baby is breastfeeding, there is a physiological need to be close to the mother or that she does milk pumping. It is also typically necessary that the nursing mother has an accompanying person that helps in the baby's care, which increases travel costs. As a consequence, attendance at conferences has serious economic and logistic restrictions for mothers, with harmful consequences for their careers. In this talk, I will present several study cases of international conferences in the field of Ecology, critically analyzing their family-friendly policies. In general, most part of organizers fails in considering childcare, breastfeeding options, participation of children in social activities, or economic support for nursing mothers. Finally, I will describe a shortlist of recommendations for organizers of scientific conferences to encourage the attendance of mothers. Having more inclusive conferences that facilitate the attendance of scientist mothers is a win-win situation: it reduces the bias against female scientists and increases diversity and equity in science.

Motherhood as a political act: a look from neurodiverse upbringing.

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In the presentation to be made, we will address the barriers to which women are subjected since we are pregnant mothers, the maternity leave that must be paid but depends on the type of contract in which you are at the moment before informing that you are pregnant, the adaptation of the maternal to the investigative role in scientific women, and we will reach diverse and neurodiverse motherhood from the upbringing with boys and girls who leave the mold of accepted normality, in particular we will address early childhood upbringing from infancy dissidents, childhoods with neuropediatric diagnoses and how mothering becomes political, educational, feminist activism, where childphobia is fought in the midst of an adult-centric, patriarchal and misogynistic society.

Experiences and stories based on interviews will be exposed in a simple way through the question/answer format.

Collaborative couples in science - plugging the leaking pipeline?

Fauvelais, Manon[1]; Velicu, Antonia[2]; Jerke, Julia[2]; Rauhut, Heiko[2]; Lemaitre, Bruno[1]

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The under-representation of women in academia is a persisting issue that manifests itself in the so-called "leaky pipeline", describing the declining proportion of women in higher academic positions (European Commission, 2019). It is also well established that women's careers are more negatively impacted by parenthood than men's (Correll et al., 2007). A major reason for female scientists dropping out of academia may therefore lie in the difficulty of balancing a successful academic career with family life.

Even though it has often been observed that scientists tend to form relationships with each other (e.g., Pycior et al., 1996), there is only few research addressing the role of homogamy, i.e., couples with comparable educational backgrounds, on academic careers and success. With this in mind, we ask: Could homogamy mitigate the motherhood penalty?

We draw on the recent survey “Academic career, partnership and family”, conducted by swissuniversities in 2021 and completed by 6’067 scientists (Liechti et al. 2022). Within the survey, scientists were asked to evaluate the impact that having children has had on their career. We find that while female scientists evaluate the effect of children on their career much less negatively when they are in a homogamous relationship, the exact opposite is observed for male scientists. They report their career being more negatively affected when their partner is in academia as well. Our most prominent results show that household and childcare duties are more equally distributed across partners in homogamous relationships, which thus reduces the “motherhood penalty” and benefits women’s career.

Insights from our study will provide valuable learnings on maternity issues and will be able to suggest widespread implications on how to improve rigid structures.

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Fatherhood in academia. Innovative scientists, innovative fathers?

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Several studies, across many fields and countries, show the unequal impact of parenthood in academia and the existence of motherhood penalty. While the experience of working parents in universities remain gendered, research in Western countries have illustrated changes in parenthood. In Italy these changes are less pronounced than in other countries, but skilled fathers with flexible working hours in the public sector have been in favor of greater involvement in childcare. Fathers' experiences in balancing work and care responsibilities in academia are less investigated, and a lack of appropriate data has prevented the comparison of fathering in different academic career stages and research fields. The aim of the paper is to investigate the practices and representations around fatherhood in academia, by focusing on the experiences and narratives of men with or without children at different career levels in Italy. Using 80 in-depth interviews with male professors, research fellows and key informants in four Italian public Universities, we ask to what extent changing norms of fatherhood and academic workplace affect men working in a highly male-dominated career and what variation exists across STEM and SSH fields. The interviews have been realized in 2020-2021 within the wider research project of relevant national interest "GeA – Gendering Academia". Reflections on the construction of science and knowledge as well as of fatherhood expectations and fathering practices emerged. Results show that work-life balance conflicts are perceived by both fathers and men without children, drawing critical problems on parenthood penalties and inequality in science and academia. Looking at work-family balance, instead, on one side, it emerges that the precarization of early career stages forces men – similarly to their female colleagues - to postpone parenthood or even to choose childlessness. On the other side, unlike mothers working in academia, fathers' most common reconciliation strategy is to delegate care tasks to other caregivers and to embrace models of "the good father provider" and "ideal academic". Our results allow to reflect upon possible solutions and policies to reduce structural discrimination of mothers in academia by fostering paternal involvement in childcare, to change both practices of parenthood and workplace cultures.

Tips for a mom-friendly lab environment

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Maternity has been identified as one of the main obstacles for women researchers to continue and grow in a scientific career. Based on our experience as mothers and scientists, in this communication we share tips to conciliate academic and family lives and identify important points that research labs, research centers and universities may adopt to help researchers conciliate maternity and science. These include limiting research meetings to school times, giving flexibility in working schedules, allowing remote working, technical support for laboratory or fieldwork activities incompatible with pregnancy or promoting the creation of daycare at the working place. We hope these tips will help to increase not only the presence of women in science but also more friendly working environments.

Symposium: Gender bias in neurosciences

Chair: Paula González

Wednesday, 14th September 2022, 5:00pm - 6:00pm

Negative impact of neurosexism

Kochen, Silvia

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In the present century, new advances in diagnostic methods, especially brain MRI, have been used to carry out scientific fraud and consolidate negative stereotypes of women. In this presentation, the methodological and theoretical flaws of such studies are examined. We consider this is an essential purpose for the training and dissemination of the scientific evidence available in the general population, especially among students, teachers and researchers, and decision-makers in different areas. As a contribution to gender equity in Sciences and Technology, we carry out an annual cycle of conferences, "Women and Brain, myths and realities", in virtual format, which is freely available for those interested [https://www.youtube.com/watch?v=5YfYmDotPaQ]

Towards the end of binary neuroendocrinology

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Science builds tales to interpret how living beings and the world function. These tales are not stripped of ideology and reproduce the system of gender inequalities. One of the great accounts of neuroendocrinology divides sex hormones into female and male hormones. The best known related to the former is estradiol and to the latter, testosterone. The account establishes two different hormonal systems for two different types of body, which have different abilities and brain capacities.

Testosterone is responsible for male virility, aggression, strength, spatial orientation and sexual attraction to females. The account embodies in testosterone the cultural pattern of masculinity, which in turn legitimizes it as a scientific matter. On the other hand, estradiol became the symbol of femininity, always related to the sexual cycle, maternal instinct, verbal skills and emotional instability. Estradiol and testosterone emerge as a binary, dichotomous and antagonistic pair that validates the hierarchical gender system and heteronormativity.

But, is this the only possible account of the hormonal system? Of course not.

Steroid hormone synthesis shows that testosterone is converted into estradiol by the enzyme aromatase. This enzyme, which is present in both males and females, challenges the binary hormone division. Moreover, many studies show that the actions that classical endocrinology attributed to testosterone, are in fact actions of estradiol produced by aromatase. On the other hand, females also produce testosterone whose blood concentration is higher than that of estradiol. Furthermore, testosterone has functions in the female sexual cycle. The scientific account should consider the estradiol/testosterone ratio instead of dividing them into male and female hormones. Estradiol and testosterone are two different hormones that act together regulating physiological functions in both sexes.

Breaking with the gender symbolism of the binary neuroendocrinology account is essential for the scientific discourse to stop being the gender hierarchy system´s accomplice.

Athletic events: sport, gender, and mentalized bodies

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In this presentation, I intend to deepen from Gender Studies on the mind-body relationship in those areas where segregation by sex is usually justified according to the widespread idea that genitality explains the binary distribution of certain psychological states and behaviors. Specifically, I will address the current Olympic regulation and its legitimation regarding the causal link between testosterone and athletic ability. I will incorporate the idea of events and mentalized bodies to reinterpret this link within the framework of gender regulations.

Does algorithmic bias affect our Human Rights?

Danesi, Cecilia Celeste

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A logical consequence of algorithmic bias is the violation of Human Rights. We are going to mention just two.

Algorithmic bias and discrimination: Algorithms are trained and learned the social stereotypes. This takes place due to biased dataset (normally no representative), no diversity in programmers' teams and no control during all AI life cycle. As a result, for example, social media becomes a scenario where stereotypes are fixed and, consequently discrimination is a general rule with no legal consequences. A clear example is Twitter saliency algorithm, which chose white faces as a relevant part in the miniature´s pictures.

Rights to freedom of opinion and expression: social media algorithms increasingly dominate how individuals' access and share information and ideas and how news is disseminated. Users are silenced without realizing of it and without any explanation. The platforms have the monopoly of the speech and they do it through its algorithms which decide what can we say or what can we debate. This happens in a dark scenario where rules, governance models and algorithms are unknow, and even more worrying, it is done in an imperceptible way. The impact on our rights to freedom of opinion and expression is obviously direct.

What could be the solution? To begin with, the problem is not technology but how it is used. The EU issued the proposal for regulating AI. The aim of the document is to ensure that AI systems used in the EU are safe, transparent, ethical, unbiased and under human control. Therefore, they are categorized by risk: Unacceptable, High risk, Limited risk and Minimal risk; each of them has to comply with different requirements.

The "AI Act" has interesting rules which focus on preventing algorithmic bias, especially in High Risk systems. For example, it says that training, validation and testing data sets shall be subject to appropriate data governance and management practices, which has to include examination in view of possible biases. It also requires: transparency and provision of information to users, human oversight and accuracy, robustness and cybersecurity.

Is the proposal enough to combat algorithmic bias?

Symposium: The gendered science

Chair: Miriam Comet Donoso

Thursday, 15th September 2022, 10:00am - 1:30pm

Sex and gender reporting in Australian health and medical research publications

Hallam, Laura[1,2]; Vassallo, Amy[1,2]; Hallam, Clare[2]; Thompson, Kelly[1,3]; Shanthosh, Janani[1,2]; Chappell, Louise[2]; Wainer, Zoe[4,5]; Norton, Robyn[1,6]; Woodward, Mark[1,6]; Carcel, Cheryl[1]

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Women have historically been excluded from medical research. Many medical researchers rarely consider the impact of sex and gender in their studies, despite increasing evidence demonstrating disparities and differences in diagnosis, progression, treatment, and outcomes of many health conditions, as well as health behaviours and access and acceptability of healthcare. While some countries have developed policies to promote diverse representation in research and consideration of sex and gender in research design and reporting, Australia does not have a cohesive approach to mandating, or even promoting, sex and gender incorporation into research. This is despite half of the top ten Australian medical journals endorsing the International Committee of Medical Journal Editors (ICMJE) guidelines, which contain criteria for inclusion, data collection, reporting and analysis by sex and gender. We conducted a retrospective analysis of 1136 original research articles published in these ten journals in 2020 to determine how sex and gender were being incorporated into medical research publications and whether endorsement of the ICMJE guidelines improved incorporation of sex and gender in publications. Sex and/or gender of research participants was highly reported (88%), but largely with conflicting terminology and only in binary categories, failing to capture gender-diverse individuals. Only 2% of included study populations were limited to a single-sex and/or gender; however, frequently less than 40% of participants in studies were women. Results were disaggregated by sex and/or gender in only 29% of studies and the discussion of the influence of sex and/or gender on the results was present in only 17% of studies. There was no significant association between endorsement of the ICMJE guidelines and adherence to any of the sex and gender criteria. These policies need to be supported by capacity building and education about sex, gender, and health and how these can be investigated with suitable research methods, with gender-sensitive and intersectional approaches. This will enable the research sector to improve the integration of sex and gender, collect inclusive data about all populations, identify relevant differences, and inform health agendas to achieve equitable outcomes.

Science for all; all for science - Why should men have all the fun?

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Ethnicity and cultural bias play a key role in shaping the minds of women in developing countries. 43% of the total and 14% of students graduate in science, technology, engineering and mathematics (STEM) pursue research. There is a general trend among majority women to imagine themselves as incapable of scientific activities and research. This huge disparity begins at a very young age. Science, is not a subject of nobility nor is it for some specific category of people. Science is for all. All for science. For decades we have witnessed women working hard and making their way in all spheres. The biased thought that only men are capable and skilled enough to perform scientific research is the foundation of gender inequality and sexism even in the scientific community. The rural communities treat women like commodities even

in the 21st century. They are, sometimes, not even enrolled in schools. Research says that the cognitive abilities of women are different than that of a man sometimes more thorough. Given proper exposure and temperament, women in STEM shall come up with newer ideas and abilities. In India, the sex ratio of men to women has increased but this shall not guarantee a healthy competition or proper growth of rational mind among the men and the rest of the society. Only a very small number of women pursue a career in STEM. Only few are believed to possess a scientific temper. Women are deprived of the field jobs almost 99% time. To eradicate sexism in the scientific community proper awareness programmes relating to gender issues should be addressed. Males of the society should be given insights from the works of women scientists all over the world. Overlooking the achievements and the massive capabilities of women to carry out successful projects in every discipline is only making the scientific community evolve at a much slower pace. Collaborating with like-minded people and teaching and exposing them to insightful studies and practices will build up a stronger scientific community and bridge the gap.

Mapping reasons for “dropouts” and depression among women scientists in developing countries - entangled knots in Rapunzel’s cascading hair!

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Being a woman in STEM has its hurdles and barriers to break. However, it gives a true picture of the “society” that we are in. According to the UNESCO Institute of Statistics (2019), women account for less than 30% of the researchers worldwide. While India witnesses a positive trend of gender parity in science education, there is a fall in women’s participation in higher science-related careers. Less than 15% of researchers in India are women, while women constitute only 26% of the STEM-related workforce in India. Despite several programmes by the government as well the UNESCO, question remains why women are dropping out? 'Patrifocal' ideology in workplace and family, gender-related difficulties at work result in stress and depression. The number of women studying STEM sciences remains drastically below par that of men. There is a drastic decrease in the percentage of women from the doctoral level to the scientist/faculty position suggesting a bottleneck at the employment stage due to recruitment procedures, policies and family responsibilities. Another issue is the attitudinal barrier; the belief that men are better suited for highly skilled tasks and advanced technologies. Also, what remains behind the curtain is sexual harassment. Though laws are prevalent against sexual harassment of women in the workplace the enforcement of the law still is a slippery floor. Developing countries are still to a great extent orthodox in their approaches towards women. A harassed woman is often subjected to immense social shaming. Peer pressure and social isolation raise to such an extent that it is a regular affair for harassed women to drop out of their careers to retain “social” prestige. Another naked truth is several women scientists quit research because of institutional policies rather than an inability to balance family life and scientific career. Mapping and networking all problems and analyzing case histories give a complex socio-economic and socio-cultural model that needs a holistic unbiased selection category for women in STEM ideally free from nepotism and sexual harassment. Theoretical laws cascade like Rapunzel’s hair but the underlying knots need to be resolved with person-specific uniqueness to bridge between theory and reality.

Gender Bias in 3D (bio)printed tissues: A Challenge to Personalised Medicine

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Introduction: Research shows that women’s bodies, activities, and experiences tend to be overlooked and not included in the design and clinical use of medical implants and organs which have led to disproportionate harm to women compared to men. In this article, we explore to what extent gender

differences may be reproduced in new personalised technologies such as 3D (bio)printed tissues. When engineers, researchers and clinicians do not sufficiently account for human diversity, like gender, in the design of (bio)printed tissues, this could lead to gender bias. We will illustrate this using the examples of personalised 3D bioprinted organs and personalised 3D printed bone implants.

Method: We conducted a narrative review, searching multiple databases with a search focused on gender, sex, 3D (bio)printing, organs, tissue, and implants. The included articles were analysed and divided into several phases along the lifecycle of the two different examples.

Outcome: Gender differences mainly occur in the workings of the body and their effect on the 3D (bio)printed tissue, the choice of design, cells and (bio)materials. Furthermore, we found the possibility of gender bias during the testing and clinical phase. Finally, gender bias interacts with economic imperatives.

Conclusion: Personalized techniques such as 3D (bio)printing alone do not eliminate gender bias. Gender considerations should be included into every step during the lifecycle of 3D (bio)printed tissues. Additionally, the current knowledge about gender aspects is focused on differences between men and women. In the future it is necessary to consider differences between people of all genders.

A Gender Approach to Oncology: individual, organizational and instituional obstacles. An italian Case Study

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Since the 1990s, the debate on gender medicine has questioned how to consider sex and gender differences in the biomedical practice to ensure more effective and safer diagnoses and treatments for all, men and women (Oertelt-Prigione, Regitz-Zagrosek 2012). While pointing out to numerous sex and gender biases in research and clinical practice (Ruiz, Verbrugge 1997; Hamberg 2008; Risberg et al. 2009), the literature also proposes a set of tools and guidelines to make the inclusion of a gender lens in medicine effective (Schiebinger, Klinge, 2013; Clayton, 2018).

Based on the data collected at the European Oncological Institute of Milan, the research sheds light on the individual, organizational and institutional obstacles preventing the adoption of a gender approach in biomedical research and clinical practice. These obstacles are reproduced at different (micro, meso and macro) levels and include, among others, epistemological factors, methodological constraints, the way the clinical and research work is organized and normed, institutional regulations and policies of biomedical research, as well as the research funding system. Such heterogeneity calls for the need of more structural and complex interventions to promote the genderization of research and medical practice.

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Gender bias in the Ph.D. theses within the optics and photonics disciplines in Spain

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Some gender stereotypes associate attributes like brilliance or genius with men more than with women. This produces a biased system transversal through all areas, becoming more important in science, technology, engineering, and mathematics (STEM). In this work, we evidence that these gender stereotypes are not only a general bias for STEM vs. social, art, or human sciences but, even within the same field, there exist differences between the topics that attract the interest of women. To do so, we analyzed the Ph.D. theses defended in several subfields of optics and photonics from 2015 to 2020 at public and private universities in Spain.

To ensure an open and reproducible result, we have used the open database TESEO from the Spanish Ministry of Education where all theses are registered and each user can choose up to four keywords classified according to the UNESCO nomenclature (an international standard nomenclature used for the classification of research papers and doctoral dissertations). With the information from TESEO using a total of 80 UNESCO codes related to optics and photonics, our own database was elaborated including the code and name of each descriptor, the name of the thesis author, the title of the thesis, the year of defense, the university, the doctoral program and the kind of the thesis (clinical-bio or technical-fundamental optics). The gender of the doctoral researcher was inferred from their first name, thus we cannot consider non-binary gender in the study.

We obtained that less than 40% of women choose descriptors related to optics and photonics. Moreover, if the topic fits with the clinical-bio kind, the percentage of women increases but if it is related to technical-fundamental optics kind of thesis, this number of women goes down dramatically. It confirms that gender stereotypes remain hidden in our society, which influences the scientific community. Our results pave the way toward further studies and measures addressing implicit gender-based associations to eradicate gender inequalities that exist even within a particular STEM discipline. Similar data analysis can be extended to other stages of the scientific career, or to other specific scientific areas beyond general categories.

A new perspective on Physics for undergrads: Escola d'estiu de dones en física

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A very critical point for women in STEM is at the end of their formal training, when they have to decide whether or not to start an academic career. Their talent is unquestionable, yet it has been seen and demonstrated repeatedly that as we advance up the academic hierarchies the presence of women, in Physics in particular, is drastically reduced. The reasons for them to quit their careers are diverse, among which we can highlight a hostile environment that erodes their self-worth and makes them believe they are not valid enough to continue.

With the goal of increasing the opportunities in research and academia for the female students who are interested in this path, the Escola d'estiu de dones en física (Summer School of Women in Physics) will be held this year for the first time in Barcelona, as collaboration amongst Universitat de Barcelona,

Universitat Autònoma de Catalunya and Universitat Politècnica de Catalunya. This project, at Catalan level, is a continuation of the European project Erasmus+: Diversity in the Cultures of Physics: A European Summer School Curriculum, which ended in 2019, after three editions of the summer school with very positive results and very positive feedback from the participants. The school aims to show students what is done in the faculties of Physics and to present physics as a profession with gender perspective. To achieve this, it combines talks focused on the functioning of the university and the research that is developed there with other talks on philosophy and feminist history, also including workshops of personal and collective analysis and visits to research laboratories. Throughout the two weeks of the school, students can interact directly and easily with professionals, predoctoral researchers and professors that would not have been otherwise readily accessible; in addition, they have constant presence of the organizers with whom they can share their experiences.

In this talk, the Catalan Summer School of Women in Physics curriculum will be shared, and the feedback from the participants will be discussed.

If Monique Wittig had been a physicist

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Some reflections and interpretations of reality provided by the theoretical aspects of feminism, such as feminist theory and feminist epistemologies, have logical, structural and conceptual parallels with quantum physics. "It is oppression that creates sex, not the other way around." With this statement, Monique Wittig argues against the idea that gender is a consequence of sex, offering the possibility to think about sex as a consequence of gender. I align this idea with the concept of collapse in quantum mechanics where the need to understand the result of the measurement as a consequence of it, is not only a philosophical interpretation of a scientific theory but an observed effect and something necessary to the same scientific theory. This way, even though quantum mechanics was constructed conditioned by cultural context and social values that deem it as social-free inside a masculine scientific narrative, it can be used in a new cultural and social context, a feminist one, to talk about gender. Building bridges between different disciplines (like feminist theory and quantum physics) could potentially change the access, participation and construction of knowledge.

Woman's Weeds: from mediaeval cunning women to 19th-century feminist botany, the origins of women in STEM

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In the 18th and 19th centuries, one of the few branches of scientific study that was considered within the purview of 'ladylike' pursuits was the study of botany and its attending botanical illustrations. This led to many women becoming quite adept at the creation of detailed and accurately articulated botanical images, which were often used in reference publications without credit. This is only one example of the silenced histories of women's roles in scientific study and medical practice. The connection between women and plants was not an 18th-century construct. There has been a long association with women and herbal practice that can be traced back to the role of female healers in mediaeval and early-modern European communities. The study and classification of plants wasn't initially considered its own separate science, just part of the fabric of nature as a whole.

History has mostly been written by men. And going back before the early modern period, these histories were written specifically by men of the church. This has led to an exceedingly skewed view of the role of

women in history. 'Feminism' is not a 20th century concept. Women have been making their mark for millennia, these stories have simply not made it into our common historical narrative.

My first aim with this project is to redress this poor retelling of history, highlighting the important role women have played in botanical (and therefore medical) research and development. Alongside the stories of women, those of non-binary persons and people of colour have been overlooked—or, more accurately, actively suppressed—by a white, male, religious view of historical events. While this project is aimed at women's history in herbal medicine, I will be actively looking for all silenced stories along my research journey.

This research is undertaken as part of a one-year Arts Council England funded project delving into the hidden origins of women in medicine and the botanical sciences. This wider story is beyond the scope of this preliminary research paper; this paper instead aims to share these preliminary research findings with the aim of posing questions and provoking conversation.

Diagnosis and pedagogical proposals in an experimental science subject based on feminist perspective

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Introduction. The catalan law 17/2017 with its article 28.1 together with the instructions stated by AQU's demand to universities the introduction of the gender perspective in a transversal way. When applied, the measures are very generalistic, not very specific for each discipline nor in the classroom experience.

Goals. To explore the grade of gender perspective in experimental science; create pedagogical feminist proposals based on the needs detected and to evaluate their effect.

Methodology. Sequential QUAN:qual study in 3 phases (diagnosis, creation of pedagogical proposals and evaluation). Context and participants: students and teachers of the Biotechnology in the UB. Variables and collection tools: sociodemographic by means of a survey; student's participation in the classroom by means of direct observation; perception of the gender perspective by class observation through standard template.

Results: Phase I: Regarding the participation in class, the questions that the professors ask the students are answered by men a 70%. Regarding the perception of the gender perspective, the 30% of women do not feel their needs are covered in relation to methodology vs 17% of men. But, meanwhile a 68% of men find the lack in very few classes focused on extension and specific knowledge, females wish for more opinion spaces (31%) and from knowledge created by the students (37,5%). Phase II: Pedagogical proposals focused on a change of methodology, promoting new ways of participating in the class; Phase III: The participation in the questions asked by the professor is in women 44% and men 56%. Regarding the methodology used, it increases significantly in women (94%), while it decreases in the male-student (59%).

Conclusions. The direct implementation of feminist practicum can be: include different referents in science, taking into account the opinion and needs of the group from a class exploring it at the beginning of the subject; asking for and adjusting the pronouns and blurring the generic masculine in favor of an inclusive plural; or diversifying the type of classes... influencing in educational strategies seems to generate a positive change in the perception of the subjects on the students who identify as women or dissenter.

Promote scientific culture in girls to transform science

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According to Nussbaum (2002) all human beings tend to develop their capacities to the maximum for their development, however, we see how there is a blockage in this development in the participation and choice of scientific-technical disciplines when it comes to the female gender. Already in the selection of the baccalaureate modality, a horizontal segregation occurs where girls tend to choose a social modality instead of the scientific-technical (Generalitat de Catalunya, 2020). This phenomenon makes it our duty to ask ourselves, when and why does this happen? Studies indicate (Bian et al, 2017) that from the age of six, perceptions of science are gendered; girls feel intellectually "less bright" than boys because the infants associate the "intelligent and bright" roles with the male gender. Consequently, girls are not considered capable of those areas of knowledge that are socially considered to require more “intelligence”. This fact cannot be due to brain differences, since numerous studies, including those by Fausto Sterling (2006), explain that it is not cerebral sexual dimorphism, but that cognitive development is in line with the stimuli that are offered and the lived reality of each person.

This paper presents the experience developed by Luciferases association to create scientific culture in children from 6 to 12 years old. The objectives to be achieved are: a) to generate a participatory environment associated with scientific culture; b) reconstruct the gender roles that exist around those who do science, c) make women scientists visible and d) understand the importance of these women in the construction of knowledge.

The process of creating these workshops and the results obtained, opens a path to promote scientific vocations, break the gender gap in science careers and transform science towards a more plural and robust knowledge.

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Symposium: Past, present and future of women and gender studies in Archaeology

Chairs: Ana Galán López, Ana Abrunhosa, Joana Valdez-Tulle

Thursday, 15th September 2022, 10:00am - 2:00pm

We are the Spark: feminist struggles against discrimination in archaeology

Algrain, Isabelle; Mary, Laura; Pasquini, Béline; Vandevelde, Ségolène
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In the early 2000s, the American archaeologist Margaret Conkey asked: has feminism changed archaeology ? Twenty years of struggle later, it is clear that we are still waiting for a structural change. Yet the numerous publications and testimonies show that systemic violence does not spare our profession : wage inequalities, gendered division of labour, glass ceiling, paternalism, teasing, insults, harassment, sexual and physical assaults, etc. Paye ta Truelle is a collective project created in 2017 which fights for equality and diversity in the world of French speaking archaeology. This effort is carried out on two fronts: the promotion of studies related to gender archaeology and the call for awareness of discriminations (sexist, racist, classist, homophobic, biphobic, transphobic, ableist) with the aim of dismantling them. This paper aims to give an overview of discriminations in archaeology and to present various actions carried out within the framework of the collective since its creation.

The "romanticization" of archaeology and restoration. Making masculinity visible in gender(ed) relations on sites

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Constructions are one of the most male-intensive industries in most countries. The international literature studied the experiences of its female workforce, chiefly promoting discussions on the socio-cultural and economic barriers faced when entering and establishing a career in the industry. Moreover, the role of workplace culture in (re)producing (in)direct mechanisms of exclusion has been discussed, together with informal institutions' ability to obstruct concrete gender equity notwithstanding the adoption of (sector-specific) equity policies.

However, Italian scholars neglected constructions' female workforce and predominantly dealt with the industry's problematic tendency to rely on migrant (often irregular) workforce and on the role of informal networks in supporting the reproduction and diffusion of undeclared working praxes.

Therefore, this research was carried out relying on the approach provided by gender studies and intersectional theories, to understand the ways in which renown socio-cultural barriers and challenges are perceived and tackled by women and men entering and establishing a career in the Italian building industry. To overcome the limits of previous studies and making "masculinity" visible within the gender(ed) relational dynamics, semi-structured interviews with male and female workers, professionals, and entrepreneurs working in constructions were conducted; alongside, participant observation was carried out on sites, at public events, and online (Instagram), embracing the quasi- or rapid-ethnographic method. Attention was especially paid to reflect on the construction of "masculinity" and "femininity" on sites, as discursive and narrative analysis were employed to analyse the gathered data.

Findings show that the "romanticization" of female-intensive professions, especially restoration and archaeology, is associated with discourses emphasising women's "natural inclination" towards nurturing and caring behaviours. This narrative: i) leads to the underestimation of the health and safety hazards to which archaeologists and restorers are exposed in their everyday practices; ii) subordinates women's

sense of belonging to the industry to their conformity to the traditional gender roles and expectations and confines them in particular, "feminine" niches of production; iii) provides a possibility for openly discussing about the presence of homosexual men in the industry, due to their "lack" of masculinity.

Dissident archaeologies: challenges for caregiving in academic practice

Pastor Pérez, Ana[1,2]; Rasmussen, Josephine Munch[1,3]

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The Norwegian and Spanish academic archaeological ecosystem is male, white, cisgender and fosters gender and non-gender inequalities and spaces for the perpetration of harassment. The main victims of these patterns of behaviour and of this stratification system are women and gender dissidents, particularly from underrepresented minorities. This paper examines how structural violence has been implemented in archaeological academic practice and career patterns. To this end, different elements that allow us to map and understand the most common practices of workplace and sexual harassment in our profession will be proactively analysed. The aim is to explore proactive solutions to mitigate embedded misconduct practices through the configuration of guidelines based on the ethics of care in the profession.

Feminist perspectives in action: looking for the social impact of gender archaeology

Gonzalez Marcen, Paloma[1]; Soler Mayor, Begoña[2]; Rísquez Cuenca, Carmen[3]; Sánchez Romero, Margarita[4]; Jardón Giner, Paula[5]; Delgado Hervás, Ana[6]; Prados Torreira, Lourdes[7]; Cid López, Rosa[8]

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In the last decade there has been a significant growth, both qualitative and quantitative, of academic contributions in the field of gender archaeology. However, if we assume that the development of gender archaeology parts of a search for a critical and informed representation of gender, and particularly women, in the historical narratives, broadly understood as instruments of knowledge, reflection and action, there is surprisingly little and / or poor visibility of gender perspectives in the field of so-called public archaeology.

In this presentation we intend, first, to reflect on why the journey from feminist activism to gender archaeology seems to have become a one-way one, with few return tickets; secondly, we want to discuss the academic difficulties that activist researchers may encounter for making their actions both visible and relevant, and, thirdly, to provide examples and proposals for a higher incidence of gender archaeology in different areas of contemporary society.

Representations of Women in Prehistory: Museum narratives

Vale, Ana Margarida

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This presentation aims to analyse the representation of human beings in Prehistory in Portuguese archaeological museums, and asks, what images are possible, considering that the way we represent the past shapes its construction?

In many museums, prehistoric objects are accompanied to varying extents by illustrations of life in the past, creating narratives of men and women aligned with gender categories based on a binary system. As

these categories correspond to the physicality of the body, they are seen to be natural, biological and universal. This analysis will seek to understand our dependence on the distribution of different roles according to biological sex, gender and age. To do this, images will be presented and discussed, and the articulation between the visual discourses present in museums and the scientific discourses within the discipline of archaeology will be analysed, considering the importance of the illustrative images exhibited in museums.

Tackling the problem of the dual division of biological sex with which studies in prehistory necessarily deal with, the possibility of constructing past narratives taking gender into consideration will be considered and the creation of more inclusive and equal visual discourses about the prehistoric past will be discussed.

Gender, ethnicity and status in First Millennium BCE Mesopotamia: An overview from text and image

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Ancient Near Eastern sources (cuneiform documents and iconographic representations) inform us on different aspects of Mesopotamian society in the First Millennium BCE. However, very often information about the function of women and their specific characteristics and qualities (class, ethnic origin, status…) is elusive. In this paper we propose to combine the categories of gender, class and ethnicity in order to scrutinize foreign women, focusing on the representation of women in texts and images. The exploration aims at investigating what types of women appear and in which contexts, in order to assess how multifaceted aspects of female identity were expressed and established. Several case-studies of women from Assyria and Babylonia will be presented.

Pride and Prejudice: (De)constructing grand narratives on late prehistoric body representations from Iberia

Santos, Ana Amor

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Since their first discoveries, prehistoric anthropomorphic representations have constantly been used in grand archaeological narratives. The lack of information for their function, their often questionable find context, and the suggestions of human body depiction, have led traditional archaeology to form interpretative readings which steadily became paradigms of Iberian Late Prehistory in themselves. In fact, regardless of multiple studies and interpretations that have been put forward in recent years, the "Mother Goddess" theory and the "Idol" axiom are both still very much present to this day regarding 4th and 3rd millennium BC anthropomorphic representations found in archaeological sites in Portugal and Spain. Despite the lack of a scientific basis, these interpretations are still included in current archaeology research, museum exhibits, and, perhaps even more troublesome, school programs and textbooks.

More than displaying the presence of these grand narratives in current archaeology, however, this presentation aims to expose the multiple factors which have led to such endurance. In this sense, we offer a critique of the role of preconceptions in the construction of archaeological identities, resulting in a historiographical approach to the discipline of Archaeology itself. Moreover, this presentation hints at other perspectives on how to tackle the representation of the human body in late prehistoric "mobiliary art", focusing on the represented bodies rather than their hypothetical symbolism, as well as the utility of a large-scale analysis that does not construct closed narratives.

Decolonizing (bio)archeology: moving beyond sociocultural and biological determinisms

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Archeologists are considered white, male, and middle-class, solitary adventurers and explorers. Feminist studies within archeology have criticized these distorted views of archeologists and also the traditional archeological methodological approaches that privilege an androcentric view of human society. This model assumes that biology is “naturally given”, where sex is associated with biology and gender is associated with the cultural roles that those sexed bodies adopt. It implies that all bodies are dimorphic: "males" are “men” and "females" are "women" and that there are universal and homogeneous categories. At the same time, it assumes that all people with the same type of sexual characteristics adopt the same type of gendered socio-cultural practices. Moreover, the interpretation related to these gendered practices has an androcentric bias, it is based on dichotomous pairs of values where the “male”-“man” is associated with authority, violence, dominion, exploration, etc, and “female”-“woman” is associated with submissive, peaceful, caring, sedentary, etc. This view has been strongly criticized by sociocultural studies since the 90 with the discursive turn where this interpretation is inverted: in this model, priority is given to discourse, i.e., gender discourse is the basis on which sexed bodies are interpreted and represented. It is common in these studies to find a total denial that biology can influence social phenomena. Both of these models are reductionist and deterministic. In order to avoid models that separate matter from discourse and nature from culture, we employ new feminist materialisms and decolonial feminisms for the analysis of sex-gender interactions. These views assume that sex and gender are co-constitutive and that one does not come prior to the other. First, they help to overcome dimorphic discourses and also help to think about bodies that are in interaction with gendered practices beyond gender binarisms. Second, they imply that sex and gender are not universal categories and that therefore different cultural and native models of sex and gender must be taken into account. We hope this contributes to the dismantling of the binaries related to sex and gender and the nature-culture divide in the (bio)archeology practices and methodologies.

Recovering the biographies of women in archaeology: challenges and successes

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It is difficult to find women in the histories of archaeology and there is no country that contradicts this statement. Recent work in several countries including Australia, Mexico, Peru, Spain, South Africa, UK, and the USA, is retrieving many female archaeologists who were waiting to be remembered. We can now say that, before they were allowed a university education, there were women collectors whose efforts can now be traced in archives and archaeological material stored in museums. The first women to be accepted in the profession worked in museums, and although a few women managed already to get curatorial positions in the nineteenth century, most of them only succeeded in this after World War I. Getting positions in universities was more difficult, and it was only well after World War II that the type of university posts obtained allowed the first few women to earn a living out of their work. One of the main difficulties they had to overcome was the lack of field training. Positions in heritage services and commercially-led archaeology came later but inequalities are still maintained.

Retrieving women for the histories of the discipline is essential but need to be accompanied by a critical analysis to understand the reasons behind their absence. It is crucial to identify the obstacles they encountered that ultimately left them out of the general histories of archaeology. Some of them were the control of the spaces were they were allowed (or not) to move and the use of their bodies they were expected to make (voice, movement, eyes...). Other elements to consider are the effect of the way their work was (de)valued and even invisibilised, and connected to this syndromes they may have experienced

such as the impostor and the queen-bee syndromes. Concepts such as the sticky floor and the glass ceiling will also explain many absences of women in the histories of archaeology. The presentation will end by explaining why we need to recover women's past history in the discipline, and where we should go from there.

She cannot win: the paradox of Dame Kathleen Kenyon (1906-1978)

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Unlike, say Chemistry, the discipline of Archaeology is firmly rooted both in the field as well as in the lab, and this is often used to create a gendered division of labor, with the field work seen as male and macho, and the lab as female and necessary, but not original. The life and work of Kathleen Kenyon challenges this supposed dichotomy, and yet her achievements in the field are downplayed, and her overall contribution to the development of archaeology as a discipline is often ignored. She was a preeminent force in archaeology, in Britain as well as the Levant. Sites she excavated include: Samaria, Jericho and Jerusalem, as well as a number of Roman and Iron Age period sites in Britain. Her passion was archaeological fieldwork and she published more than a dozen books and over 80 papers, in addition to training a younger generation of field archaeologists that she helped to place in leading departments. She played a critical role in establishing the Institute of Archaeology at University College London, and kept it going throughout World War II. Yet one senior male scholar in Levantine Archaeology has written "…her colleagues admired her mostly as a technician, not a scholar…" and that she lacked originality, that she was not "capable to producing broad historical or cultural syntheses….the few attempts at historical and cultural explanations being rather simplistic" and that her work contained few original and creative concepts (Dever 2004: 545).

In this presentation I will focus on fieldwork in archaeology is seen as male, as macho, as the role of the real archaeologist, yet why if Kenyon, a superb field archaeologist, whose recording methods continue to allow for the publication of the Jericho volumes, is seen as less, as not original? I do not have an answer to this, but it illustrates the in-bred patriarchy we have within the discipline. To counter this, I believe we need to detail and celebrate the many contributions of women archaeologists, pointing out their superior work.

The incorporation of women to the University In the subject of Archeology

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It's been more than a century (1910) since King Alfonso XIII ratified the Royal Order of the Ministry of Public Instruction and Fine Arts. Women gained then access to all educational establishments and it officially granted them access to the University. This was only possible, until then, in few cases having specific permits.

The studies taken by the first women were linked mainly domestic roles attributed to their gender. These studies were related to the education and childcare, such us midwifes and teachers. Access to Philosophy and Letters faculty was the next step.

With only few previous exceptions, Spain started to see its first women graduating at 1940s. A significant amount of them did focus their studies on Archaeology, Epigraphy and/or Numismatics. Once their studies were completed, the professional opportunities were diverse but most of them ended up as part of the "Cuerpo Facultativo de Archiveros, Bibliotecarios y Arqueólogos" (faculty staff of Archivists, Librarians and Archaeologists), linking their careers to the world of museums. Initially in smaller numbers, others had the opportunity to continue collaborating in different departments of the faculties, completing

their doctoral theses there and gaining access to teach in the university. In 1974, Ana María Muñoz Amibilia became the first professor of Archaeology in Spain.

Therefore, our contribution will consist of analyzing the different aspects in the process of incorporating women into the university teaching in Spain for the area of Archaeology; research stays abroad, teaching career, their role at founding archaeology journal and access to department management, among others.

Where do we go from here? The future of women in Archaeology.

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Archaeology as a discipline is unique in its combination of science, humanities, social sciences and hands-on field practices. Thus, women archaeologists face not only the common inequalities in terms of salaries, opportunities and career paths but also challenges that are shared by very few other disciplines, such as fieldwork at remote places, unusual working hours and spending time away from home and family. In addition, there are huge differences in the treatment and perception of women archaeologists between different national contexts across the globe. This paper will offer our views of how to tackle some of these challenges by outlining possible action points to improve the future of women in archaeology worldwide, namely creating more unions of female archaeologists and stronger and more active support networks A key outreach events like the BRIDGES Symposium are giving more visibility to women, where they can speak publicly about their concerns and problems. Last but not least is the need to open a discussion about how we can support women working or aiming to work in archaeology in conservative societies.

General session: Embracing critical thought: feminist and decolonial epistemologies

Thursday, 15th September 2022, 3:00pm - 4:30pm

Rethinking of one health and antimicrobial resistance through gender lens

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In the current global health discussions, antimicrobial resistance (AMR) is one of the major issues requiring system thinking and multidisciplinary networks. In spite of pervasive acceptance of it as a global emerging issue, none of the practiced approaches for its containment such as One Health (OH) and Planetary Health (PH) is gender responsive and rethinking them through a gender lens is a must, particularly evident in the current pandemic. Unlike the overarching themes of OH and PH, the way in which gender affects human and animal colonization with resistant bacteria is not well studied. While women are believed to have more AMR infections due to higher susceptibility to major drug resistant sexually transmitted diseases (STDs), unwanted pregnancy, abortion and urinary tract infections (UTIs), recent surveillance data in Germany revealed men as more infected with AMR bacteria both in terms of clinical infection and colonization. In a patriarchal society, male has a socially constructed hierarchy over social, economic and political decision-making including access to health services such as AMR infection and management as well. It is also evident that people more involved in certain occupations such as agriculture and animal husbandry sector like slaughterhouse, cattle, pigs and poultry farming receive frequent microbial infection and gut colonization with resistant bacteria. In the context of occupation, women are mainly involved in poultry production, dairy farm, milking and processing, food processing, child keeping, farming, water fetching whereas men are mostly engaged in agricultural services. While the plausible linkage between disease and occupation is well established, the way how this gender and social inequality along with occupation based on gender role impacts the occurrence of AMR and AMU is not explored. In fact, gender-focused antimicrobial use (AMU) and AMR research is neither prioritized in the national action plans nor currently practiced except as a demographic variable. Thus, unidentified knowledge gaps and gender inequality may hinder the effectiveness of multidisciplinary approaches. To address all these knowledge gaps and to rethink the global issue of AMR in gender lens, evidence synthesis, case studies and capacity building at local context need to be deployed.

Sandwich generation and diversity of familes in Western Europe

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The proportion of childless men and women has increased and is expected to rise even further in future generations. It has been the main aim of this study to investigate whether this development, paralleled by decreasing union stability, should give a reason for concern regarding health and well-being in later life.

It seems worthwhile to investigate further issues of complementarity and substitution between different partnership models from a cross-nationally comparative perspective with more details of individuals` increasingly complex life histories and the relationship between the sequencing and timing of family events (such as early or late entries into (grand-)parenthood).

A different pattern of union formation behavior has been influenced by a unique set of historical, cultural, political, and economic developments. The increase in cohabitation may not simply be due to a shift in

values towards expressive and unconventional values like a rejection of institutions, but may instead be a symptom of increased uncertainty and instability.

Informal care is expected to postpone the transition toward residential care. Intergenerational family structures became more complex due to socio-demographic and cultural changes. How do changing intergenerational family structures affect upwards intergenerational solidarity within Europe? Who are the older adults at risk of weak intergenerational ties?

This interdisciplinary study uses descriptive elements of sequence analysis and fixed-effects regression based on the high-dimensional balanced panel data from the four waves of the Survey of Health, Ageing and Retirement in Europe (SHARE-project.org, waves 1, 2, 4, 5) released between 2004 and 2013.

The characteristics of the family may have important consequences for healthy aging. The data (n person-year = 30,092; 10 countries) shows different patterns of the gender-related health dynamic in Western Europe. The results of this study could be used to identify the stages of the life course that are most important for maintaining functional health under special social conditions (critical transitions).

Contributions of Tunisian social media to promote "ignored" historic landscapes

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Our contribution documents different initiatives from different social media platforms aiming to promote "ignored" historic landscapes in Tunisia. Based on these initiatives, our main objective is to understand the relevance and contribution of social media platforms in the promotion of patrimonial sites, especially those "ignored' by governmental organizations.

This contribution is divided into four main sections. In the Introduction, we present the extant literature on the ways in which social media is playing an important role in shaping the Tunisian opinion(s) and creating engagement, especially with cultural heritage. We then move to present our cases studies from different social media platforms such as Facebook groups, Facebook pages, and Instagram accounts. We highlight how the online sharing and interacting practices contribute to raising the awareness of the historic landscapes that are not part of the "conventional" promoted heritage. Hence, the online interacting practices create possibilities for patrimonialization processes to take place. The theoretical framework together with the online initiatives we present express the capacity of social media to evoke forms of participation in which a patrimonial site is not limited under the concept of institutional knowledge, but rather used in an inventive manner to (re)explore, inviting to (re)think the heritage. The contribution concludes that given the impact of social media and participation and their contribution demonstrated in the different initiatives, extending the research to quantify, analyze, and assess the role of social media and participation in other Tunisian experiences would give more insights into inclusive noninstitutional promotion of heritage in Tunisia.

Language biases in curricular materials used in Comprehensive Sexuality Education teacher training courses in Argentina

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Comprehensive Sexuality Education(CSE) is a framework developed by UNESCO for the promotion of educational policies on gender and sexuality issues in compulsory basic education. Argentina is a leading country in incorporating this type of policy into its educational system. In 2006 the CSE bill was passed, where it was established that topics related to CSE should be transversal to all subjects of the compulsory education system. Since then, the Argentinian state has had to guarantee access to teacher training. Here I aim to analyze curricular materials generated for teacher training. I use decolonial feminist studies as a

theoretical framework. In particular, I will use the concept of Anthropology of Domination coined by Ochy Curiel which focuses its analysis on the processes that continue to sustain privilege and domination within social structures. In this sense, there are different types of privileges that are sustained within educational institutions that arise from modern-colonial systems of domination: heteronorm, cissexism, sexual allonorm, romantic allonorm, and a nuclear kinship system. As a methodology, I will use discourse analysis as this type of analysis allows highlighting power relations within the discourse and the biases related to this. To carry out this analysis I will focus on the virtual courses dictated by the platform of the National Institute for Teacher Training (INFoD) during the year 2020. These courses focused on topics such as introduction to sex education, gender diversity, gender violence, and maternity. The documents of these courses mostly use a binary vision of sex, gender, and sexuality. On the other hand, they tend to confuse the categories of sex and gender, and do not usually define either of these concepts. In turn, the concept of sexuality is used with different meanings depending on the context, but in general, the term is linked to the sexual activity of cissexual people. In general, the discourse revolves around heterosexual and alloromantic heterosexual couples, and the discourse on parenting revolves around the "mother" as the only person capable of gestation. This analysis can be used to generate new curricular guidelines and classroom materials to break with structures that upholds privilege.

Does English as a Medium of Education help or hinder female engineers? A Palestine/UK comparison.

Guariento, William Anthony[1]; Elmgadma, Amani[2]; Burns, Caroline[1]; Elaydi, Hatem[2]; Penlington, Roger[1]

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In Gaza, riven by decades of conflict, engineering is crucial and increasingly attractive to female students, but intersectional barriers restrict employment / career-advancement. The UK's Engineering Council Accreditation of Higher Education Programmes report (2020) recognises, too, that female career-progression (criterion M11) is a particular issue.

In April 2022 an interdisciplinary research team at the Islamic University of Gaza (Palestine) and Northumbria University (UK) completed the project Development of Intercultural Competencies for women engineers: a Story Circles approach, which sought to better understand the barriers to career advancement for female engineers. The Story Circles methodology (Deardorff, 2020) was employed to create a safe space for sharing of experiences, and strategies for overcoming barriers. The project was funded by Culture for a Sustainable Peace, an AHRC project led by the University of Glasgow (Scotland).

British Council funding is now allowing the team to consolidate their partnership and build on previous findings. An EME-focused investigation into barriers facing female engineers began in April 2022 and is exploring how English as a Medium of Education is experienced by participants in Gaza, and how this might relate to employability. EME is a global phenomenon, linked to the internationalisation of higher education and employability, yet its rapid spread has outstripped empirical research (Galloway, 2017). We are looking at participants' language preferences when discussing personal challenges and emotions. If, as some of the evidence suggests, participants prefer to use their L1 in this context, the Story Circles will be run in both Arabic and English, challenging the assumption that international research projects should be conducted in English, and giving value to a decolonial approach in the former British colony. The projects contribute to UN SDGs 4, 5, 16 and, crucially, 17: Partnerships for Goals.

References:

Deardorff, D. K. (2020) Manual for developing intercultural competencies: Story circles. Routledge

Galloway, N. (2017) How effective is English as a Medium of Instruction (EMI)? Voices, 14/09/17, British Council

Symposium: Science and gender: the African perspective

Chair: Bulelwa Ntsendwana

Thursday, 15th September 2022, 5:00pm - 6:00pm

Paradigm shift to redefine the fate of women in STEM using TOP to BOTTOM approach in academia

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STEM challenges creativity for new and novel developments in science and technology and women have played a key role in many success stories. Behind the scenes, the peer pressure of being a woman in this field can easily demotivate some brilliant brains that perhaps can deliver much better results manifolds. Multitasking, patience, hard work and competence are core features that become challenge to STEM society. Woman empowered STEM management at the TOP level have been benefitted to suit to male dominancy thereby ignoring the busy bees collecting nectar to make honey. Not all but many visible success stories of the male dominancy in STEM especially in AFRICAN chapter is a showcase for self-motivation that is build up on the grave of ethical values. This ignorance needs the paradigm shift in order to accommodate and celebrate the unsung heroines who are capable of leading STEM discipline to new heights. The shift that is needed in order to progress, sustain and preserve the STEM so that women [the busy bees] at the bottom should not scream "I exist".

The gender disparities in science in tertiary education: Empirical evidence from Rwanda

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Rwanda's effort to promote gender equality and women's empowerment has been widely acknowledged. Commendable achievements have been registered in different sectors including education, which is recognized as the key to sustainable development. The country has thus prioritized a gender inclusive education system as a pathway to boosting its human capital and key to its economic growth and sustainability. In spite of a number of gender responsive policies and initiatives that encourage females to pursue careers within the fields of STEM, research indicates that they are still under-represented in STEM. Despite advances made at primary and secondary levels of education, access to higher education for females continues to be a challenge. Moreover, even for females who make it to tertiary education, there are gaps in terms of the programmes they enroll into, with most opting for areas traditionally known as female domains, non-STEM fields. This paper aims at unpacking why women and girls are so underrepresented in STEM and why this matters. We present a brief analysis of the new empirical qualitative data gathered through in-depth semi- structured interviews and Ecomaps, with 40 undergraduate students, 10 postgraduate students from purposively sampled higher learning institutions (HLIs) in the country and from 40 purposively sampled employees working in STEM areas. This paper specifically focuses on gendered dynamics and pedagogies; environmental barriers that researchers have been able to unpack through qualitative data analysis. Early findings from the ongoing study show that a comprehensive approach for educating communities and popularizing STEM from early ages has the potential to repair the leaky pipeline and improve the attrition rates in STEM.

Drivers of gender inequities in scientific research career progression in sub-Saharan Africa

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The slow progression and under-representation of women in senior scientific career positions is a well-known and persistent global problem, especially among academics based at universities. The 'leaky pipeline' metaphor has commonly been used to numerically describe this. Current statistics indicate that women account for only 28 percent of all researchers worldwide; although Sub-Saharan Africa has been identified as the region with the lowest numbers of women in science careers. However, to inform action for change, there is a need to go beyond numerical evidence of inequalities to understand the underlying social, cultural, and institutional drivers and processes that produce gender inequities in science careers. Efforts to address this problem was resorted through a research study that was nested within the Developing Excellence in Leadership, Training and Science in Africa (DELTAS) 'Learning Research Programme', which worked alongside the DELTAS Africa Capacity Building Programme to produce research-based learning about how to equitably develop internationally competitive and effective researchers and research institutions in Africa. Specifically, the study was aimed at examining the barriers and enablers to gender-equitable scientific career pathways in the DELTAS-funded African research institutions to provide information about how to improve research career equity. Findings showed that the career progression of female [and male] researchers to senior positions within the DELTAS-supported institutions was influenced by many factors, including individual, socio-cultural and institutional barriers. Current mechanisms in place for addressing some of the barriers will be highlighted. Suggestions for improvement and future plans as put forward by study participants will also be presented.

Symposium: Power asymmetries in academic-scientific environments: critical insights into the neoliberal production of knowledge

Chairs: Paula Medina García, Ana Santamarina Guerrero

Friday, 16th September 2022, 10:00am - 4:30pm

Misogyny and Gendered Collusions within STEM fields in Indian Universities

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India has the third largest higher education systems in the world next to China and the USA. But as far as access to higher education is concerned, India's figure (19.4) is significantly less than other countries like the USA (89), UK (59), and China (24). A matter of particular concern in the Indian context is gender disparity, especially in STEM related higher education fields. Since the 1950s, the Government of India has made various policy commitments to combating gender disparity in STEM employment and education. The Science, Technology and Innovation Policy has made gender parity a goal by setting up flexible schemes that aim to facilitate women's careers in STEM fields. In the more recent years, the National Education Policy (NEP) 2020 has proposed several progressive reforms in the education system to make higher education more equitable and inclusive. The move towards equity, however, has seen the emergence of new hierarches within higher education institutions. It is therefore, critical to go beyond macro level policy analysis to look at granular trends at various institutional levels to understand how gender identities determine and impact women's access to STEM education particularly at the prestigious institutional levels.

In this paper based on more than 50 semi-structured, qualitative interviews with STEM female students in some of the leading Universities in India, we explore how a culture of misogyny and gender collusions in STEM disciplines are impacting female students studying engineering and other science related fields in some of the leading universities in West Bengal. These experiences of misogyny often left the women feeling angry, isolated, and oppressed in the academia. Through the voices of our research participants, we draw out the shared dimensions of the women's individual experiences to show their roots in a broader social context in which sexism and misogyny remain features of many classrooms and University campuses.

Indian brain drains in the twenty-first century – A worsening situation for women in STEM.

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By definition " brain drain" is the emigration of highly trained or qualified people from a particular country or their country of origin. India's brain drain problem is perhaps as old as the age of the subcontinent. From 7 million Indians living abroad in 1990, the numbers have flared to 17 million people by 2017, the United States being the first option and Canada the second. In searching for answers in the academic world, the scenario seems worsening for women in STEM. In general India's young and talented scientists are forced to leave the country in search of better rewards for their efforts, talents and better working facilities. As for women, amalgamation of problems like nepotism, racial preference, gender sensitization, inequality in funding between men and women all add to force a woman to leave the country. Academic institutions fail to keep transparency in their policies and nepotism results in a biased measure of talents in Indian academia. Women are often considered unfit for field based scientific endeavors. Political parties intervening in recruitment policies and bribing to recruit their people to create difficulty for the worthy to get jobs. Lack of funding in core sciences and applied sciences leads to an existing bottleneck

and for girls. Additionally, projects restricted for women scientists often has a lesser amount of funding than those in common. Indian parochial society thrusts down rigid societal diktats, unsaid and unwritten rules that prevent women from working independently or alone or in an unbiased environment. . The "societal" pressure to get married builds up to a great extent after graduating. Failing relationships, and broken marriages that are a part of every society, are still seen as taboo in India. While there are laws in favor of equality, all things glitter in theory and progress is in a sluggish pattern. Even more distressing is that women themselves often criticize, judge and sabotage other women change makers. The outcome yields a bunch of scientists staggering under the weight of social stigma, joblessness and looking for a breath of fresh air abroad.

Gendering academia in Italy

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Gender inequality is a persistent phenomenon all over the world and in every socio-economic domain. The underrepresentation of women in academia has triggered interests among scientists.Scholars discuss whether this is due to overt gender discrimination, unconscious gender bias, gender gap in scientific productivity or to other more or less visible or subtle factors.

Data show that while female university students perform better than their male counterparts, the situation does suddenly change in postdoctoral fellowship positions and further worsens throughout the subsequent stages of academic careers. In Italy, for instance women remain significantly underrepresented not only in early career stages, but also in full professorships and in leadership positions (Checchi, Cicognani and Kulic 2018; Murgia and Poggio 2019; Gaiaschi e Musumeci 2020). More recent literature has highlighted the emergence of new inequalities due to the affirmation of the neo-liberal agenda and to the consequent redefinition of organizational practices and processes, all processes with remarkable gender implications.

This paper focuses on gender inequalities in Italian academic careers both in STEM (Science, Technology, Engineering and Mathematics) and SSH (Social Sciences and Humanities) disciplines. The empirical material derives from an Italian National Research Project (GEndering Academia) funded by MIUR (the Italian Ministry of Education, University, and Research).

The paper, based on a qualitative study, aims to understand whether and how gender differences and inequalities are (re-)produced at various stages of academic careers and in different disciplines, and how they are connected to the structural and cultural factors that operate at the individual (micro), organizational (meso), and institutional (macro). This entails both disentangling the role of cultural factors (i.e. norms on gender roles) versus structural barriers (i.e. recruitment/ selection/ evaluation rules and practices) and considering the complex interaction among the micro level (individual attitudes, preferences, and decisions), the meso level (organizational practices, cultures and processes), and the macro level (the institutional settings and the national regulations and policies).

The qualitative study is based on 127 in-depth interviews with early and advanced career researcher and professors, and on 46 interviews with key-informants working in both STEM and SSH academic departments in four Italian Universities.

Behind the blindness of equity gender research: the case of the universities of Bari

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Although the dual breadwinner family model allows an apparently more equal division of labour, this does not lead to effective gender equality at the family and work levels. In fact, caregiving is read by

neoliberal society only as a burden that is passed from one woman to another. According to intersectional feminist theories, women from the wealthier classes rely on women from either their family networks, migrants or less well-off classes to support care work. As in other work, precarious women in the Academia, who will not be able to afford to cede their care-work to others in the absence of suitable policies from the state, will have to choose between giving up their academic career or adapting to the neoliberal male-leadership.

The main object of this research is to demonstrate the presence -often hidden-of elements of structural and/or functional inequality even in more highly feminized departments, where theoretically gender inequality does not find acceptance and legitimization from a cultural perspective.

To answer this question, this study aims to investigate the existence of gender inequality in Academia using a structural approach.

As case study, two Italian universities were considered: "University of Bari " and the "Polytechnic University of Bari". Bearing in mind that the Social Sciences area stands out not only for its high feminization but also for being the one with the highest Glass-Door Index in Italy, this work has turned to the Political Science department of the University of Bari in order to analyse gender inequalities. The work quantitatively explores horizontal and vertical segregation in the universities, a general baseline for the Academia of Bari scenario. The qualitative research focused on the department of Political Science was conducted with interviews with a sample of eight professors and researchers, both advanced and early career, equally distributed by sex.

From the results, it is patent how people living in the Academia have the illusion of a cultural context of equal opportunities. However, many issues appear from the interviews and the quantitative data, like a clear vertical and horizontal segregation. In conclusion, we could describe gender inequality only in one word: embeddedness.

Why women are leaving academic chemistry

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Sweden is one of the world's most gender-equal societies; nevertheless, women are still underrepresented in academic faculty positions. At the Chalmers University of Technology, where we conducted this pilot study, 16% of the professors were women in 2020. A long-term initiative called Gender Initiative for Excellence (GENIE) has worked toward more equal and diverse academia. This study is a bottom-up project funded by GENIE to understand better why women leave the Department of Chemistry and Chemical Engineering, which had 15% of women as full professors in 2020. To explore the reasons behind women's exit, we conducted eight semi-structured interviews with women, doctoral and postdoctoral researchers, and women faculty who left the Department between 2015-2020. A survey (n=17) was conducted with women and men in the same academic roles who had left the Department during the same time. Thematic data analysis indicated that personal skills and capacities as well as the overall support available were the primary perceived career-enhancing factors by informants. Regarding the negative aspect impeding career progression, the informants reported they largely encountered obstacles related to academic organization and culture. Doctoral and postdoctoral researchers explained they had left due to non-attractive academic work conditions, such as too high demands, noninclusive culture, job instability, and the challenges in combining work and private life. The leavers from faculty positions emphasized the lack of job satisfaction and professional support as reasons behind their exit. The male-dominated academic culture was perceived by the informants to affect negatively women's academic careers. Applying Liisa Husu's notion of non-events as a significant but poorly recognized form of gender discrimination in academia, our data highlights how the informants, primarily women, reported various hidden and subtle ways of unequal treatment: lack of support, their abilities not being valued,

not being listened to or heard at meetings, how their research ideas, needs, requests to collaborate were neglected or their career plans being neglected. Accumulated non-events can marginalize women researchers and hamper their career aspirations and careers. This study is currently in progress, focusing on the dynamics and impacts of non-events in the academic chemistry career from a gender perspective.

Gender and Precarity in Higher Education in and beyond STEM disciplines: implications for knowledge-making in the academy

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This paper looks at two pressing issues in Higher Education and the interlinkages between them. Our first concern is gender and other aspects of diversity of representation of academics in STEM disciplines. Secondly we are concerned with employment precarity in academia – that is, the proportion of academics on fixed-term, temporary, part-time, or hourly paid/'zero hours' contracts – a phenomenon that is firmly tied to overarching neoliberal forms of governance in HE, and affects knowledge production by constraining and marginalising the ability of precarious workers to produce and disseminate knowledge. In the UK as in many countries across the globe, precarious academics are more likely to be women, the under-35's, academics with disabilities and black and minority ethnic academics (Equality Challenge Unit, 2015).

We take an intersectional poststructuralist feminist approach that emphasises the fluidity/constructedness of both 'sex' and 'gender', and places an importance to looking at the ways in which gender intersects with other aspects of identity/positioning (such as race, age, sexuality, disability) in people's experience. We utilise Judith Butler's (2008) theorisation of precarity as a socially induced phenomenon, and her focus on the ways in which precarity is more likely to be felt (and experienced more severely) by those in less advantaged groups.

In this paper we utilise data from three projects (two on UK academics and precarity, and one project (funded by the UK's Economic and Social Research Council) focusing on gender issues for both staff and student experience in STEM fields in India, Rwanda and the UK. We will be looking at the implications of such dynamics for those who are able to succeed in STEM disciplines in India, Rwanda and the UK. What are the implications of precarity for those looking to diversify the academic workforce in STEM fields, and what are the implications for diversity in the production of STEM knowledge?

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The need for a real connection between academia, transformative sustainability science and feminist approaches

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This communication is situated from the development of sustainability science (SS), specifically agroecology, as disciplines that challenge the socioecological crisis. The current agrifood and care crisis are two faces of the same coin with common roots; however, the connections between the study of social-ecological systems, feminism and agroecology is not always explicit.

SS emerged with the purpose to recognize the interconnection and co-evolution between societies and life-supporting ecosystems. The traditional scientific knowledge production has lied on isolated disciplines that didn't consider the complexity and non-linearity of nature-society relations. SS was conceived to link scientific knowledge (from different disciplines) with other types of knowledge, and with action to address the current persistent socioecological crisis and promote new pathways for the transition to sustainability.

Despite this, SS has not been able to occupy a central position in academia, neither in facing environmental challenges or avoiding the neoliberal production of knowledge. SS wasn't conceived to be a neutral objective of knowledge but to have a transformative capacity, bridging the gap between activist knowledges and academic knowledges production in a shared commitment towards social and political change.

But, transdisciplinary research (needed at SS), it is still not well understood or valued at the dynamics of knowledge production. Academic environments and institutions are not supporting a balanced, but rather creating trade-offs between the principles of transdisciplinary research (science, society, self). In the same way, feminist and agroecological principles (embrace different sources of knowledge, the role of nature sustaining life and society, the importance of collective approaches, the study of power asymmetries, etc.) have not been fully incorporated in the research of sustainable agrifood systems.

In this contribution, we rethink our role as academics in the promotion of SS and how we incorporate gender explicitly in our agroecological studies. To do so, we reflect on our practical experiences from two research projects oriented to agroecology and sustainability and from teaching commitments intended to drive a structural change in academia through the application of socially responsible research.

From women in science towards new paths of a feminist and postcolonial sustainability and transdisciplinary science: experiences from our own association and research.

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In order to produce knowledge that may support societal solutions to the urgency of wicked socioenvironmental problems and push towards transformative pathways for the future, sustainability scientists increasingly recognize the need of a transdisciplinary science that engages multiple voices in the implementation of socially-legitimate actions. However, scholars also recognize that a transformative science requires a strong commitment to challenge unequal power structures and asymmetries between scientists (i.e. social and natural science) and with local communities. Such asymmetries may be the result of intersecting discriminations (i.e. gender, race, age, knowledge system, urban or rural origins etc.). Definitely, a truly transformative science implies transforming our ways of doing research, challenging a neoliberal model of science, based on extractive, transactional, competitive, and exploitative relationships. But, to support women in science for increasing equality is not enough to revert power structure in the neoliberal Academia. Thus, feminist and postcolonial studies of science have profoundly transgressed mainstream epistemological and methodological approaches and logic of research. In this sense, our contribution is aimed to define how to refuse the official paths of scientific research, challenging the inequity of neoliberal system of science, and exploring new paths from a feminist and postcolonial science study and under a social justice principle. We present the application of such new paths in our own organization, FRACTAL collective, an association of women feminist researchers for transdisciplinary sustainability science, and our way of researching in processes of knowledge co-production and activism. We mainly discuss from our own experiences and projects three feminist

principles: 1) positionality and reflexivity, i.e. the examination of one's own beliefs, judgments and practices that bound decisions along the research process and reflect power and values in generating/circulating knowledge; 2) embodiment and co-production of knowledge, i.e. including multiple voices, knowledge and knowing systems and exploring collaboratively (researchers and non-) new methodologies through body and emotions; 3) reciprocity and ethic of care, that may bring transformation and emancipation by orienting the way of doing science. Finally, we discuss how our feminist women collective may address sustainability transitions from holistic perspectives with proposals to counteract the multiple systems of oppression.

Women, pandemic, and research: gender gap in Science and Academia

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Despite the androcentrism present in all the dominant forms of science (Harding, 1986) the incorporation of women into Science and Academia has improved remarkably in recent decades (European Commission, 2013, 2021; Huyer, 2015). Nevertheless, the gender biases present in these areas -same as in society- mean that the gender gap depends on the countries and the areas of specialization, among other factors.

Recent studies confirm that the gender gap in Science and Academia has widened due to the Covid-19 pandemic. This recent health and social crisis have caused a dramatic drop in the number of investigations and publications carried out by women, mainly due to the inequality in the arrangements of family care and the distribution of leadership.

The project "Innovation, decision making and leadership in Science: How researchers work together" analyses the internal mechanisms that operate in scientific research groups while identifying patterns and strategies of collaboration that promote innovation and excellence in a broad sense. In addition, the transformations in collaborative groups, affective networks and communication in the scientific field caused by new technologies are also studied.

The fieldwork consists of 48 semi-structured interviews with members of the research and ethnographic workgroups in projects financed by the European Research Council. There are different profiles according to their gender, job position (consolidated, Principal Investigator or predoctoral students) and the disciplinary area they belong to (STEM, Humanities or Social Sciences). At present, the second phase of the fieldwork is being carried out with new interviews, mainly with women. Both the interview script and the ethnographic work are focused on the analysis of the gender gap and the emotions it provoked within Science and Academia.

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Gender inequities in STEM fields at Argentina: The case of two institutions of the public scientific system (CNEA and INTA)

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Gender inequalities in science are a relevant problem, especially in STEM fields. Women represent 53% of the total research staff in the Argentinean scientific system (Arredondo et al., 2019). Yet, by disciplines and areas of knowledge (especially engineering and technology) women are represented in a lower proportion compared to men (D'Onofrio and Tignino, 2018). Despite the efforts to reverse this situation, these disparities remain in highly representative institutions of the public scientific system such as the National Atomic Energy Commission (CNEA) and the National Institute of Agricultural Technology (INTA). For instance, only 30% of the staff in CNEA are women, while in INTA this proportion is about 40% (Komar Varela and Aizcorbe, 2019; Nocetti, Palioff, and Della Torre, 2018). In addition, these gaps are deepened when observing the participation of women in the highest positions. In the case of the CNEA only 5% of the highest tier is represented by women, while INTA is represented by 13% in hierarchical positions. We examine how motherhood, workplace violence, precariousness and institutional cultures cross the female scientists trajectories at INTA and CNEA. To do this, we use the data from two focus groups and semi-directed interviews with researchers from both institutions.

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Effects of workplace sexism on mental health: a systematic review

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Biological and socio-cultural factors are involved in the onset of psychiatric disorders, including exposure to prejudice in all of its forms, as well as exposure to workplace stress. Since sexism is still a recurrent issue on women's daily routine and work has a central role in contemporary life, this study evaluated the relationship between exposure to workplace sexism and depression through a systematic review. Observational studies about workplace sexism, sexual and workplace harassment, gender pay gap or career progression that have also evaluated depression and its comorbidities were included, however, other study types and articles that have not tested the impact of gender inequality on mental health parameters statistically were excluded. Thus, a broad search strategy with keywords and MeSH terms related to our eligibility criteria was applied in five databases (PubMed, PsycInfo, Web Of Science, LILACS and CINAHL), from which 1613 articles were retrieved and analysed by title and abstract, 19.5% were read in full by two reviewers, 6.6% studies matched the inclusion criteria and 2.9% had available data of interest. Results suggest that women are more exposed to sexual harassment and assault in the

workplace, have lower salaries, face more gender-related barriers to job promotions and are more exposed to gender discrimination at work. Several work areas and different country populations are represented in these articles, being the Unites States of America the most common affiliation source of authors. All studies were published by, or in collaboration with Universities in developed countries. Few studies considered the intersection between sex and race, highlighting the need for more studies about sexism in the workplace being conducted around the world, especially in underdeveloped and developing countries, which are currently underrepresented. The most frequent and consistent result concerned exposure to sexual harassment or abuse in the workplace, being the military field the most investigated. Although women are in general more exposed and affected by sexual harassment, it seems to increase depression and comorbidities regardless of sex and work area, suggesting social factors have a major role in depression.

Gender and miscegenation straitjackets in energy scientific production: reframing identity politics to think other possible epistemologies

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The production of scientific knowledge in Latin America has been strongly marked by a politicization of identities that took the place of the preceding struggles of the 1970s against a system based on a structure of exploitation and economic domination. These struggles were replaced by demands for inclusion in the same system by the excluded sectors, each in the name of an identity that was often retouched or built to serve as a label for the subject of that demand. The present work seeks to offer an anti-racist feminist critique of the politics of globalized identities in the framework of social studies of energy, since it is these that mediate access to resources, exposure to pollutants and opportunities to participate in energy resource management, policy and science. Returning to fundamental authors of decolonial reading and putting them in dialogue with pioneers of black feminism, the analogy of the gender "straitjacket" (Ciccia, 2021) and "mestizaje straitjacket" (Segato, 2007) is used to insist on the need to take care of the specificities of meaning that the identity categories assume in their particular historical context, not in terms of discrediting, but in their potential as a defense of cultural autonomies and the expansion of rights. The idea is to reflect on the way in which the neoliberal logics of scientific knowledge production, using globalized identities, come to replace authentic historical subjects, leaving aside their political horizons, and how this affects the emergence and development of other forms of energy organization.

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Over-contribution of women in top-ranked journal publications reveals a new type of gender bias

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There is a generalized strong belief by which Academia is considered a meritocracy: a system of career advancement depending exclusively on individual talent and effort. Nevertheless, countless studies have documented differential barriers for women in science affecting productivity, impact and career length. Specifically, Ecology is one of the disciplines with major competition for tenured positions across STEM disciplines. Mining into the structure of scientific co-authorship publications, in this contribution we developed a women contribution index pondering the gender-based individual contribution (ie., merit within a paper) using the allocation in co-authorship rank. We surveyed articles of the Top ranked journal Ecology from 1999 to 2021. We compared the measured women contribution index vs what was expected in a non-gender biased scenario. We found that overall, women account for 30% of authors, yet their contribution is higher than expected by chance (i.e., over-contribution). Moreover, in multi-authored papers, the probability of not having a female co-author is higher than not having a male co-author. We observed an extreme gender-segregated pattern, with fewer female co-authors in men-led papers.

We discuss the underlying process behind the observed female over-contribution patterns in terms of gender biased drop-out rates and its counterpart, over-compensation. This implies dealing with open or implicit biases pointing at the few women publishing in Ecology not only achieving the merits accomplished by their male peers, but also surpassing them.

Gender in the Social Sciences curriculum: A quantitative study at the University of Chile

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This is an empirical research situated in the institutional context of the Faculty of Social Sciences of Chilean public university, with a history of installing the gender perspective in postgraduate and continuing education, and more recently in undergraduate; Being five careers with a diverse incorporation of gender theories, based mainly on optional subjects.

The optional subjects are located in the last semester levels and by their definition, they are not necessary for the training. For example, a complete generation of students could not take any of the elective gender subjects but fulfill the other requirements, and graduate as professionals in the Social Sciences. It's an exception to Sociology and Social Work, where currently there is no degree if the gender courses are not approved.

The specialized literature supports the importance of incorporating gender in university education as a matter of social justice for the training of quality professionals who are able to solve the challenges of the 21st century. Additionally, it constitutes a factor of innovation and change in education to promote more democratic societies with gender equality.

The objective of the research was to know the forms of incorporation of gender in the undergraduate curriculum of the Faculty of Social Sciences of the University of Chile. Through a quantitative approach and a document review, we analyzed 164 syllabus of compulsory subjects in Sociology, Psychology, Social

Work, Early Childhood Education and Anthropology. The results show a low incorporation of gender in these careers, with a shortage of female authors per program in terms of frequency average (<5) and percentage average (<40%) and also the low appearance of concepts of gender, women and feminism (⅓).

We discuss the androcentric view in the selection of content as well as in the bibliography and the challenge of gender in the margins of the undergraduate, still in an optional modality and whose teachers are mainly women. The findings constitute a relevant input to discuss possible improvement actions with the careers with a view to gender mainstreaming in professional training and that could be useful to other universities.

Mainstreaming gender in natural infrastructure and water security research

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Climate-related water insecurity – droughts, fires, floods and landslides from climatic extremes generated partly by the El Niño phenomenon – affects millions of people in the arid Central Andes and the heavily-populated coastal desert of Peru. The Natural Infrastructure for Water Security (NIWS) project, a consortium of NGOs, social enterprise and academic institution, works to scale-up efforts to protect and restore natural water infrastructure in Peru while addressing gender gaps that are incompatible with a water- and climate-secure future. Policymakers and water managers are increasingly recognizing the indispensable roles natural infrastructure and ancestral technology play in managing water access and risks. As a result, water security in Peru has improved through growing investments in the maintenance and restoration of natural infrastructure: between 2014 and 2020, financing grew by a factor of 13, reaching the equivalent of USD 10.2 million executed in 2020, despite impacts of the COVID-19 pandemic on public resources and the ability to execute activities in the field. Natural infrastructure interventions include conservation and restoration of high Andean ecosystems (forests, wetlands and grasslands), improved grazing and farming practices, and restoration of pre-Incan infiltration canals. The NIWS project's actions in the field bridge the gap between ecohydrological research and traditional practices, some led by indigenous women farmers who have produced food under water-scarce conditions for generations. Nonetheless, there continues to be a gender bias across the board in Peru's water sector, especially in leadership positions at all levels of government, on watershed boards, as well as in the scientific community. Whereas the global scientific community has diversified during the last decades with increased participation of women, this is not reflected in the authorship of scientific publications. A recent NIWS study corroborated that trend; it found that inequality remains between men and women in the authorship of scientific publications on topics related to natural infrastructure and water security, especially in traditionally male-dominated disciplines (e.g. hydrology, geology and forest management). To foster more equitable production and dissemination of academic knowledge, the project supports young Peruvian researchers, especially women, and encourages publications in open-access journals.

Symposium: Towards inclusive pedagogical foundations of information communication technology curriculum in digital humanities

Chairs: Gabriele Salciute Civiliene, Barbara McGillivray

Friday, 15th September 2022, 10:30am - 1:30pm

Exploratory data analysis with easy-to-handle software as an introductory approach for humanities students with little coding experiences: Reflections from the graduate DH programme at Chiba University, Japan

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In this presentation, I will share my experience in teaching humanities graduate students with little programming experience using KH Coder. KH Coder is open-source software for qualitative content analysis and text-mining, enabling KWIC concordance, correspondence analysis, co-occurrence network, hierarchical cluster analysis, and so on. Text mining in Japanese requires morphological analysis of the text as a preparatory step, but it is difficult for those with little coding experience to perform this task in a programming language. Therefore, in the class, I had the students first analyze the outline of the text corpus in an exploratory manner using KH Coder, and then move on to close reading after identifying the parts of the text that deserve attention. The focus of the class is twofold. Firstly, discussing the fact that when using easy-to-handle software such as KH Coder, the results of the analysis may look different depending on tasks such as setting parameters and choosing visualization models. Secondly, informing students that it is preferable to eventually program themselves to understand the entire analysis process, compared with ending up using easy-to-handle software. Through this discussion, I believe that students who are more interested will be motivated to learn to program, and at the same time, students who are not interested in learning programming will be able to cultivate critical thinking by becoming more aware of the existence of various factors that affect the results of data analysis.

The phenomenology of technical knowledge: product management, research software engineering, and digital humanities

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Digital Humanities (DH) pedagogy often focuses on introductory programming and data science at the expense of product management (incorporating product design, development, and maintenance). This is unfortunate, because product management offers a framework for introductory programming and Research Software Engineering (RSE) training, and encourages students to consider cultural and ethical issues conducive to broadening participation and inclusivity. By incorporating RSE product management methods (which naturally attend to and promote inclusivity due to their evolution within the education sector), into DH pedagogy, we can square the circle between commercial, government, and educational values and priorities. Product management is a growth area that will have a significant impact on the future digital world. The values and principles used to design and develop products, and the diversity of people leading product design initiatives, will have a direct bearing on the future shape of digital economy, culture, politics, and society. When delivered in parallel to programming and coding courses, DH product management has the potential to produce graduates with an understanding of core analytical and engineering skills such as design thinking, requirements and stakeholder analysis, risk management, and communications in addition to core coding and data science principles. More fundamentally, it provides opportunity for students to design and implement applied projects and experience the challenges of infrastructure provisioning and sustainability on their own terms. This is vastly different,

but complementary, to the experience of programming and less daunting to students wary of technical activities. Incorporation of product management into DH pedagogy is not without its challenges, however, and care should be taken in course design and delivery. It assumes the need for reflection on the phenomenology of technical knowledge - what is a digital 'product', what are our values and goals, who are we designing for, who is included or excluded by our design principles? We could be so bold as to suggest that product management is the natural next phase in the elaboration of an inclusive and purposive agenda for DH as a discipline but, if our phenomenology of design and use is off key, our resulting pedagogies (and products) will be too.

Towards Participatory and Emancipatory Pedagogy in teaching Digital Humanities: Reflections from the Cambridge Data Schools

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This paper reports on the experiences of Cambridge Data Schools, an intensive international training programme for adult learners which aims to democratise access to tools and methods for digital data collection, encouraging dialogue and mutual learning between practitioners in industry, civil society and academia.

Data Schools draw inspiration from Critical Pedagogy and its role in combating structural inequalities. In particular from Freire's call for an approach to adult education which emphasises working "with learners and educators, not working either on them, or simply on their behalf " (Freire, 1978: 6). It also draws from critical theory scholarship from the South to tackle questions on decolonisation of data inquiry (Dussel, 2011; Sousa Santos 2015; Couldry, 2021).

We have worked to break down the "dichotomy between teaching and learning" (Freire, 1978: 9) during the Data Schools, by encouraging participants to reflect on how they have learnt from each other, and us from them, through activities co-designed with our growing alumni networks. This aims at co-creating knowledge through mutual interactions in a common project of inquiry.

However, this approach has pressing challenges. Questions of language barriers with the Global South, limited places for students, funding, and even the overarching model of commodified education in the hosting institutions are identified obstacles. It is then a praxis evaluation based on this particular project which aims at upholding the principles of participation and emancipation, tackling imbalances and inequalities.

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Putting data science in SHAPE: A geographical perspective

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Teaching data science and GIS (Geographic Information Systems) to SHAPE (Social sciences, Humanities, and the Arts for People and the Economy) students without a technical background presents unique and exciting challenges. In this paper, I will adopt a geographical perspective to discuss strategies to make

these subjects more accessible and engaging to students from the Global South, and particularly to BAME and Black students in the UK. I will examine three interrelated propositions. (i) Data science is rooted in scientific knowledge and technologies from the Global North, predominantly developed by White (or, more recently, Asian-American) scientists and technologists. It is necessary to discuss this Northern viewpoint explicitly while emphasising Global South perspectives and applications. (ii) An introduction to data science requires not only programming but also statistics, which is arguably even more important to formulate meaningful questions. Human geography provides a rich and fascinating field that provides many types of quantitative data that can be used as case studies, for example comparing countries or regions within countries in terms of Human Development. This provides opportunities to critically discuss the biases and limitations of social data. (iii) Some of the "decolonising the curriculum" rhetoric has a clear anti-STEM orientation that I find counterproductive when the objective is precisely to foster enthusiasm and interest in SHAPE students that are sensitive to social justice. How can we decolonise (geographic) data science without rejecting it as a positivistic or even imperialistic enterprise?

SHAPING Up: How data fellowships are helping create diverse talent pipelines from the social sciences into graduate data careers

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In UK higher education an ambitious £19.5m initiative – Q-Step – designed to create a step-change in developing quantitative research skills in the social sciences ran from 2013-2021. This paper reflects on the Data Fellows programme developed by one UK university (University of Manchester) that participated in the programme. 330 social science undergraduates – Data Fellows – have completed paid work placements, undertaking data-driven research projects in industry. We describe the model developed and the skills frameworks and methods used to evaluate the outcomes (Carter, 2021). The Data Fellows programme was designed to be inclusive; 70% have been female, and 25% from historically under-represented groups.

Drawing on Data Fellows' own reflections, we present case studies both during and after their summer work placement. We evidence how experiential learning helps social science graduates enter the workplace and show how Data Fellowships provide a catalyst to address gender inequalities in entering data careers. Crucially we show how social scientists have the capability to flourish in data-driven careers.

We draw on the British Academy's The Right Skills report (BA, 2017), and McKinsey (2018) and LinkedIn (2019) reports that describe the 'top skills' for graduates. Focussing on two skillsets, (i) analytical and research skills, and (ii) professional skills, that students are expected to evidence upon graduating into highly skilled, analytical roles, we illustrate how data-driven, research-led, paid work placements provide social science data fellows with practical experience to acquire these skillsets. Examples of personal development tools to help students elicit these skills are presented: My Analytical and Research Skills Personal Development Plan and My Professional Skills Personal Development Plan (Carter, 2021)

We critically discuss the outcomes of the Data Fellows intervention programme and suggest ways this could be deployed to address inequalities. Finally, examples of social science graduates currently engaged in policy roles are presented to provoke discussion about future research.

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Inclusive education design towards interdisciplinary-enhanced employability (IEDTIE) - Case study of MSc Urban Informatics programme

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This presentation took MSc Urban Informatics programme set up by Centre for Urban Studies and Progress (CUSP) London at Department of Informatics, King's College London, as a case study, to summarise the program deliveries from 2018 to 2022 by analysing students' diversity, the programme performance, the interdisciplinary structures and module compositions, as well as the alumnus employability; with the aim to highlight its education success by (1) embracing inclusive programme design (e.g., Data Dive with diverse students from partnering universities) since 2018, which also enabled the programme to adapt to the hybrid delivery during the pandemic swiftly; (2) its distinguished interdisciplinary features (e.g., cross-faculty modules) from academia backgrounds and courses, which facilitate the resilience of students' career pathways upon wider capacity building; (3) the very practical components (e.g., placement) thanks to industrial partnerships, which granted students first-hand industrial practices experience and better understanding of working environment. Such inclusive education design towards interdisciplinary-enhanced employability (IEDTIE) model empowered by the strong supports from the managerial team, had been taken as a good working basis for wider collaborations across departments, faculties or even universities, to provide more inclusive high quality education experience for students whilst prepare them better to future employments upon graduation.

General session: An interdisciplinary approach to gender and violence

Friday, 16th September 2022, 5:00pm - 6:00pm

Social media use, perceptions, and online prosocial behavior in adolescence: differences by gender and sexual orientation

Pastor, Yolanda; López-Sáez, Miguel Ángel; Pérez-Torres, Vanesa; Thomas-Currás, Helena; Lobato-Rincón, Luis L.; García-Jiménez, Antonio

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Introduction

The use of social media and instant messaging is common and widespread in adolescence. Research has paid special attention to the study of risks, but little is known about online prosocial behavior. The present paper aims to study the differences that gender identity and sexual orientation may have on the use, perceptions of social networks, and online prosocial behavior.

Method

A self-developed questionnaire on the use and perception of social networks and instant messaging and a Spanish adaptation of the Online Prosocial Behavior Scale (Erreygers et al., 2018) were administered to a sample of 1305 adolescents from the Community of Madrid aged between 14 and 20 years (Mage=16.2; SD=1.29).

Results

Differences by gender identity appear in the frequency of use of social networks and instant messaging, in the prosocial behavior emitted and received, and in how they perceive social networks. Thus, it is the girls who use social networks and instant messaging more frequently and who report more frequently emitting and receiving prosocial online behaviors, followed by non-binary/fluid gendered individuals. The latter use more frequently than boys different networks with a prosocial purpose (WhatsApp, Twitter, Instagram, Facebook and TikTok). Compared to boys, girls and non-binary people report being more afraid of online criticism and feel better on networks when interacting without an image. In addition, girls tend to feel more observed and evaluated on social networks. Sexual orientation shows differences in frequency of WhatsApp use, prosocial Twitter use, and prosocial behavior emitted and received. LGBTBIQ+ people get higher scores in these aspects.

Conclusions: It should be noted that girls are the group that uses networks and messaging the most, shows greater prosociality and also perceives greater pressure. The fear of online criticism by LGBTBIQ+ students could be due to the fact that they are frequently the target of online hate, which favors the stress of minorities in contact with social networks.

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Expanding reflexivity inwards and outwards. Masculinities, war and science

Munaretto, Pedro

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In this anthropological exercise I intend to recover the relationship established between a male social sciences researcher and male Malvinas/Falklands war veterans through some ethnographic examples of the interaction I had with them during fieldwork. The qualitative data offered here derives from the ethnographic research I conduct in the Metropolitan Area of Buenos Aires and in the northern province

of Chaco, and shall be considered in the context of the 40th anniversary of the outbreak of that international conflict and of important advances regarding women's rights, powered by the various feminist movements in Argentina. I propose to take a deeper look at the epistemological and cosmopolitical (Stengers, 2014) advantages and disadvantages of the new gender agendas in such masculinised spheres as that of the war veterans. The hypothesis of this communication suggests that research by men on men brings as many heuristic advantages as it risks biasing the subjects of study via hegemonic and stereotyped masculinities. To conclude, I propose this ambivalence as a case study which could help demonstrating the fundamental importance of incorporating the practice of ethnographic reflexivity into all areas of science, far beyond social anthropology, so words and intelligibility could be put into the tacit and (un)comfortable relationship among men in the context of science research.

References:

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Women´s human rights: access to justice

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The present research aims to analyze the Access to Justice for the protection and development of women's human rights. The analysis aims to improve access to justice for women, as judicial protectioin is a primary guarantee for the exercise of all other rights. The research begins with a review of the critical theory of human rights designed by Joaquim Herrera Flores, as it proposes that human rights are the result of social struggles that intend to provide more dignified and effective protection for women. In addition, access to justice must be considered in its material aspect and not merely formal, in which the effective realization substantiates the fundamental constitutional right. Thus, judicial units must be structured in the existing legal, economic and cultural obstacles, as well as in the repercussions that the process can cause in the lives of the people involved. That is one of the reasons why, despite all efforts to protect these rights, the data on violence against women still remains alarming in Brazil. In addition, society is still structured on patriarchal logic, which refers to a culture of male supremacy, domestication and inferiorization of women. This is a bibliographical research with a descriptive methodology, which aims to demonstrate the imprescriptibility of guaranteeing, in a specific manner, to women, the specialization of normative acts, institutional practices and public policies to curb violence and promote their access to what is necessary for a worthy life. To this end, it will be necessary to go through the available paths to obtain the assistance of the Brazilian Judiciary, as well as to analyze the main instruments of risk assessment for femicide and the coping network in the face of the situation of domestic violence against women. It is intended to contribute to academic debates on the feminist perspective of law, which effectively shed light on subsidies for the protection of women and families.

Gender and bystander effect of teen dating violence. Preliminary study.

Ancín Nicolás, Ruth África; Pastor Ruiz, Yolanda

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The high prevalence of dating violence (DV) among adolescents and the gender differences that may exist between bystander, victim and perpetrator may have different consequences for individuals. Therefore, it is necessary to study this phenomenon. The aim of this study is to find out whether gender can be a differential factor that can influence the intervention or not of the bystander in situations of violence against children. For this study, a questionnaire was administered to 64 adolescents between 14 and 19 years of age, concerning the participants' socio-demographic data (including variables such as age,

gender, grade, and whether or not they had a partner), experience with VN (in physical, psychological and sexual violence), bystander behaviour and behavioural intention, bystander efficacy, bystander barriers and justification of intimate partner violence. The results showed that girls had been more exposed to DV than boys either because they had been told about it or because they had seen it. It should be noted that significant differences were only shown for exposure to physical violence. Differences were also observed in behaviour and behavioural intention, efficacy, barriers and tolerance and justification of violence according to gender. Boys scored higher on all scales, although there were significant differences only in tolerance and justification of violence. Boys justify violence to a greater extent than girls. In relation to the gender of the victim and the aggressor, the behavioural intention to intervene in case of being a bystander was higher when violence was perceived in heterosexual couples, with the man being the aggressor, and to a greater extent in the case of sexual violence. Therefore, we can see that gender can lead to differences in DV bystanders, and further research is needed in this area.

Posters

Thursday, 15th September 2022, 5:00pm - 6:00pm (Onsite session)
Friday, 16th September 2022, 10:00am - 11:00am (Online session)

Women empowerment and adoption of climate smart practices in Southern Nigeria

Ogunnaike, Maria Gbemisola

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This study examined the effect of women empowerment on adoption of climate smart practices in Southern Nigeria. Multistage sampling technique was used to select 521 farmers across five states in Southern Nigeria. Data were obtained on socio-economic characteristics, Climate Smart Agricultural Practices (CSAPs) of farm households, livelihood assets and activities of adults using a structured questionnaire. Women empowerment was assessed using the framework of Abbreviated Women Empowerment in Agriculture Index (A-WEAI) methodology. Data were analyzed using frequency counts, percentages, means and Multivariate (MVP). Results revealed that the mean age of the respondents was 40.7 years with 9 years of formal education and the household size of the respondents was 7 persons with three being economically active while 74.7% had access to extension contact. Residue retention (52.1%), minimum tillage (34.0%), green manuring (12.1%), agroforestry (9.0%), farmyard manuring/composting (8.8%) and crop rotation (8.4%) were commonly adopted CSAPs by the farm households. A-WEAI results showed women achievement rates in Productive Assets Ownership {PAO (49.0%)}, Participation in Production Decisions {PPD (62.0%)}, Control Over Use of Income {COUI (52.0%)}, Access to and Participation on Credit Decisions {APCD (19.0%)}, Group Membership {GM (74.0%)} as well as workload (67.0%) were significantly ($p<0.01$) lower than that of the men (73.0%, 73.0%, 67.0%, 30.0%, 82.0% and 65.0% respectively). Based on 80.0% achievement in the five Domains of Empowerment (5DE), only 28.0% of women in the households were adjudged to be economically empowered compared with 44.0% of the men. Also, 33.0% of the primary women achieved parity with the primary men in the households. MVP showed that higher 5DE score of the farmer significantly enhanced the adoption of crop rotation, while households in which women achieved parity with the primary men were less likely to adopt farmyard manuring/composting "$\beta = -0.417$, $p < 0.01$". The study concluded that reducing gender differences in access to production resources through women empowerment can enhance adoption of CSAPs in Southern Nigeria. The study therefore recommended public sensitization and favourable policy to enhance COUI and PPD among women as well as gender parity in access, ownership and control of livelihood assets of farm households.

Strengthening intercultural understanding among Swiss and Ghanaian high school students through collaborative learning on socio-scientific issues - Intercontinental learning with and from each other

Schriebl, Daniela[1]; Macamo, Elísio[2]; Wrigley-Asante, Charlotte[3]; Ablo, Austin[3]; Robin, Nicolas[1]

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The world has grown together, yet we have developed and fostered a problem-solving culture that is local in orientation. We have grown interdependent, but education systems encourage young people to approach problems as local problems without any global bearing. How do we educate young people to live up to the interconnected nature of the world? What are the stakes in fostering a problem-solving culture with a global orientation? Perhaps understanding each other's needs and daily challenges is crucial for such a commitment, especially regarding socio-scientific issues such as climate change, distribution of resources, etc. The question is how to develop the necessary socio-cultural skills in young people's education in a gender-sensitive way to equip them with a normative and ethical framework that

acknowledges the importance of thinking global. Education, especially the education of young people, seems to be the ideal place to start, which is why our project focuses on promoting socio-cultural skills among youth to protect the ultimate value of ethics of recognition of our shared humanity.

The project's overall objectives consist of using high school students' exposure to intercontinental and intercultural exchange through collaborative learning to enhance their competence in dealing with global socio-scientific issues. Specifically, the project seeks to (a) sharpen students' awareness of the interpenetration of global and local issues, especially concerning those of a socio-scientific nature; (b) equip students with the necessary skills to deal with such issues; (c) help students experience a high level of personal relevance in the teaching units; (d) empower female students, in particular, to participate in public debates on socio-scientific issues and, finally, (e) engage teachers to experience the quality and positive impacts of socio-scientific issues.

We will present our research design and give insight into an interdisciplinary collaboration between researchers from sociology, gender studies, geography and STEM education, based in Ghana and Switzerland.

The progress of low and middle country contribution to STEM

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Background

Better access for clinicians from low- and middle-income countries to international conferences can improve collaborative opportunities and subsequently address the knowledge gap between the weaker and stronger knowledge economies. A better understanding of the cost of international conferences may help conference organizers improve access to their conferences. This study aimed to describe the expense-associated barriers to a selection of international emergency medicine and critical care conferences, in terms of registration cost and out-of-pocket expense.

Methods

A cross sectional, retrospective design was used. Registration cost variables (cost, waivers, discounts and scholarships) were collected from a cohort of international emergency medicine and critical care conferences held during 2016. The World Health Organization Purchasing Power Parity index was then applied to calculate an equitable registration cost for delegates from South Africa, Brazil, Turkey, China, Australia, Germany and the United States for each conference.

Results

Twenty conferences were included. Eight conferences (36%) offered discounted rates, and another eight offered scholarships for low- and middle-income country delegates. Calculated, equitable registration rates were 2.6, 1.9, 1.9, 1.7, 0.9, 1.1 times lower than quoted respectively for South Africa, Brazil, Turkey, China, Australia and Germany compared to the rate in United States dollar. Only one conference provided equitable registration rates for all test-countries.

Discussion

Current international conference registration costs (despite discounts, waivers and scholarships) are likely a barrier to including low- and middle-income delegates in the educational, networking and promotional opportunities that conferences provide. Conference organizers should consider restructuring registration costs to encourage more representative international audiences.

Conclusion

Based on statistics concluded, it was observed that middle country benefit a lot in promoting STEM than the lower country and we have to find a way to increase the gap.

An interdisciplinary and intersectional approach to "Gender and Science" outreach activities: findings and challenges

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This work presents a brief overview of the findings and challenges identified after analysing four teaching and outreaching online activities on "Gender and Science" (2021-2022) that were addressed from an intersectional and interdisciplinary approach and orientated to people on different stages of the academic career. The research draws from qualitative and quantitative methodologies by focusing on the thematic axes organising the debates, the interpersonal dynamics during the sessions and the data gathered through anonymous surveys. With a sample of 81 attendants, the work is twofold: 1) it addresses the impact of gender in the production of scientific knowledge and 2) analyses power relations and discrimination within scientific and academic environments (representation, discrimination and harassment, work-life balance, etc.) from an intersectional perspective (gender, sexuality, race/ethnicity, life-course). Among the challenges that these activities posed us, stand out the scant engage from people without previous gender-training; the difficulties to overcome the separateness-inseparability dilemma crosscutting intersectional approaches; the lack of aggregate multi-dimensional data to address intertwined forms of discrimination; and the skepticism of part of the participants, regardless of figures and experiences, when addressing the magnitude of certain normalised exclusionary practices (biases, underrepresentation, gaps, harassment, etc.) within Academia.

Gender differences in the results of the Geology Olympiad in Spain: A thirteen years revision

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In this paper, we present the preliminary results of a study on the differences observed in the results obtained by the girls and boys participating in the national geology Olympiads in Spain.

In his way, we have noticed differences between the average scores obtained by boys and girls, with boys always having higher scores. In addition, it has always been a boy the one who has obtained the best results in the individual phase, although the winning teams in the group phase there are always composed of a majority of girls. These initial results could be related to some girls' lack of confidence when faced with individual tests while overcoming this distrust once they are part of a group; in these cases, they are even able to obtain better total scores than boys. It is important to follow this line of research to find out the reasons for these differences and try to change this trend to ensure the equality of opportunities between students regardless the gender.

The Geology Olympiads at all levels (local, national and international) have resulted in multiple benefits for the teaching of geology, its visibility among the society, and the assessment and awareness for the protection of the natural environment and the Geological heritage.

Fieldwork in Geology and menstruation. How does it affect the students?

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[1]Universidad Complutense de Madrid, Spain; [2]Geosciences Institute, Sedimentary Geology and Environmental Change, Spain; [3]Association Mujeres con los Pies en la Tierra, Spain; [4]National Museum of Natural Sciences, Department of Paleobiology, Spain; [5]Bayerische staatssammlung für paläontologie und geologie, Germany; [6]Transmitting Science; [7]Universidade de Vigo, Spain; patcarro@ucm.es

Field trips are a very important part of the itinerary of many science degrees, especially those in Earth sciences. In contrast to their importance for professional training, these field trips hardly have any preparation to meet the possible needs of the students. For example, routes are hardly ever planned to include stops at public toilets. This work summarises the results of surveys carried out both with teachers from the Faculty of Geological Sciences at the Complutense University of Madrid (Spain) and with undergraduate students of Geology at the same faculty to check to what extent these issues are considered in the preparation of field trips. Geology is one of the science degrees with more field trips during the year, including field trips of several days. This is the first time that both teachers and students have participated in a questionnaire that attempts to highlight the problems that make these field-trips not equally welcoming to everyone. Some students declared having problems related to menstruation during field trips and highlighted the need to take into account people's physiological needs. Some of the problems are the scarcity of stops during the day or the access to toilets, and that teachers do not carry first-aid kits with sanitary pads, tampons or napkins, partly because those issues are believed to be responsibility of the people who menstruate and rely on them to have the tools to solve those problems. Among the solutions, we propose that it is essential to raise awareness of these problems among the professors and to establish an action guideline for field trips.

The experiences of Queer High School Students in Mathematics, School, and Communities

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The dearth of research that foregrounds the experiences of Queer students in high school, considering their mathematical experiences, guided this study. In this study, I designed and combined surveys that fulfill the primary need of getting to know the experiences of Queer students in high school mathematics. This study had the goal to answer the following questions: 1. What are the experiences of Queer high school students in mathematics, school, and their communities?; and 1.1. How are Queer high school students' experiences in mathematics, school, and communities related to their gender and sexual identities?

The surveys, which were administered to 79 Queer students in a major state in the Midwest U.S.A were primarily analyzed using descriptive statistics in SPSS. Taking into consideration students experiences, perceptions, and views of mathematics, findings show that most Queer high school students disagree with enjoying mathematics, looking forward to their mathematics class, believing learning mathematics is worthwhile for their future, and being interested in mathematics. When thinking about studying mathematics, Queer high school students agreed that they often worry about not getting good grades in mathematics and having difficulty with the subject. Still, at the same time, these students also agreed that they get good grades in mathematics and learn the discipline with ease. Most Queer students also disagree that they are strong mathematical thinkers and disagree that they are not successful in mathematics. Queer students also have strong views of their mathematics lessons. In addition, Queer high school students disagreed that they would try harder if they had different teachers and that they would do badly in mathematics whether or not they studied it. When asked about discipline affinity among mathematics, English, and Science, the majority of Queer high school student disagreed that they

would take additional mathematics classes after finishing high school and that in their future profession they would use/need mathematics.

This study findings re-affirmed the importance of understanding Queer high school students' experiences in mathematics, since many Queer high school students are not engaged in mathematics activities and would rather study non-STEM subjects.

Building a Movement with EDIS

Craig, Robin[1,2]

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EDIS (Equality, Diversity, and Inclusion in Science and Health) is a coalition of 29 research organisations tackling equality and inclusion issues across the UK science and health sector. EDIS' vision is simple: for everyone to have equal opportunities and access to a successful career within science and health, its research and its outcomes.

This poster proposes to map how EDIS has developed since its inception in 2016, including how it has built momentum for sector-wide equality initiatives and facilitated collaboration between research organisations. EDIS' self-reflective and collaborative mission will be a key feature of the poster, with emphasis on how we have worked with member organisations to drive collective change.

This will take the form of a timeline of EDIS' work, including major milestones such as:

• EDIS' inception as a collaboration between the Francis Crick Institute, Wellcome Trust and GlaxoSmithKline.

• Developing an inclusive name change policy for academic publishers after working with the Trans Name Change Policy Group (https://edisgroup.org/wp-content/uploads/2021/01/Inclusive-name-change-guidance-v4.pdf)

• Publishing the Diversity and Inclusion Survey Question Guidance (DAISY Guidance), a free resource for organisations collecting diversity data developed with the Wellcome Trust (https://edisgroup.org/wp-content/uploads/2022/05/DAISY-guidance-current-upated-May-2022-V2.pdf).

• Running 3 successful symposiums on the themes of inclusive conferences and events and inclusive research and experimental design.

• Presenting collective oral evidence to the UK parliamentary inquiry into Diversity and Inclusion in STEM.

The goal of the poster is to inform delegates about EDIS' coalition-building and invite feedback on EDIS' work. It will also prompt observers to consider how equality and diversity work can be most effective when it is undertaken collectively and collaboratively

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Belli, Simone
Bencivenga, Rita
Benedi-Garcia, Clara
Benites, Lucas
Berlanga Palomo, María José
Borba, Edilce Maria Balbinot
Bozukova, Katya
Brattoli, Bartolomeo
Brovelli, Dorothee
Bullock, Renee
Burns, Caroline
Calonge García, María Amelia
Canal Calvo, Xènia
Cannito, Maddalena
Carcel, Cheryl
Carrillo, Patricia
Carro-Rodríguez, Patricia María
Carter, Jackie
Casasgranda, Elvira
Cashmore, Matthew
Chakravorti, Sanjukta
Chappell, Louise
Chechik, Elena
Chiappero, Fernanda
Chillo, Veronica
Chiocca, Susanna
Ciccia, Lucía
Cid López, Rosa
Cocimano, Alejandra
Coll, Catalina
Colombara, Diego
Coltofean-Arizancu, Laura
Craig, Robin
Crane, Todd
Cuesta, Elena
d´Hiriart, Sofia
D'Almeida, Romina E.
Da Riva, Rocio
Dahmen-Adkins, Jennifer
Danesi, Cecilia Celeste
Davies, Richard
de las Heras, Alba
De Stefanis, Eleonora
de Tezanos Pinto, Paula
Delgado Hervás, Ana
Delgado-Pinar, Martina
Desiderato, Alessandra
Diaz Zepeda, Alejandra
Díaz-Andreu, Margarita
Dos Santos, Daniel Andrés
Echavarría, Marta
Elaydi, Hatem
Elmgadma, Amani
Eriksen, Siri
Espinoza-Cara, Andy
Estradé, Sònia
Fanjul, Elisa
Fasola, Laura
Fauvelais, Manon
Fernandez, Romina
Ferrusola Bial, Judit
Fischer, Melina
Florczak, Marcos Antonio
Fontanarrosa, Gabriela
Fraile Rey, María Aránzazu
Fratani, Jessica
Freeman, Richard P.J.
Gaiaschi, Camilla
Gallegos Sánchez, Silvana
Gamboa, Sara
García-Jiménez, Antonio
Garcia-Llorente, Marina
García-Llorente, Marina
Gaydarska, Bisserka
Giles, Sam
Godoy, Priscila Brandi Gomes
Goldberg, Mariela
Gómez Cano, Ana Rosa
Gómez-Varela, Ana I.
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González-Fernández, Verónica
González, Leticia
Gordin, Shai
Graciá, Eva
Guariento, William Anthony
Günther, Isabel
Gutiérrez Briceño, Inés
Gutierrez Franco, Elena
Hallam, Clare
Hallam, Laura
Harttgen, Kenneth
Hevia, Violeta
Huerta, Irving
Hussein, Fabiana R Gonçalves e Silva
Husu, Liisa
Inés, Oleastro
Iniesta-Arandia, Irene
Jardón Giner, Paula
Jensen, Lars Bang
Jeppesen, Cynthia Veronica
Jerke, Julia
Jorgensen, Anna
Juvera Avalos, Janett
Kirk, Katherine
Kochen, Silvia
Kokaze, Naoki
Kosmala, Katarzyna
Kozlowski, Diego
Labombarda, Florencia
LAMADRID ALVAREZ, SILVIA
Larivière, Vincent
Lebrón Moreno, Alberto
Lecuona, Óscar
Lema, Cintia
Lemaitre, Bruno
Leone, Cinzia
Li, Tong
Li, Yijing
Liani, Millicent
Lido, Catherine
Livio, Barbara
Lobato-Rincón, Luis L.
Lomáscolo, Silva Beatriz
López Carrillo, María Dolores
López-Guerrero, Paloma
López-Sáez, Miguel Ángel
Lopez, Diana E.
Lorenzo Pisarello, María José
Lynn, Robert
Mabuba, Nonhlangabezo {Bezo}
Macamo, Elísio
Maitra, Saikat
Maitra, Srabani

Makhatha, Mmamooko Elizabeth
Malonza, Josephine
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Manzano-Balsells, Cristina
Martinez Galvez, Fernanda
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Martins, Ana Cristina
Marty, Edwige
Mary, Laura
Medina-García, Paula
Meili, Dario
Mendoza, Irene
Menéndez, Iris
Meraviglia, Greta
Miller, Heidi J
Mingorria, Sara
Mishra, Shivani
Mocrosky, Luciane Ferreira
Molineri, Carlos
Monmany Garzia, Carolina
Monroe-White, Thema
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Moreira, Sarah
Moreno, Magdalena
Moth-Poulsen, Kasper
Müller, Jan
Munaretto, Pedro
Nagy, Beáta
Naldini, Manuela
Nanni, Sofia
Nicolas, Robin
Norton, Robyn
Novillo, Agustina
Ntsendwana, Bulelwa
Nuñez Montellano, María Gabriela
Ogunnaike, Maria Gbemisola
Olivella Quintana, Maria
Oliver, Adriana
Oteros Rozas, Elisa
Ovejero, Ramiro
Owusu Afriyie, Micheal
Paksi, Veronika
Pasquini, Béline
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Pastor Ruiz, Yolanda
Penlington, Roger
Pérez Ibarra, Irene
Pérez-Herrera, Rosa Ana
Pérez-Torres, Vanesa
Pero, Edgardo
Pez, Priscila
Piquer-Rodriguez, María
Platero, Lucas
Plaza Behr, Maia
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Ramnarain, Dereshni
Rasmussen, Josephine Munch
Rauhut, Heiko
Ravera, Federica
Read, Barbara
Reades, Jonathan
Reagan, Romany Perrette Burgess
Reynaga, Maria Celina
Rial, Mariana Cecilia
Risi, Federica
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Robin, Nicolas
Rodríguez Arteche, Iñigo
Rodríguez, Daniela
Román, Francisco
Romero-Delgado, Marta
Ros Magán, Germán
Roy, Aindrila
Russo, Candela
Saha, Anwesha
Sánchez Romero, Margarita
Sandoval-Sainas, Maria
Santamaría, Beatriz
Santero, Arianna
Santos, Ana Amor
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Sanz-Pérez, Dánae
Saunders, Rachel
Schriebl, Daniela
Schroeder, Natalia
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Serje Arias, María Angélica
Shanthosh, Janani
Sheppard, Laura Harriet
Shipovskaya, Valentina
Simionato, Natalia Maria
Siqueira, Ranyella Cristina
Sirigu, Elsa Sale
Slade, Bonnie
Smithies, James
Soler Mayor, Begoña
Soriano, Cristina
Stern, Margaret
Stiti, Khaoula
Suchecki, Deborah
Sugimoto, Cassidy
Tabernero, Andrea
Taral, Suchana
Tardos, Katalin
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Thompson, Kelly
Tomás, María-Baralida
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Torres, Laia
Trowsdale, Jo
Umutoni, Jane
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Vale, Ana Margarida
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van Daal, Manon
Vandevelde, Ségolène
Vanegas Díaz, Alejandra Marcela
Vassallo, Amy
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Velo, Agustina
Veneri, Camilla
Vizuete, Beatriz
Vuolo, Nicola
Wainer, Zoe
Wild, Tom
Wittung-Stafshede, Pernilla
Woodward, Mark
Wrigley-Asante, Charlotte
Zarbá, Lucía