

**The Spanish Equality Law and the Gender Balance in the Evaluation Committees:
An Opportunity for Women's Promotion in Higher Education.**

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Abstract

Despite advances in gender policy and equality laws in the 21st century, women are still a minority in the full professor category in Europe. Some measures establish gender quotas to balance gatekeeper positions, which will supposedly pave the way to make women's integration into senior higher education positions easier. In Spain, Organic Act 3/2007 of 22 March on effective equality between women and men launched progressive norms governing gender issues, and the Spanish Science and Technology Act (2011) incorporated measures to promote effective equality in academic institutions. This paper evaluates how Spanish evaluation agencies' compliance with implementing gender balance has affected the composition of evaluation committees and its impact on the advancement of women in science. Findings reveal some positive figures on women's representation in recent decades, even though gender balanced committees do not show any clear evidence of causing this effect. There seems to be no correlation between gender balanced committees and women's success rates, suggesting intermediate variables affect women's low participation in competitive submissions. It explores several factors concerning two agencies' evaluation procedures, such as formality and transparency, direct/multiple gatekeeping processes, the influence of epistemic cultures, cohorts and confidence of female candidates.

Keywords: gender equality; evaluation system; quotas; legislation; academia

Introduction

Discrimination against women continues in the 21st century, despite advancements in gender policy and equality laws. In 2015, Spanish data showed positive figures for women, who represent 42 per cent of tenure track (some 35% in 2005) and 21 per cent of full professors (compared to 13% in 2005), where these figures are above the EU mean of 37.1% and 20.9%, respectively. But the percentage of women in rector positions is lower than the EU mean (only 10%, below EU mean of 20%). Horizontal segregation is still in place, with a minority of women in STEM (science, technology, engineering and mathematics) disciplines, since there are more than twice as many men in the early stages of STEM careers across higher education, government and business enterprise. This reveals only a moderate advancement of women reaching top positions, which hints at a sticky floor phenomenon, and ongoing low representation of women in STEM fields.

Some decisive equality policies promise faster advancement for women in science, but more information needs to be collected on the extent to which gender measures have been applied and if they yield a positive impact favouring the representation of women in science.

This article examines the compliance of Spanish evaluation agencies with the gender balanced composition regulated by the Spanish Science and Technology Act (2011), exploring its real impacts on the entry of senior researchers and their attainment of the highest stages of recognition.

The first section outlines the methodology and the second sets out the context of gender equality actions in the Spanish research and development (R&D) policy environment, including the implementation of legislation. The third section explores the impact of evaluation processes on the advancement of women in research. The fourth section describes the evaluation process and addresses the gender composition of two Spanish evaluation agencies. The fifth section discusses the impact on female success rates of applying female quotas to committee boards. Finally, the main results are summarised and we set out a few suggestions and recommendations.

Methodological notes

The article addresses the gender composition of the evaluation committees at two independent Spanish evaluation agencies that act as gatekeepers for R&D institutions to promote researchers' advancement. The nature of this work is based on the use of mixed approaches, ranging from legal and political analysis to employing secondary data. It focuses on the gender balance composition of the National Agency for Quality Assessment and Accreditation (ANECA), which evaluates the accreditation of academics, compulsory for applying to full professor positions, and of the National Committee for the Evaluation of Research Activities (CNEAI), which evaluates the research merits accumulated by researchers in tenure track positions for six-year periods, and then compiles a ranking based on meritocracy, for which top rated researchers receive bonuses and recognition. We would expect legislation to benefit gender equality, at least by formally regulating the gender balanced composition of evaluation committees. Finally, summary data is presented of how the implementation of female quotas and evaluation processes may influence the success ratio of men and women researchers in achieving promotion and recognition by accreditation.

Gender equality actions in R&D and innovation in Spain

European countries have dealt with the gender gap by launching regulations, positive actions and equality policies to support female careers. In Spain, Delgado (2014) explains that the gender agenda in research has been a result of two general trends: firstly, European governance and supranational demands for data to implement gender mainstreaming; and secondly, national pressures from gender lobbies, such as the Spanish Association of Women Researchers and Technologists (AMIT). These two trends led to the enactment of Organic Act 3/2007 of 22 March on effective equality between women and men to establish the legal framework, and the creation of equality observatories at universities, governmental organisations and large corporations. This law also created the Women and Science Unit (UMyC), which advocates the inclusion of gender issues in the text of the 2011 Science and Technology Act. As Delgado (2014) has pointed out, and which we will confirm later in this work, its advocacy stance and watchdog mission is decisive for increasing equality at academic institutions. Regarding this legislative vocation, in 2011 the Spanish Science and Technology Act established gender measures in R&D under the framework of Equality Act 3/2007. All stakeholders expected the specific mention of women in legislation and the balanced composition of men and women on evaluation committees to create opportunities for women in academia.

Legislative framework

In 2011, the Spanish government approved Science, Technology and Innovation Act 14/2011, which replaced the former legislation from 1986. This was done after an overhaul of academia rules in 2001, via Organic Law 6/2001 of 21 December and

Amended Organic Law 4/2007 of 12 April. Its aims were to transform Spanish R&D by promoting research, innovation and technological development. To do so, legislators planned to modernise Spanish universities and promote internationalisation, which would involve cultural changes in research careers and more competitive activity by trying to align with the European Research Area. Among other modifications, Act 14/2011 implements a 'gender balanced composition in management and representation bodies' in Spanish academia to enact gender mainstreaming in line with European guidelines (Bustelo, 2004; Bustelo and Lombardo, 2007). This is based on Organic Act 3/2007 of 22 March on effective equality that establishes that the 'total number of people in a body should not exceed sixty percent or be less than forty per cent'. Thus, the disposition is mandatory for those committee boards that regulate hiring and promotion for staff civil servants and private sector employees in academia.

Additional section 13 of Science and Technology Act 14/2011 enacts the incorporation of gender mainstreaming in research with the following instruments: 1) The Spanish Science and Technology Strategy and the Spanish National Plan for Scientific and Technical Research and Innovation for promoting gender perspective in every step of the research process (objectives, research problems, theoretical and explanatory frameworks, methods, collection and interpretation of data, conclusions, predicting applications and technological developments, and future proposals), 2) fostering gender and women's studies that motivate and recognise women's presence on research teams, 3) collection of segregated data by sex in every R&D institution and the construction of indicators on gender gap, 4) avoidance of gender bias in the selection and evaluation of national research activity (handled by CNEAI) and researchers' curricula (managed by ANECA), keeping data on the sex of the candidate confidential for evaluation purposes, 5) promotion of gender mainstreaming in every dimension of the Spanish Innovation

Strategy and the National R&D and Innovation Plan, and 6) implementation of equality plans at public research institutions with the inclusion of positive measures to monitor and analyse trends through annual indicators.

Progressive gender policy should have a great impact on women's advancement in academia, but its implementation depends on how it is managed at different Spanish institutions, and the financial crisis unfortunately brought its execution to a stop (Salazar, 2016; Puig-Barrachina et al., 2016).

Are women a minority in academia because of old boy networks? The gender composition panels on evaluation committees

Since the late 20th century, a large body of literature highlights the importance of social and structural factors affecting the scant percentage of women in senior positions (Acker, 1989; Benschop and Brouns, 2003; Krefting, 2003; Kuijpers and Scheerens, 2006; van den Brink and Benschop, 2011; Etzkowitz and Ranga, 2011), which aids in preserving the hegemony of male researchers in academia (Rees, 2011; Sealy, 2010). O'Connor and O'Hagan (2016) criticise the myth of excellence and the ultimate legitimacy of the organisation of science as still favouring gender inequity.

Homophily and old boy networking slant the bias in favour of white men who resemble the people who sit on influential committees (Kanter, 1977; Ibarra, 1992; Lewis and Simpson 2010; Moss-Racusin, Dovidio, Brescoll, Graham, and Handelsman, 2012). Porter and Rossini (1985) explain that researchers make decisions based on cognitive similarity, membership in a particular group, and the tradition of a discipline, what they call cognitive particularism, and Knorr Cetina (1999) calls epistemic culture. In these cases, men have higher chances of success at accessing senior positions because of informal networks that influence the subjective decisions of peer reviewers (Brouns,

2000; Bozeman, Dietz, and Gaughan, 2001; Mouw, 2006; Sandström and Hällsten, 2008). Formal processes related to high transparency levels and public accountability are supposed to create opportunities for the progression of women in academia (Benschop and Brouns, 2003). On the contrary, processes related to invitation and nomination actually disfavour women's advancement, such as the case study of the Netherlands presented by van den Brink, Brouns, and Waslander (2006). In that evaluation process, the male inner circle caused serious deviation from the application of the assessment criteria.

Several studies (Grant and Low, 1997; Wennerås and Wold, 1997; Black and La Valle, 2000; Sandström and Hällsten, 2008; Marsh, Jayasinghe, and Bond, 2008; European Commission, 2009; Moss-Racusin et al., 2012; Leathwood and Read, 2013) have emphasised the low proportion of women receiving grants in research funding. According to their findings, old boy networks appear as a problem due to male reviewers deciding in favour of male candidates. Although some studies do refine the results, seeking variations on different types of applications and knowledge fields, they find no clear evidence to support gender differences in grant allocations. On the contrary, their evidence reveals that few women submit competitive applications, which decreases the gender success ratio (Marsh, Bornmann, Mutz, Hans-Dieter, and O'Mara, 2009; Ceci and Williams, 2011). The number of women's submissions drop when the processes are informal and opaque, as if they were measuring their low chance of success. Therefore, cultural factors affecting female confidence in evaluation processes appear relevant to understand the low participation of women.

Some studies highlight that male and female evaluators show less confidence regarding women's competences because of gendered organisations, supporting stereotypes that

male academics are more secure and consistent than female candidates (Benschop and Brouns, 2003; Moss-Racusin et al., 2012; van den Brink, Benschop, and Jansen, 2010). The study by Steinpreis, Anders and Ritzke (1999) points out gender bias in preference for male job applicants when male and female evaluators review the curricula of job applicants for tenure tracks. These facts underline that male and female evaluators are equally biased in making decisions. O'Connor and O'Hagan (2016, 1950) explain that 'members of the board were seen as extremely unlikely to read any individual application in detail', therefore, the researcher's reputation is clearly key in the appraisal methodology, where women get low credentials. Also, van den Brink and Benschop (2014: 478) state women evaluators' difficulties with defending female candidates due to their minority positions on evaluation panels, which could be interpreted as favouritism and feminist choices.

In Spain, Zynobyeva and Bagues (2011) found gender bias in accreditation processes for full professor and tenure tracks accredited by ANECA, since the gender composition of committee panels correlates with men having greater success in achieving accreditation. More recently, Bagués, Sylos-Labini and Zinovyeva (2015), speaking of the Italian and Spanish promotion systems, concluded that there was no clear correlation between the gender composition of evaluation panels and the increasing rate of women's success in full track professorship. These results differ from the conclusion of van den Besselaar and Leydesdorff (2009), who tell of a decreasing gender gap over time, as equality policies increase. However, the reality of both Italian and Spanish academia shows little effect from promoting women's advancement, even though Spain in particular has launched progressive policies on gender in academia.

The evaluation processes and the composition of committee boards

The Spanish evaluation system is formally based on three dimensions: independent peer review, accountability of excellence and gender blind assessment. According to the first feature, both national agencies are external and independent institutions so that they accomplish their mission without interference from academia, but academics are in charge of some phases of the evaluation process. The National Agency for Quality Assessment and Accreditation (ANECA) and the National Committee for the Evaluation of Research Activities (CNEAI) are in charge of Spanish researchers' evaluations that operate according to peer review processes, inviting senior researchers to evaluate the curricula of the candidates. The evaluators are experts in their field of knowledge but they are not professional evaluators or entirely independent reviewers. They become gatekeepers for the entry (tenure track and full professorship as civil servants or private employees) and promotion of new researchers (merit recognition process), which ends up multiplying the number of decision making tasks that only a few influential researchers must perform (Merton, 1973). Regarding the second feature, the accountability of excellence, it is mediated by bureaucracy, a typical characteristic of the Spanish management culture. These criteria emphasise the quantitative evaluation of merits in curricula, except for assessing the qualitative aspects of researchers' work. According to Spanish academia, these procedures are transparent because evaluators are guided by a list of merits and the quantitative value of every merit (this process also makes the peer review process feasible, because it is basically a mechanical and quantitative process of assigning a score to every merit). Transparency orients researchers' efforts for accumulating the proper merits to achieve accreditation. Finally, the third aspect of the Spanish evaluation system is characterised by what they call evaluation objectivity, interpreted as a blind assessment process to avoid any kind of discrimination (gender, race, religion, etc. according to Spanish Acts 3/2007 and

14/2011). The evaluation agency itself repeats that gender is not a problem in the evaluation process because evaluators should evaluate only ‘objective criteria’, ignoring personal circumstances (such as motherhood or illness). Contrary to their intention, this objectivity criterion actually harms female careers because lack of merits during their life-course is penalised in the evaluation of research careers that defines excellence as lineal and accumulative by adding recognitions (Benschop and Brouns, 2003; author, 2015, 2016; O’Connor and O’Hara, 2016).

Mapping the composition of the assessment boards at Spanish evaluation agencies

Since 2001, the Spanish Organic Universities Act 6/2001 has defined two different career specifications entailing different contract statuses, benefits and prestige. Private sector employees at every university are added to alleviate the state level expenses of hiring a large volume of civil servants, which are financed by every autonomous community. This gives regional universities the opportunity to invigorate their R&D policies by hiring young private employees. Hence, while we refer to them as ‘private sector’, the truer meaning is hiring at an autonomous community level.

As mentioned, two agencies are responsible for evaluating the research merits of Spanish academics. The National Agency for Quality Assessment and Accreditation (ANECA) grants accreditation to researchers so they can apply for posts at universities as civil servants or private employees. The National Committee for the Evaluation of Research Activities (CNEAI) recognises the accomplishment of research merits for the past six-year period, involving salary incentives and peer recognition. Although both processes involve meritocracy, they are supported by two different processes, handled by different compositions of committee boards, and have two unique bureaucratic procedures.

ANECA is an autonomous organisation whose aim is to provide external quality assurance for the Spanish higher education system. Since 2002, ANECA has developed several evaluation programmes to conduct the evaluation, certification and accreditation of Spanish universities. It assesses applicants' qualifications, as a necessary step to access higher positions in Spanish universities. After they obtain this accreditation, researchers can apply for a higher position. CNEAI is part of the Spanish Ministry of Education, Culture and Sports and evaluates the research outcomes of academics for six-year periods to obtain productivity bonuses. Unlike ANECA, this evaluation is voluntary and automatically rewarded, an incentive to improve salary, peer recognition, participation in influential committee boards and seniority.

ANECA bases its decisions on twofold phases. First, it studies independent reports by two random experts selected by a pool of evaluators who evaluate curricula considering the merits characteristic of each field of knowledge and career stage (from associate to lecturer and full professor). The experts classify candidates by four categories (from A to D) according to their outcomes. Secondly, A and B curricula are discussed by a commission of panel reviewers who eventually decide whether to approve or reject accreditation. CNEAI makes decisions based on the decision of an expert panel (which may ask further experts for technical opinions in the case of a draw). The committee panel grades curricula from 0 to 10, where 6 is the minimum score to obtain a six-year qualification. People involved in both evaluation agencies design their evaluations based on quantitative guidelines.

According to Acts 3/2007 (in a broad sense) and 14/2011 (specifically on science), the composition of both agencies' assessment boards must be gender balanced (40-60 per cent). We will now examine the gender composition of the ANECA and CNEAI assessment boards in the past and current databases in every knowledge field.

1) ANECA assessment boards

The evaluation panel and the pool of experts has changed over time with regard to structure, number of evaluation committees and gender distribution. A report by UMyC (2014: 104-105) pointed out the male dominance of the ANECA committee board, which may promote changes in gender composition. In 2016, the evaluation panels had more gender balanced committees compared to the previous compositions of the evaluation panels and pool of experts in 2015.

As shown in Figure 1 and Figure 2, Arts & Humanities and Social & Legal Sciences have unbalanced gender composition on evaluation panels. The gender balance of the pool of experts displays highly unbalanced ratios, although Arts & Humanities are gender balanced. They display percentages below the range of 40-60 (from 24 per cent to 30 per cent women, as detailed in Table 1). Conversely, women exceed this 40-60 balance in Arts & Humanities (70% approximately). The committees with 50-50 balances have female chairs: Science, Engineering & Architecture and Health Sciences. These findings were surprising, especially in light of the fact that traditionally male dominated areas have balanced committees.

Figure 1. Composition of the evaluation panels

Source: Public data from ANECA (2015). Retrieved 5 May 2015 from:
<http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Comisiones-de-Acreditacion>

Figure 2. Composition of the pool of experts

Source: Public data from ANECA (2015). Retrieved 5 May 2015 from:
<http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Panel-de-expertos>

Due to the revamping of ANECA programmes in 2016, evaluators were changed and the structure modified. There are now 21 areas of knowledge (instead of five) and new

names for the peer reviewers' list (without a pool of experts). Regarding gender, as illustrated in Figure 3, the 21 areas are composed of 40-60 per cent except for these fields of knowledge: Molecular & Cellular Biology, Clinical Medicine, Behavioural Sciences, Social Sciences, History & Philosophy, and Philology & Languages. The trends indicate some areas have persistently unbalanced compositions, such as Social Sciences and Humanities (in the table below, History & Philosophy, Philology and Languages), which are feminised areas with respect to the number of female researchers in Spain (these two areas represent the highest percentages, 45-46% in 2014-2015 according to figures from UMyC 2016: 56).

Figure 3. Composition of the evaluation panels (21 areas, from 2016)

Source: Public data from ANECA (2016). Retrieved 25 May 2017

from: www.aneca.es/content/download/13428/166407/file/academia_3.0_comisiones_170426.pdf (<http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Documentos-del-programa>)

With regards to chairs, women lead only eight of 21 commissions: Mathematics, Physics, Chemistry, Biomedical Sciences, Electrical & Telecommunication Engineering, Computer Engineering, Architecture and Economics & Business. This distribution would seem to be related to epistemic cultures rather than quantitative factors; they do suggest a male dominated science structure, since the majority of committees are male chaired.

2) Composition of the CNEAI evaluation panel

CNEAI assessment boards evolved differently across knowledge fields and periods of time (public data available from 2003 to 2014, in some fields only some years are available). There are two clearly different groups regarding gender compositions: male

dominated committees, and female dominated or gender balanced committees. The first group, male dominated across time, is bigger (9 fields of knowledge) in comparison with the female dominated committees (6 fields of knowledge).

As depicted in Figure 4, ten committees show an evolution mainly dominated by men where composition was unbalanced. Since 2011, the year the Spanish Science and Technology Act was implemented, in Mechanical and Production Technology only 2011 and 2012 were balanced, and 2013-2014 was somewhat unbalanced; in ICT and Electrical Engineering only 2013 was balanced; Biomedical Sciences is balanced only in 2011 (and previously 2006-2007), and unexpectedly, Economic and Business Sciences reversed its balanced trend in 2011 through 2014.

Figure 4. CNEAI male dominated committees

Source: Public data from CNEAI (2016). Retrieved 8 April 2016

from: <http://www.mecd.gob.es/ministerio-mecd/organizacion/organismos/cneai/comites-asesores.html>

The second group has been composed of six female dominated or 40-60% balanced committees since 2011. Data trends reveal that the Spanish Act caused changes to the gender balanced composition of CNEAI evaluation committees. Only two areas were close from this year, although still not 40-60% composed, Philosophy, Philology & Languages, and Mathematics & Physics. The distribution of these six fields of knowledge are displayed in Figure 5 below.

Figure 5. CNEAI female dominated or gender balanced committees

Source: Public data from CNEAI (2016). Retrieved 8 April 2016

from: <http://www.mecd.gob.es/ministerio-mecd/organizacion/organismos/cneai/comites-asesores.html>

However, there is not a coherent trend for the gender balance of evaluation committees, as we see disparities between both agencies' compositions and persistent gender gaps in some fields such as Social Sciences, Humanities and Medicine.

After this analysis, intermediate variables such as the effects of the size of the discipline area (van den Brink et al. 2006) and the influence of epistemic cultures (Knorr Cetina, 1999) have been examined in order to address the influence on gender balanced committees across areas and agencies. Findings show that the largest disciplines do not always present gender unbalanced committees and the organisation of epistemic cultures emerges as a possible correlation, although it needs further exploration. In summary, the Spanish Act does seem to set the trend in general terms across all broad areas, but it highlights the importance of regulation and surveillance by gender equality gatekeepers since some agencies adopt 40-60 percentages after women's organisations publish report.

Discussion of the impact of applying quotas to evaluation boards on female progression

Despite the implementation of national regulations based on the European scheme (Bustelo, 2004; Bustelo and Lombardo, 2007), the introduction of quotas for balancing the presence of women on assessment boards is a controversial issue as shown by literature and empirical data. Firstly, there is not a clear correlation between gender balanced committees and women's career progression (Marsh, Bornmann, Mutz, Hans-Dieter, and O'Mara, 2009; Ceci and Williams, 2011; Zynovyeva and Bagues, 2011; Bagués, Sylos-Labini and Zinovyeva 2015). According to the Ministry of Education,

Culture and Sports (MECD, 2016a) in Spain there are twice as many men as women in every field of knowledge applying for a full professor position (5,549 men and 2,663 women respectively). Moreover, the success rates of men and women stand at almost the same percentage (differences by sex are some 1-3 points and women surpass men in some STEM areas, where ANECA committee boards were male dominated prior to this data and later on became gender balanced). Women seem to submit their curricula to a lesser extent than men for accreditation for the full professor category (depending on areas, female percentages reach 33-38 per cent of total applicants in contrast to 62-67 per cent of men; the lowest percentage of female submissions corresponds to Architecture and Engineering, at 22 per cent of total applicants, where committee boards are male dominated over the entire period of time and are also chaired by men).

Secondly, as Lewis and Simpson (2012) argue, gender equality is not a simple question of numerical advantage, since masculine values and gender stereotypes remain in decision making and organisational practices in academia. Tracking researchers' performance during the six-year accreditation periods (MECD, 2016b), women and men received a similar number of merit accreditations, and women even slightly outnumber men in some fields of knowledge, except for Arts and Humanities (these committees are male balanced in the CNEAI). The number of men and women submitting their curricula for this accreditation is unbalanced (64 per cent men, 36 per cent women among civil servants, and 53.5 per cent men and 46.5 per cent women among private sector personnel). Gender success rate is slightly higher in favour of male civil servants (91.2 per cent men, 88.4 per cent women), but gender balanced among private sector employees (84.6 per cent men, 84.7 per cent women). This difference between civil servants and private sector employees is probably related to cohorts and the scientific culture of both groups of researchers. Since 2002, the success rates of tenure track have

become gender balanced, which is very likely related to the cultural transformation of Spanish academia.

Our previous hypothesis suggests that quotas on committee boards may make a difference, but an unsteady gender composition on these committees refutes this assertion in the Spanish R&D system. According to CNEAI accreditation, private sector personnel's worst success ratio for women is in Architecture and Engineering, ICT and Electronic Engineering, Knowledge Transfer (all male dominated) and Mathematics and Physics (gender balanced). Therefore, gender mainstreaming does not seem to escape entirely from gendered biases in academia (Benschop and Verloo, 2006) and leads our research to postulate the influence of intermediate variables unrelated to the sex of evaluators' influence regarding women and men candidates, but instead involving the structure and operating modes of these two agencies, and epistemic cultures (Porter and Rossini, 1985; Knorr Cetina, 1999; van den Brink, 2006).

An alternative explanation is related to the procedures in evaluation processes and their influence on women's decisions. As previously mentioned, the CNEAI evaluation process is voluntary with automatic effects on researchers' curricula, whereas ANECA is a multi-step procedure where candidates must first obtain the accreditation and later pass an oral examination. Thus, ANECA accreditation is not enough to qualify candidates for a professorship, and even the job vacancy depends on a national appointment decided upon according to collegiate decisions in universities and epistemic cultures.

Faced with this complexity, women may decide to submit for the recognition of six-year accreditation, which is a single evaluation, and feel discouraged from submitting for the full track in ANECA that requires a longer and more uncertain process. This operational mode is a highly complex process, while CNEAI is a formal process and simple to

apply. Authors (2015) reveal that collegiate decisions disfavour women in research, while individual processes of achieving merits are easier for women.

Final remarks

This article addresses the impact of gender policy in research to increase the number of women in top positions. Similarities in European and Spanish legislation provide a broad contextualisation for enlivening the discussion on the effectiveness of gender policy and positive actions, such as gender quotas in the composition of committee boards. Due to the claims of women's associations and the framework of European Union legislation and recommendations, at the turn of the new century the Spanish government launched progressive legislation on gender equality. European influence and pressures from women's organisations (such as AMIT and UMyC) are clearly responsible for these changes. However, the economic crisis and the conservative government have put a stop to these positive measures, primarily related to budget allocations to comply with only mandatory items. However only fulfilling compulsory legislation should have improved women's progression in research (since women exceed men in the earliest stages of research careers). The gender gap is actually shortened mid-career, although they are still a minority in the full professor category and in traditionally male dominated areas.

Regarding the focus of this article, we describe and analyse the composition of two evaluation agencies (ANECA and CNEAI) regarding the procedures and gender composition of their committee boards. The aims of this analysis address the extent to which quotas have actually influenced female careers. We critically analyse the mainstays of peer review processes, the accountability of excellence based on scrutinising merits, and objectivity by disregarding personal circumstances just because

they are supposedly gender-blind assessments. The figures on gender balance (40-60 per cent as required by law) on committee boards reveal satisfactory fulfilment and unbiased proportions across several years and several subfields of knowledge, particularly since the implementation of the Spanish Science and Technology Act in 2011. Although five areas out of 21 areas at ANECA and 11 of 15 areas at CNEAI are still male-dominated (below 40-60 composition). Unexpectedly, in general male dominated areas are gender balanced and traditionally female dominated areas are underrepresented by women. Thus, these results are not due to lack of women in these knowledge fields and suggest the influence of intermediate variables related to cultural and structural environments in academia (Benschop and Broun, 2003). Even if more women sit on evaluation committees, there are still similar percentages of female success rates. However, incorporating senior women is required to recognise their seniority in these influential positions and to counteract the image of male tribunals and old boy networks.

Further, evidence reveals low female participation and a small number of female applications, which cause gender balance deviations in accreditations, and quite balanced positive accreditations for women in tenure track private employment contracts, unlike in civil servant positions. We have suggested that women have low expectations for full professor accreditation because of the complexity of the promotion processes, and collegiate gatekeeping may also discourage females from deciding to apply. Also, findings point out generational effects and more competitiveness in Spanish R&D, since female researchers who have been enrolled in academia during the last 15 years with employment contracts show quite good results.

In summary, despite open and transparent processes being implemented in Spanish academia, gendered institutions may keep women in sticky floor positions. Secondly,

quotas for committees do not necessary yield a positive impact on women's promotion because of the male environment that influences female and male researchers at every level of academia. Human agency clearly depends on micropolitics, epistemological cultures and the lack of feminist or gender stances among old boy networks.

Acknowledgement

This work was supported by the Spanish Ministry of Economy under grant FEM2013-48225-C3-1-R.

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