

GENDER, WORK & ORGANIZATION

**MAPING GENDERED SOCIAL CLOSURE MECHANISMS  
THROUGH EXAMINATION OF SEVEN MALE-DOMINATED  
OCCUPATIONS**

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## Introduction

The gendered division of labour and the concomitant segregation of occupations by sex continue to structure our contemporary labour market and have a variety of negative repercussions. On the one hand, for a society in which equality of opportunities is a cornerstone of its social legitimacy, occupational segregation contributes to reinforcing gender stereotypes that usually work against the subordinated groups. On the other hand, it is one of the most significant factors when it comes to understanding pay differences between men and women (Mandel et al, 2014; Kirak, 2009).

Our decision to study occupational segregation on the grounds of gender is rooted in the fact that such segregation remains stable in Western countries (Hegewisch & Hartmann, 2014) and is even on the increase in some (Charles & Grusky, 2004), including, in the context of our case study, Spain (Ibáñez, 2017: 24). However, after years of examining the quantitative dimension of gendered occupational segregation in Spain (Ibáñez & Vicente, 2020; Ibáñez, 2010; 2008), in the last years, we have focused in the dynamics of segregation (Rubery & Fagan, 1995). In previous scholarly works, we have analysed from different perspectives what it means to be a woman in “men’s worlds”: including access to the occupations, copying mechanisms in discriminating environments, family-work tensions, etc.

In our most recent research, which we share in this article, we have mapped the *mechanisms of gendered social closure* that operate in traditionally male occupations. Our motivation for the analysis of this research object is twofold. First, we understand that only through a detailed knowledge of the mechanisms and their specific dynamics can we propose changes in public policies. Second, from a theoretical stance, few studies have investigated how collective behaviours shape labour market processes through social closure mechanisms (Kirak, 2009: 124) and, even less, through empirical evaluations and convincing data (Weeden, 2002: 57).

The first section of this article briefly outlines the theoretical framework of the analysis, based on *gendered social closure mechanisms* and proposing an analysis model that combines three dimensions: the more general or *structural*, the *professional*, and the

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3 *organizational*. The second section explains the methodology used and describes the  
4 occupations selected for analysis: ICT technicians, painters and other workers in  
5 construction trades, vehicle repair mechanics, dock workers, train drivers, airline pilots,  
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7 police officers in the Spanish National Police, all jobs with a high degree of gender  
8 occupational segregation. The third section presents the results, which includes the  
9 analysis of the social closure mechanisms, their manifestation in specific practices, and  
10 the social agents that enable them. Then, we focus on the process involved in taking the  
11 decision to enter a male-dominated occupation of this type, the points when the various  
12 mechanisms impinge, and their interplay, to classify the occupations according to their  
13 social closure mechanisms.  
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## 22 **1. Theoretical framework**

### 23 **1.1. Studying gendered social closure mechanisms**

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25 Even though some authors have proposed that modern societies tend to use less social  
26 closure (Durkheim, [1893] 2014), closure remains ubiquitous in the social world and one  
27 of its most important manifestations is the limited access to specific occupations and  
28 professions. In fact, *closure theory*, which started with Weber's ([1922] 1978) notion of  
29 *social closure*, has paid close attention to its manifestation as *occupational closure*.  
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38 In our research, we follow the definition of *social closure* proposed by Macker, who  
39 stated that it 'refers to processes of drawing boundaries, constructing identities, and  
40 building communities to monopolize scarce resources for one's own group, thereby  
41 excluding others from using them' (2012: 1). We focus on the processes involved in  
42 social closure and the idea of community building, complemented with critiques from  
43 studies at the micro-sociological level (Acker, 2012; Crompton, 1987).  
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50 Amongst neo-Weberian authors, many have worked on *occupation closure* (Collins,  
51 1979; Manza, 1992), and we use their understanding of the day-to-day interactions  
52 through which occupational cultures are formed and boundaries maintained (Collins,  
53 1979:59; Manza, 1992: 286).  
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58 From the subfield of the *sociology of professions*, we take into especial consideration  
59 the efforts of scholars who have theorized the relationship between gender and  
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3 occupation, what has been dubbed 'Gender and Professions' (Acker, 1992; 1990; Davies,  
4 1996) or 'Patriarchy and Professions' (Witz, 2013; 1992; 1990)<sup>1</sup>. From this scholarly, we  
5 have taken the concept of *professional projects* and the fact that they are based on  
6 bringing closure tactics into play (Witz, 1992: 62).  
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11 To observe how gender discrimination operates in traditionally male professions, we  
12 analyse *social closure mechanisms*, defined by Reskin as 'specific processes that link  
13 individuals' ascriptive characteristics to workplace outcomes' (2003: 2).  
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18 The objective of our research is thus to identify the gender dimensions of the *social*  
19 *closure mechanisms* in the occupations under scrutiny, in the belief that an empirically  
20 based project can contribute to a collective scientific endeavour. This task is not,  
21 however, simple, as it involves integrating the proposals of researchers whose approach  
22 is structural (Witz, 1992; Crompton, 1987) with the ideas of those working on a micro-  
23 sociological scale to examine issues such as organizational culture and work identities  
24 (Acker, 2012; 1990; Crompton & Sanderson, 1990; Crompton, 1987; Davies, 1996). The  
25 current research therefore proposes bringing together both investigative approaches in  
26 three dimensions: structural level, occupational level, and organizational level.  
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35 Through the revision of key authors, we have tried to add a gender-sensitive perspective  
36 into the model, this is: a relationship between the wider gender order and the closure  
37 mechanisms at the structural level, occupational level and organizational level.  
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## 42 **1.2. Debates and dimensions of the gendered social closure mechanisms in entry to** 43 **occupations**

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45 We consider that the closure mechanisms occur at three levels: the most general or  
46 *structural level*, the occupational or *professional level*, and the *organizational level*. As  
47 usual in such analysis, the division is merely a theoretical tool, as the dimensions overlap  
48 in empirical reality.  
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58 <sup>1</sup> The term 'professions' is used here because of this literature, although the occupations under  
59 consideration do not all require the higher education associated with that word in English.  
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## Figure 1. Gendered social closure mechanisms and levels where they occur

### Level 1: Closure mechanisms at the structural level

At the structural level come the effects caused by context and social structure, though for some researchers, such as Reskin (2003) and Sørensen (1998), these should not be considered as mechanisms but rather as a framework within which the organizational and professional mechanisms operate. Nonetheless, following Murphy (1984: 550), we consider that there are closure mechanisms at this level, including (1) those *related to property*, (2) those *related to the educational system*, and (3) those *related to the regulation of the professional sector*.

Private property is the first social closure mechanism, central to analysis of social class since the beginnings of Sociology, and with a wide and deep theoretical reach (Wright, 2000). In the current instance, it involves a gendered mechanism the moment that women's access to male-dominated jobs is related above all to the degree to which wives/daughters gain entry to and/or inherit small businesses, where property and occupation are connected.

Secondly, there are mechanisms related to the educational system. Bourdieu and Passeron (1979) consider that the educational system creates a mechanism for 'selecting the elect'. The educational system promotes acceptance of inequality on the part of the disadvantaged themselves and is supported by traditional models of the division of labour, particularly at the moments in educational careers when specializations are chosen. At each of these 'turning points', a set of factors determine whether individuals find their place or are displaced: the cost and future return, the lack of information, cultural models that associate professions and studies with a social milieu (in this case, with one gender), the tendency to conform to the models, rules, and values that govern the institution (Bourdieu & Passeron, 1979: 28). It is also to be noted, that gender is a key issue in the education system, as pointed by the seminal work of Cockburn (1987) about how young women choose the educational paths very influenced by male chauvinistic environments. In short, they form a set of circumstances that are

~~brought to bear often unawares and that determine young people's educational decisions.~~

Thirdly, mechanisms *related to the ~~regulation of the work-labour relations~~ sector* are connected to the point in time where a job itself is located. So, for instance, in periods when the amount of work available rises, entry regulations fall, in line with the need to cover the vacant jobs. In this context, women are more likely to gain entry to these occupations when positions need to be covered, and the closure mechanisms will reappear or be reinforced when the number of available jobs falls again.

### *Level 2: Closure mechanisms at professional level*

At the second level we find closure mechanisms that occur in the *professional* environment, taking the idea of *professional projects* proposed by Anne Witz, who suggests that the institutionalization of professions (and, as we see it, occupations more broadly) has traditionally led to two types of closure: credentialist and legalistic (1992: 62). Credentialist tactics, for Witz, involve the mobilization of closure mechanisms 'within the institutional terrain of civil society, within the modern university and occupational collegiate organisations' (1992: 62). In this way, educational qualifications act as barriers in modern labour markets from two angles. On the one side, educational credentials define status groups, whose members use that frame to construct much of their identity. On the other, the qualification is "cultural currency" that buys membership into a club' (Collins, 1979: 189). The educational credential does certify knowledge, but what is closed is access to the credential itself.

*Legalistic closure mechanisms* 'involve the mobilisation of heteronomous means' (state, institutions) to create barriers to access to occupations and professions. For Witz, the 'archetypical legalistic tactic was to seek state sponsorship' (licenses, bureaucracy) (1992: 62). Male exclusionary practices at the professional level, for example, in trade unions have for long been a topic explored in feminist studies. For instance, Cockburn finds that men's resistance to equality movements within organizations operates at a variety of levels (Cockburn, 1991). Sylvia Walby has also been key in the study of "how trade unions have functioned to enhance these mechanisms of social closure" (Walby, 1986). Our examples of this approach are seen mainly in *regulations* involving the unions

(National Police, Airpilots) and 'closed shops' (Deckwork), where contractual conditions are agreed by collective bargaining.

### *Level 3: Closure mechanisms at organizational level*

To study the closure mechanisms at the organizational level we have taken in consideration Acker and her proposal of engendering process of organizations (Acker, 1990) and Gorman (2005) and her idea of organizations as gender regimes. The mechanisms produced and reproduced at an organizational level are those that can be researched most effectively, because they happen in daily life and are noticed and remembered by the interviewed workers.

In our study, we have considered the We see three phases of the gendering in the process of gendering in an organization: (1) the construction of symbols and images that explain and reinforce (or sometimes oppose) the division of labour by sex; (2) the interaction of women and men within the organization, where leadership is predominantly male; and, (3) the internalization of this situation into the identity of organization members (Acker, 1990: 146-7).

First, the gendered construction of the occupation includes the construction of its professional culture and the profession's public image. This situation is has been fruitfully investigated from the perspective of the Sociology of communication, for example, in the phenomenon of 'paper ceilings' (Shor et al., 2015; 2018) or in the distorted image of professional women in the media (Van Zoonen, 1994: 30).<sup>2</sup>

Secondly, bringing together ideas from Reskin and Acker, we propose the existence of individual closure mechanisms, which translate into individualized social closure practices implemented mainly by the workers within an organization themselves: *the mechanisms related to the workers' internalization of the gendered assumptions attached to the occupation*. Acker notes that organizations are successful in their gendering process because, in the final analysis, individual members internalize their

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<sup>2</sup> Eran Shor and his co-authors (2015) use the concept a 'paper ceiling' to point out that professional women are less likely to be mentioned in the press, and not because they hold fewer powerful positions but due to professional biases of the mass media.

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3 gendered work identity, as evidenced in a particular use of language and of body  
4 language, in physical appearance, and (of most interest here) choosing the kind of work  
5 appropriate to this identity (1990: 147).  
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9 We take as a paradigmatic example of this type of mechanism the case of *informal social*  
10 *networks*, which, although not designed with the aim of closing a labour market, operate  
11 as a decisive closure mechanism (Bygren, 2013).-In fact, the more informal that entry to  
12 an occupation is, the greater the tendency to reproduce its demographic composition  
13 (Granovetter, 1995). This 'homophily effect' suggests that, in order to understand the  
14 gender composition of an organization, we must examine the future colleagues of the  
15 selected candidate and those responsible for recruitment (Kanter, 1977; Bygren &  
16 Kumlin, 2005; Holgersson, 2013). In the same vein, Gorman, from a gender perspective,  
17 proposes that "the gender stereotypicality of selection criteria and decision makers'  
18 same-gender preferences operate to intensify gender inequality in hiring" (2005:702).  
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29 Lastly, we have *mechanisms related to social interaction within the organizational*  
30 *framework*, which deal with intra-organizational interactions, termed *interpersonal*  
31 *mechanisms* by Kanter (1977) and Reskin (2003). As this project is not concerned with  
32 workers' interactions once within their occupation, but with the mechanisms that stop  
33 them entering, we only consider the *apprentice systems* (Bol & Weeden, 2015). These  
34 systems consist of institutionalized closure mechanisms designed to protect work  
35 positions by creating barriers to acquiring or practising skills. These mechanisms of  
36 'homosociality' are particularly strong in occupations where the apprentice learns on  
37 the job.  
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## 49 2. Methodology

### 50 A. Methodology and fieldwork

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52 The research aim of our project is to understand how women access, experience,  
53 interact and transform men's worlds, this is, a qualitative understanding of occupational  
54 segregation on the grounds of gender. To do so, we have done case studies because of  
55 its suitability for holistic analysis (Thomas, 2011) and considering the "sociological  
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3 history of occupations as individual, empirical and above all historical cases rather than  
4 as specimens of a more general, fixed concept” (Witz, 1992: 5).  
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8 Our empirical research consists of case studies in seven highly male-dominated  
9 occupations, taken as frameworks that contextualize the phenomena of gendered social  
10 closure mechanisms. To do our research work, we combined analysis of primary data  
11 and secondary data (academic research; circulars and reports from unions, businesses,  
12 joint institutions; web sites), bearing in mind two research objectives: (1) describing the  
13 occupation, its traditions, present situation and internal dynamics, and (2)  
14 understanding the experiences of women engaged in each of the occupations.  
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21 As we were six researchers involved, we held research meetings to discuss the  
22 theoretical foundations<sup>3</sup>, to elaborate the interview outline, to agree on the sampling  
23 criteria and the analytical prospects. However, each researcher chose the type of  
24 informant and the interview method to obtain the information that the group had  
25 agreed, according to accessibility and effectiveness criteria.  
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32 To achieve the objective of understanding the experiences of “women in men’s worlds”  
33 we produced qualitative data by conducting *in-depth biographical interviews* to women  
34 who had sound work trajectories in the chosen occupations. The interviews, lasting 90  
35 minutes on average, had a first unstructured biographical part<sup>4</sup> and an structured part  
36 with specific questions about diverse topics (as in Kvale’s metaphor of the miner, 2008)  
37 including: (a) decision and process of entering in the occupation; (b) working life in the  
38 organization (support, discrimination, etc.); (c) experience and subjectivity as female  
39 workers; and, (d) [interviewees’ perceptions about their working rights and ~~positive~~](#)  
40 [discrimination-affirmative action](#) (Ibáñez et al, 2017: 99).  
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55 <sup>3</sup> We understand that this is a wide aim, more refined research topics can be seen in Ibáñez et al., 2017:  
56 366–67.

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58 <sup>4</sup> Following the metaphor of the traveller (Kvale, 2008), the interviewer accompanies the interviewee in  
59 the narration of the memories of her working life and just asks questions to confirm that she is  
60 understanding correctly.

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3 For this research about access to segregated occupations, we have analysed 59  
4 interviews to women, that were previously taped and transcribed with the interviewees'  
5 consent.  
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9 Also interviewed were male colleagues, trade unionists and managers in 'joint  
10 institutions' to gain a more complete view of the occupation. There were 20 of these  
11 interviews in total, with a further 3 discussion groups and 18 interviews with men in  
12 privileged positions<sup>5</sup>.  
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17 The interviewees lived mostly in urban areas,<sup>6</sup> and the fieldwork took place between  
18 2013 and 2017<sup>7</sup>. Table 1 breaks down the cities/regions, the types of primary sources in  
19 the fieldwork, and the significant dimensions related to the purposive sampling of each  
20 occupation.  
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26 **Here TABLE 1. FIELDWORK**  
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28 We contacted the women through lists from training institutions, business, union or  
29 joint organizations, and personal contacts. Then, through the 'snowball' approach to  
30 sampling, these women told us about others we could interview. In general, selection  
31 of the interviewees proceeded by the saturation principle, so that, once we had  
32 established a 'typical career path', we avoided going over the same ground. The amount  
33 of variation between the interviewees (i.e., the typical career path) differs for each  
34 occupation: for the ICT specialists a range of company type and size was included, while  
35 for the car mechanics we were interested only in the situation of those in small body  
36 shops. In construction, the interviewees' situation before employment was important,  
37 whether unemployment, self-employment, waged employment in a small family firm, a  
38 large traditional firm, or one of the 'cowboy' firms that sprang up at the height of the  
39 construction boom prior to the crisis in 2008. For the railway drivers and the airline  
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53 <sup>5</sup> We interviewed men aiming to have a deeper understanding of occupations as they hold privileged  
54 positions and to see if men's experiences differ to those of women.  
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56 <sup>6</sup> Exceptions to urban living were a painter specializing in second homes in a rural tourist area and some  
57 of the train drivers, who resided in suburban areas.

58 <sup>7</sup> For further detail see Ibáñez 2017 and, in Spanish, Ibáñez et al. 2017; and on policewomen and dock  
59 workers, see Ballesteros & Aguado, 2018.  
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3 pilots, their 'generation' was particularly significant, as different forms of access and  
4 working career were available at different periods. Finally, in the case of police officers,  
5 career paths were analysed according to decisions about geographical mobility and  
6 promotion, closely related to domestic situation.  
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11 Each interview was analysed by identifying the relevant contents according to the model  
12 agreed by the team.<sup>8</sup> This involved: forms of entry, barriers to entry, reasons for entry,  
13 and any reference relating to employment access. We were particularly interested in  
14 finding out if interviewees knew about any cases of women who had ended up  
15 abandoning their intention of entering an occupation (their personal situations, reasons,  
16 processes).  
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23 To avoid the tendency for researchers to reinterpret and read their own meanings into  
24 the transcribed texts (Butler, 2015), the interviews were analysed/coded in meetings of  
25 two or three researchers using the same code book in Atlas Ti and were accessible to all  
26 via shared resources.  
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### 31 *B. The case studies*

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33 For this project, seven occupations were chosen where the only common feature was  
34 the relative lack of women. Each occupation is very different, both in its system of labour  
35 relations and in its entry process. By this means, the intention is to cover most of the  
36 labour spectrum, from small companies, with more or less formalized systems and giving  
37 greater or lesser importance to credentials (ICT-computing, car repair, construction), to  
38 large companies with different degrees of bureaucratization (Renfe, aviation, National  
39 Police), and finally the very special case of dock work.  
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#### 48 1. Women in ICT

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51 Technological sectors currently hold a prominent place within the structure of  
52 occupations, and, within these sectors, ICT technicians are regarded as occupying a  
53 central position. In Spain, the ICT sector employs almost 30% of women (Castaño, 2010:  
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58 <sup>8</sup> The names of those in the team and the individual researchers' specializations are in the  
59 acknowledgments.  
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3 87), however the problem arises in the new generations: women make up only 9.4% of  
4 the students in mid-level ICT training courses (age 16-18) and 13.5% at higher levels (18-  
5 20) (MEC, 2016). At the same time, the businesses that employ people with this  
6 professional profile are the most varied in type, both in size and sector. Of the seven  
7 occupations examined, women ICT specialists have the easiest and most direct access  
8 to employment. The unemployment rate of women with professional qualifications in  
9 ICT is very low, as with their male counterparts. Although the actual forms of access to  
10 employment depend on the type of organization, entry often comes via the training  
11 institutions, whether through internships or teachers recommendations, who usually  
12 provide a short list of candidates to the hiring companies (Fernández-Casado, 2017).  
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## 22 2. Women in vehicle repair

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25 For women working in the repair and maintenance of motor vehicles, gender  
26 segregation is very evident. If we put administrative secretaries to one side, the  
27 proportion of women working in repair shops is very low: 95% of the mechanics and  
28 fitters in Spain are male (INE, Population Census of 2011).<sup>9</sup> For the fieldwork, we  
29 selected businesses with fewer than five workers, taking into account their importance  
30 in the sector: women's entry to working as mechanics comes through a family business  
31 with fewer than 10 workers in 97% of cases (INE, Central Business Directory 2014). Even  
32 in these small companies, it is extremely hard to find women mechanics on the payroll,  
33 since the young women contacted through training centres remain in the grey economy  
34 or have left the profession (Maira-Vidal, 2017).  
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## 44 3. Women in construction

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47 By percentage, construction is the most segregated sector in Spain, as in other Western  
48 countries. In 2008, before the crisis, when the sector had the highest level of work  
49 available in Spain, women accounted for 6.3% of the whole workforce (compared with  
50 Germany's 12% and the United Kingdom's 9.8%), figures that hardly reflect the reality,  
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57 <sup>9</sup> The international labour statistics refer to the subsector of sale and repair of motor vehicles and  
58 motorcycles, with a heavy emphasis on sales. Even so, the average number of women in the European  
59 Union was only 16.1% (Eurostat, Labour Force Survey, 2014).  
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3 as a very high proportion of these women were in administrative roles (Eurostat, Labour  
4 Force Survey, 2008). The entry path into construction for women depends on a variety  
5 of circumstances. One route comes from being part of a family business. Another route,  
6 the most common and successful, is that of the self-employed worker specializing in  
7 projects in people's homes, where gender stereotypes work to women's advantage  
8 (cleanliness, care over detail and finish), as does the element of sisterhood, as female  
9 clients feel safer having a woman in their home. Last comes access to the ranks of waged  
10 workers, associated with the high demand for workers during the building boom. Here  
11 the entry paths depend on the type of business: while small traditional businesses work  
12 through informal networks and apprentice schemes, big companies are fed by training  
13 courses from 'joint institutions' (Ibañez, 2017)  
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#### 24 4. Women in dock work

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27 From a European perspective, women's entry into dock work is highly varied. In Spain,  
28 most ports allow women to work as dockers (except for Algeciras, Spain's largest port in  
29 number of workers). In the Port of Valencia, there are around 200 women working as  
30 dockers, approximately 10% of the total workforce<sup>10</sup> (Aguado, 2016: 130). Dock work at  
31 the Port of Valencia is assigned on a casual basis, through a labour exchange managed  
32 by a temporary-work agency. The exchange opens in response to the demands of traffic,  
33 but always just for a few days and without any general announcement. The selection  
34 process for positions on the port's own workforce consists of physical and  
35 psychotechnical tests, plus hours of experience on the job. To accumulate the requisite  
36 number of hours of work experience, it is essential to have previously been in the labour  
37 exchange. The first women who tried to gain access to the exchange were pressured to  
38 leave and give their positions up to husbands or brothers (Aguado, 2016: 131).  
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57 <sup>10</sup> The figures are estimates based on records for the 2012 union representative elections. In Barcelona,  
58 women were 3.9% of the workforce in 2012 (Van Hooydonk, 2013b: 827). International data on dock  
59 workers are incomplete (Van Hooydonk, 2013a: 73) and reports do not break employees down by sex.  
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##### 5. Women in railways: train drivers

The railway sector is male dominated everywhere in the world, and this is particularly true of train driving. In Spain 1.7% of train drivers are women (Renfe Operadora, 2015: 73), a proportion that has been increasing over the last ten years by about 0.1% per year.<sup>11</sup> The entry path depends on Renfe's recruitment methods at a given time. From the company's creation in 1941 until 1978, only those doing military service were eligible. Intake of civilians started in 1980 and, until 1989, after passing a general knowledge test, they received training from Renfe. Forty-two pioneering women passed the first public selection processes, joining a profession of about 4,500 male train drivers (Ballesteros, 2017: 375). Since 1989 the places have been filled through internal selection processes (1988, 1998-2000, 2006-2008) and competitive entrance exams. The procedure for entry by competitive exam changed in 2007. Currently, an applicant must be a card-carrying train driver 'type B', which involves passing a Ministry of Development exam, which can only be entered for by passing a one-year course at an accredited college with a cost of approximately 22,000 euros.

##### 6. Women in commercial aviation: pilots

Today women continue to be a minority of pilots in all countries, making up between 3 and 6% of the total (Narocki & Narocki, 2017). In Spain, women started to become commercial airline pilots when the number of ex-military pilots available no longer met the demand and the National School of Aeronautics (ENA) was created. From 1974 to 1990 the ENA offered 25 places annually, and each year between one and three women gained their qualifications. For some years Iberia, then the national flag carrier, also sponsored its own courses, accessible after three years of university study (in any subject) and with students taking out a loan that they started to repay on entering the company. Currently training is privatized. The most prestigious school in the country, Adventia, which replaced the ENA, offers four-year university degrees, with fees of almost 10,000 euros in 2014 (accommodation and living costs come on top of that, unless a student is already resident in Salamanca). The only companies hiring pilots at

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<sup>11</sup> In France, the figure stood at 5%, in the UK at 5.2% and in the USA at 2.8% (data in Ballesteros, 2017).

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3 the moment are the low-cost airlines, so that effectively there have been two entry  
4 paths depending on the generation: women over 45, after finishing their training, had  
5 (almost) direct access to the airlines, while the younger ones face short-term contracts  
6 with poor working conditions and a lot of geographical mobility.  
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## 10 11 7. Women in the national police force

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14 Most developed Western countries opened access for women to the general police  
15 force during the 1960s. In Spain, the National Police has only allowed women entry since  
16 1978. The percentage of women applying to take the entry exam has been rising since  
17 then; for example, in the general corps (requiring schooling to age 18), women made up  
18 12% in 2004, but the level has stalled at around 25% of those admitted since 2010.  
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## 27 **3. Gendered social closure mechanisms in occupations with extreme segregation: 28 understanding the social closure mechanisms based on the case studies.**

### 29 30 31 **3.1. Understanding gendered social closure mechanisms based on examining 32 occupations with extreme segregation**

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36 The first aspect of the research results to consider are the closure mechanisms in our  
37 case studies, as the segregation of occupations by gender must be understood in the  
38 context of the historical and social traditions of the different companies, sectors, and  
39 local communities (Greene et al., 2002). Our analytical model evaluates the types of  
40 closure mechanisms, including the agents involved in the closure and the practices  
41 through which these mechanisms act. Discussion of the mechanisms remains purely  
42 theoretical, unless we examine how they are embodied in social practices and put into  
43 effect by agents, and thus explore the other qualitative data in depth. The following  
44 table presents a summary of the cases that we have found most paradigmatic and the  
45 closure mechanisms, agents, and practices involved—always with the proviso that the  
46 mechanisms do not apply exclusively to a single example but are usually repeated in  
47 different occupations.  
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**Table 2. System of gendered social closure mechanisms, agents, and practices****Closure mechanisms, practices, and agents at structural level***Closure mechanisms related to property: the cases of women painters and women mechanics*

*'I was lucky that I was respected... I never had any problem, I mean, when... [...] I've told the story many times and everyone is surprised, how you got into this world, how you started... most people think that I inherited the business.'*  
(Woman, painter, 49)

*'The workshop was my father's and my uncle's. When they were gone, I stayed on with one worker in the shop, so I went halves with this worker, and then this worker went off to Opel and I was left on my own, I stayed on my own with my brother. But my brother has never liked the workshop. It seemed like he was obliged to be there...'* (Woman, mechanic workshop owner, 62)

Small family businesses where the owner is also a worker select their staff through social networks and recommendation. In traditionally male occupations with this form of set-up, women are not normally viewed as potentially workers in the firm. The cases of entry that we have found show situations where women helped at peak times, assisted in administration and business, which ended up leading to full integration when other circumstances came along: the illness or death of the male head, daughters finding few openings in other occupations (especially traditionally female ones), a daughter's feeling of vocation, preference, or persistence. Despite the difficulties of access, once in the job, these women show the most satisfying career paths of all of those interviewed, as they benefit from being in control.

*Mechanism related to the educational system: the case of women in ICT*

*'I was sure that I liked computers. I don't really know how, because ever since I was small, I was being put into it. Because I remember that all my friends were taking dance lessons, gymnastics, and my mother told me, "You're going to do IT, my girl, that's tomorrow's future". And while they were all doing their hobbies, I was with computers [...]'* (Woman, ICT, 29)

In labour markets that require specific training and recognized qualifications for access to most jobs, educational careers determine occupational outcomes, and it is very



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3 difficult to break out of the first specialization. The case of ICT is particularly interesting,  
4 as it is an occupation where there was equality, but which has become increasingly male  
5 dominated over the last twenty years in line with the increase in importance of the  
6 training required for the profession. The metaphor of the 'leaky pipeline' (Blickenstaff,  
7 2005) gives an idea of the complex entanglement of circumstances, often subtle, that  
8 distances girls and young women from ICT. In this case, the perspective of the educators  
9 interviewed is particularly significant, as even in secondary schooling, they see that  
10 there is nothing they can do because it is already too late. These data reinforce the  
11 studies that have documented how the vicious circle of young women losing confidence  
12 and interest starts very early, with greatest impact during secondary and university  
13 studies (Margolis & Fisher, 2002).

24 *Closure mechanisms related to sector: the cases of women pilots, train drivers, and*  
25 *construction workers*

28 *'I started working at [a small airline], which is a freight company [...] It's not that*  
29 *they gave me a chance—you pay to fly, you pay for a course and they guarantee*  
30 *you two years' work. They don't give anything for free.'* (Woman, pilot, 35)

33 The point where a sector or occupation is in its economic cycle correlates to the ease of  
34 entry or the closure mechanisms in place. For women in construction, painters and  
35 workers in other trades entered during the building boom; train drivers and pilots gained  
36 access when the army stopped being involved. When opportunities become scarcer, the  
37 most recently recruited are affected particularly strongly. In this context, the case of  
38 airpilots is interesting. From the 1990s, with the deregulation and privatization of  
39 training, the market was flooded. Women suffered most in this situation, as, on the one  
40 hand, they could not, for example, apply for jobs in the Arab market, and, on the other,  
41 only freight and low-cost companies were hiring, offering insecure labour conditions,  
42 specifically short-term contracts, high work intensity, lower earnings than previous  
43 generations, and a sexist environment. Given this context, the young pilots interviewed  
44 believe that those of child-bearing age have fewer chances of being selected and those  
45 who are already working postpone pregnancy, aiming to consolidate their career first.

## Closure mechanisms, practices, and agents at professional level

### *Mechanisms related to qualifications/credentials: the cases of women train drivers and pilots*

*'I just entered for the exam for train driver and the decision was out of my hands, though my father was opposed to it as he thought then that it wasn't a job for women. I put in for it with a university friend as a kind of dare and truly didn't think I'd pass—I was actually planning to work in a hospital.'* (Woman, train driver, 55)

As noted in the occupation outline above, the course for the qualification needed for the job of train driver comes to 22,000 euros for 11 months. The commercial pilot's course costs almost 40,000 euros for 4 years (plus living expenses etc. for students whose families are not local). Furthermore, these centres are private so that students are not eligible for public scholarships. Of course the price of the courses does not vary according to sex, but, if there are greater difficulties in accessing work afterwards, the investment is clearly riskier, so that we would expect to see women reflecting more about realistic employment prospects and an increase in the effect of other closure mechanisms, especially the most gendered ones, in line with Polavieja's thinking (2012).

### *Legalistic closure mechanisms: the case of women dock workers*

*'To get a job they ask for school leaving certificate and a driving license [...] but there's no specialized vocational training for dock work. Or rather, there's training once you are in ... [...] You enter the pool, the labour exchange. Okay, okay, okay. Then you ask for work [...] access usually goes from fathers to sons, but well....'* (Woman, dock worker, 31)

In the twenty-first century it is relatively difficult to find legalistic mechanisms in operation; nonetheless, the central role of joint institutions as an organizational mechanism for gendered social closure can be seen. Dock work is an example of a closed shop, where a trade union is responsible for admitting new workers, operating as a social closure mechanism via particularly blatant networks with no transparency and little accounting for the process. In the Port of Valencia, access is controlled by a labour exchange, managed by a form of casual-work agency; family connections are key to entering the trade, as they are often a requirement and certainly give access to privileged information (Aguado, 2016). The social closure mechanism is the organization of the male workers themselves, who do not allow entry to the wider population and often not to female relatives either.

### Closure mechanisms, practices, and agents at organizational level

In addition to the closure mechanisms that are directly gendered (examined further on), there is a mechanism in the organizational aspect that can obstruct women from entering: internal promotion. For example, in an organization as male dominated as Renfe, this alone is a gendered social closure mechanism. The interviewees who attained the level of train driver by this route have done so after more than twenty years of other specializations—labourer, electrician, or station manager—that are already very male dominated. There are so few women who can reach this level that increasing women's representation is very difficult, if not impossible.

#### *Closure mechanisms related to gendered construction of the profession: the cases of women train drivers, pilots, and police officers*

*'Well I did my studies like everyone and at a particular moment my brother's godfather, who was a policeman, said to me "Why don't you put in for this, as they're starting to take women now". And at first, I said, "What do you mean? Are you mad? Where would I fit in there?"'* (Woman, National Police, 47)

Until well into the 1970s, Renfe, Iberia, and the National Police recruited from the army, and the military still retains its own access routes into the police, constituting a form of internal promotion, which yet again favours more men at higher levels. They have kept an aesthetic with military associations: uniforms, badges, peaked caps. It is interesting, in this context, to see how, when civil aviation became more widespread in the 1950s and wanted to create an image of the pilot that would convey authority, they took as their model sea captains, with élite military uniform, including gold braid (Mills, 1994).

Not only is the image of the profession consciously constructed from male stereotypes, but the three occupations continue to be *men's jobs* and continue to promote what Mills calls *corporate images of masculinity* (2002: 173). How masculinity and corporate images are intertwined has been widely described by scholars studying air pilots (Mills, 2002, 1994; Narocki & Narocki, 2017), train drivers (Ballesteros, 2015; 2003), war reporters (Pedelty, 2013; 1997), and policemen (Prokos & Padavic, 2002).

This mechanism works in a twofold manner: first, gender stereotyping happens at an internal level, embedded within internal discourses about corporate identity and promoted through internal communication actions; second, at an external level, sending

gender-stereotyped images of the profession/occupation to society as a whole. At this point, we must not forget that gender stereotypes reflect and promote gender segregation in employment (Cejka & Eagly, 1999: 414) and that they operate as subtle closure mechanisms that are very hard to remove.

*Closure mechanisms related to workers internalizing the gendered organizational culture: the cases of women painters and mechanics*

*'I ended up without work [...] and through an acquaintance, there was a friend who had a building project, and they needed someone, and I started working with them... and I was there for a year.'* (Woman, painter, 49)

The fundamental closure mechanism in construction is that selection is conducted by means of informal networks. Apart from family relationships, commented on above when looking at property as a closure mechanism, the workers' own 'homophily' is clearly in action, and they have to make a conscious effort to go against habit (and convenience) to hire women<sup>12</sup>. The case of small construction is a good example (Ibañez, 2017)<sup>13</sup>. In these, a factor that positively influences women's chances of equal access is the personal involvement of key agents. In our fieldwork we came across a specific case of a woman hiring manager who favoured giving jobs to other women, and a small plumbing business owner who, having himself suffered difficulties getting into the business through lack of family connections, decided to help and hire one of our interviewees.

*Closure mechanisms related to the gendered organizational relations: the case of women mechanics and workers in construction trades*

*'Years ago, they didn't hire women, they didn't give us a chance. But it's been changing. They've realized that there's no reason why you can't do it as well as a man, especially if they train you. Very often you arrive at workshops and it's true that plenty open their doors to you just because you're a woman and they'll stop and listen to you out of politeness, or they may tell you to piss off... there's all types, but they're a little more embarrassed... but then they think that you're less professional. There's some that say, "Bah! a woman in the workshop... you should be at home washing up". And that's happened to me too, not often, but it has.*

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<sup>12</sup> Furthermore, those in charge of hiring have internalized the gendered system and may think that they will lose team spirit, which would then lead to a fall in productivity (Bergmann, 2011).

<sup>13</sup> This is like the situation of small car-repair businesses (Maira-Vidal, 2017).

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3 *Indirectly they are telling you, "You don't know what's what". But there are*  
4 *others who throw you a line and say, "Why not?"* (Woman, mechanic, 42)  
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7 The construction sector and vehicle workshops have traditionally worked with a system  
8 of apprenticeships, where the workers themselves train the new people, which means  
9 that acceptance by fellow workers is a key factor (Ibáñez & Narocki, 2012). This closure  
10 system has traditionally been very effective when the specialist operatives and the  
11 unions controlled the supply of work by means of apprenticeships, where women did  
12 not fit in (Walby, 1989, examining engineering in England). In recent years, with  
13 specialized training courses in operation, including, for example, a course for mechanics,  
14 the place of the apprentice has become blurred and the barriers that this system puts  
15 in women's way are weak (Bol & Weeden, 2015: 356).  
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24 Even so, the system of apprentices and informal networks is interrelated with these  
25 male dominated organizations. This segregation relies on the idea that workers should  
26 be men, and this masculine identity is defined in relation to their 'tough' job, the culture  
27 of taking safety risks, and working long hours (Ness, 2011). Both hiring managers and  
28 fellow workers must try to overcome the initial homophily that pervades the  
29 organization.  
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### 36 **3.2. Understanding occupations with extreme segregation based on their closure** 37 **mechanisms** 38 39

40 As we have proposed, the barriers to access that we have observed in the occupations  
41 examined cannot be understood from a single dimension. From our empirical work,  
42 closure mechanisms come into play long before the women involved take the decision  
43 to try to enter. To understand how these closure mechanisms work, we examine the  
44 temporal dimension, in other words, when the closure mechanisms take effect in a  
45 person's life cycle and in relation to *taking the decision* to access the occupation. We  
46 propose the following model:  
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55 **Figure 2. Plan of the social closure mechanisms and their timing (pre-existing, prior**  
56 **to, or threshold of access)**  
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3 In first place, we see that some of the mechanisms identified appear at a phase before  
4 the decision is made (termed *pre-existing mechanisms*) and shape the conditioning  
5 factors that will influence the decision whether to enter the occupation or not. Then we  
6 have mechanisms that come before access (*prior mechanisms*), in play at the time when  
7 women are making the decision to enter an occupation (for example, deciding whether  
8 to start a form of professional training). Lastly, there are the mechanisms operating  
9 when accessing and have significant impact, stopping access to an occupation or  
10 profession even at the point of making or being ready to make the decision (*threshold*  
11 *mechanisms*). In the following section, we examine further the timing of the closure  
12 mechanisms for each of the occupations, to establish the relationship between the  
13 occupations and the processes of closure, as well as typing the occupations according to  
14 their closure mechanisms.  
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### 26 *Research results 1: timing of the mechanisms*

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29 To examine the issue of timing in whether or not an occupation is entered, we must drill  
30 down into the data to understand why the interviewees only draw attention to specific  
31 mechanisms, when, from our analysis of the occupations, it can be seen that other  
32 mechanisms are in play. Our thesis is that the women identify as closure mechanisms  
33 (which they see as obstacles) only those that impinge once they have already taken the  
34 decision to enter the occupation, the *organizational mechanisms* (apprentice systems,  
35 sexist selection processes, etc.). The *structural mechanisms*, although very important  
36 when it comes to shaping the decision-making process, remain unnoticed or are not  
37 made explicit by the interviewees. This is, for instance, the case of the women ICT  
38 specialists, who in interview do not reflect on the closure mechanisms or show  
39 awareness of the existing inequality.  
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50 Women do not construct the narrative of their biography in terms of gender  
51 socialization or 'mechanisms for selecting the elect'. The interviewees themselves speak  
52 of invisibility, in other words, that certain activities or professions are absent from their  
53 range of possibilities for work. These become visible in various ways, often completely  
54 accidental. The family environment is crucial: a significant majority of the mechanics,  
55 dock workers, train drivers, and police officers whom we interviewed had a close family  
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3 member in these areas (and so did many pilots and construction workers). They often  
4 come into these professions by taking advantage of opportunities that are drawn to  
5 their attention by men in their circle, particularly in times of increased demand in the  
6 relevant occupation.  
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### 10 *Research results 2: overlap of the mechanisms*

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14 This model allows us to understand how occupational closure occurs with greater  
15 complexity, that there is an *overlap of closure mechanisms*, meaning that they are not  
16 only connected but also act to reinforce or accelerate one another. The concurrence of  
17 mechanisms at the same moment creates for candidates a feeling of insurmountable  
18 obstacles, such that they give up on the idea in the stages just prior to taking the  
19 decision, for example, to gain a qualification.  
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26 It is important to remember that gender norms, like any other norms, are not optional:  
27 not abiding by them means sanctions. When it comes to making decisions on education  
28 or work, gender socialization has made us experts in the social expectations attached to  
29 the role we are assigned. Commonly, when facing sanctions, we choose the routes that  
30 reinforce social norms and structures. Chen and Moons (2015) propose that women  
31 avoid male-dominated domains because they anticipate low interpersonal power in  
32 those contexts.  
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40 Our qualitative material indicates that pressure from the agents (whom we  
41 'gatekeepers') is greater once women have taken the decision to enter a job that is  
42 traditionally closed to them, as is the force with which the closure mechanisms are put  
43 into practice (attitudes of personal networks, of the environment, of the system, of the  
44 sector, etc.). That the candidates for entry feel this pressure as being 'stronger' can be  
45 explained in various ways: first, women have more agency at the threshold, having  
46 already taken the decision to enter; secondly, precisely because they have a schedule  
47 for entry, they are far more sensitive to detecting discrimination; and, thirdly,  
48 organizational mechanisms are the most direct closure mechanisms, producing  
49 practices to help or hinder access (e.g., selection processes), with elaborate discourses  
50 related to the gendering of a particular occupation. This last element may explain why  
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3 women detect the closures involved at the organizational level more than at the two  
4 previous levels.  
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## 6 7 **Conclusions** 8

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10 In this article, we set out to create a map of the closure mechanisms that reveals how  
11 these overlap and that the most determinant fact in woman's failure to enter an  
12 occupation is the cumulative effect of mechanisms along a long period of time. We  
13 believe that the idea of *the cumulative effect of closing mechanisms* is revealing and can  
14 be useful for future researchers that engage in the research of occupational segregation  
15 through biographical methods.  
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19 The other theoretical contribution that we think may be of interest for researchers is  
20 connected to the idea of the cumulative effect and is the idea of the *temporal dimension*  
21 *of closure mechanisms*. Our thesis is that women encounter gendered closure social  
22 practices from a very early stage in their life-cycle but that they only identify as obstacles  
23 what we have called *prior* and *threshold mechanisms* (short period before accessing to  
24 the occupation), so that the other mechanisms are very difficult to evaluate for  
25 researchers, and therefore, to identify social issues to be changed.  
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29 Based on our four-dimensional model, we have proposed a categorization of  
30 occupations according to their closure mechanisms. Here, we expose briefly about the  
31 three categories of occupations attending to their closing mechanisms.  
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35 Occupations such as train driving, dock work and commercial aviation exhibit closure  
36 mechanisms at all levels. These are *occupations with multiple closure*, which are also,  
37 out of all the occupations studied, those with the most extreme segregation, where  
38 women are a 'tiny minority'. One explanation suggested by this model would indicate  
39 that the presence of closures across the spectrum involves a cumulative effect of the  
40 closure mechanisms. The cases of dock work and train driving are striking, because,  
41 despite persistent closure mechanisms, there is always a minority of women who want  
42 to enter and who succeed, taking advantage of the opportunities afforded by the  
43 legalistic and credentialist entry systems. This is due to two factors: first, the professions  
44 are endogamic and, secondly, they have very good labour conditions.  
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3 A second type of occupation, such as construction trades and vehicle repair, can be  
4 considered occupations with organizational closure, where traditionally women did not  
5 enter because they were family businesses which males inherited. However, with the  
6 transformation of the construction and the automotive sectors and the implementation  
7 of non-discrimination training policies, these occupations have changed greatly. In both  
8 occupations, women encounter obstacles to entry at selection, whether for an  
9 apprenticeship scheme or getting a job. In both cases, homophily and the internalization  
10 of the androcentric professional culture create a powerful barrier to entry.  
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19 In contrast, the cases of ICT specialists and the National Police, with a higher proportion  
20 of women, have fewer closure mechanisms. The structural closure related to the  
21 educational model for the technicians, coming as it does early in life, pushes girls and  
22 young women away from this training path (the leaky pipeline has no new input),  
23 summed up in the profession's new image of 'the nerd', making it unattractive when  
24 constructing a female identity. As for the police force, the profession has a male-  
25 dominated image, and as other scholars have noted, its professional socialization  
26 processes are based on the idea that masculinity is an essential requirement for the  
27 practice of policing (Prokos & Padavic, 2002). The interviews with the women in the  
28 National Police give a good example when recounting the obstacles, they faced in  
29 obtaining suitably shaped bulletproof vests.  
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40 In this article, we have argued that even when the theoretical discussion of mechanisms  
41 is useful for the sake of sociological discussion, examining how such mechanisms are  
42 embodied in social practices and put into effect by agents, is vital to advance in the  
43 formulation of policies. Thusly, we have proposed a map of mechanisms to inform and  
44 devise public policies to help transform them, with the idea that each social closure  
45 mechanism requires a policy. For instance, we observe that all the occupations suffer  
46 from a gendered construction of the profession, which as Kahneman (2012: 24) indicates  
47 is connected to how automatic thought activates associations based on professional  
48 stereotypes. In other words, the gendered division of labour and the gendering of  
49 professions is a basic element of professional stereotypes, that can only be overcome  
50 through reflection and conscious effort, that is, by remaining alert to the image of each  
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3 occupation presented in public environments (advertising and the media, classrooms  
4 and the educational system, businesses and organizations, etc.).  
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8 However, we also acknowledge that the connection between closure mechanisms and  
9 potential policy action is not straightforward as the policies will differ significantly  
10 according to the source of the problem observed. For example, closure mechanisms  
11 related to the 'legalist' system need legislative change in labour relations, such as those  
12 related to qualifications, given the multiplying effect these can have in contexts where  
13 access is difficult, that would need *ad hoc* measures. Therefore, we then think that a  
14 complex approach such as the three-level analysis that we propose here, is needed for  
15 those who want to advocate for further and better inclusion of women in traditionally  
16 male occupations.  
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25 Despite everything included here, in our research cases we have understudied the ways  
26 of overcoming closure mechanisms, in line with Witz's conceptual proposal of  
27 *inclusionary mechanisms* (1992). Examination of detailed ways in which women manage  
28 to overcome closure mechanisms will no doubt carry forward the work that we present  
29 here, as have done authors for the cases of women politicians (Freidenvall, 2013) or  
30 women in academic sociology (Roos et al, 1993) following the idea of the *women's*  
31 *inroads into male occupations* (Reskin and Roos, 1990).  
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39 Furthermore, we believe that the model we propose can be complemented by  
40 considering the mechanisms that lead to women giving up an occupation after having  
41 entered it, an issue of current interest in our study of women journalists (García-Mingo,  
42 2019) and women in STEM, where there is a high level of departure over the course of  
43 the career cycle (Margolis & Fisher, 2002). Some of the initial results from our fieldwork  
44 shows that the gendered closure mechanisms that shape the access to some  
45 occupations are very analogous to those determining career abandonment, however,  
46 this future work remains to be done.  
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Figure 1. Gendered social closure mechanisms and levels where they occur

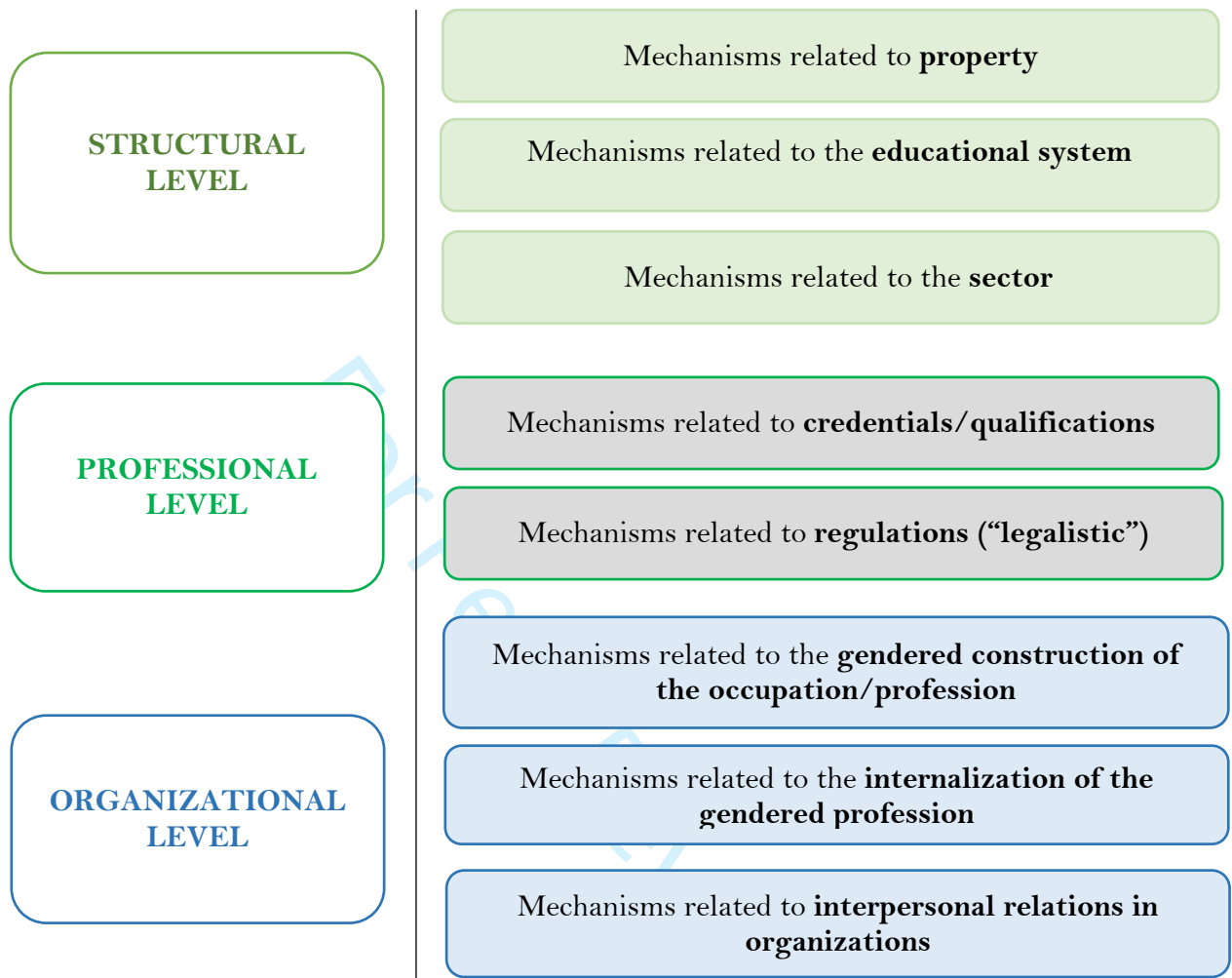


Table I. Fieldwork

SECTOR / OCCUPATION City / Region, (years)	DOCUMENTS	TARGETED SAMPLING OF INTERVIEWEES
<i>ICT technicians</i> Murcia, (2013-14)	12 interviews with women 1 work group with teachers <sup>1</sup>	specialized businesses (4), computer shops (4), large businesses (2) and government administration (3)
<i>Mechanics in motor vehicle repair</i> Madrid, (2013-14)	6 interviews with women 3 men owners/bosses <sup>2</sup>	unemployed (3), women heading workshops (2), sheet metal and painting (1)
<i>Painting and Construction trades</i> Asturias, (2013-14)	10 interviews with women 2 interviews with <u>mean</u> managers 1 discussion group with businesspeople (2 women 7 men) <sup>3</sup>	currently employed in the sector at the time of interview (3) _____ salaried (4), salaried and self-employed (2), self-employed (2), owners/contractors (2)
<i>Dock workers</i> Valencia, (2015-16)	8 interviews with women 3 conversations with men expert witness <sup>4</sup>	all with family working in the Port of Valencia
<i>RENFE train drivers</i> España, (2013-14)	4 interviews with women 5 interviews with men 23 focused autobiographies of women <sup>5</sup>	Train drivers (2), managers (1), union representatives (4), preparing entrance exams (1), retired (1)
<i>Airline pilots</i> Madrid, (2013-14)	10 interviews with women 3 interviews with men <sup>6</sup>	stable career: over 45 (7), insecure career: under 35 (6)
<i>National Police</i> Madrid and Asturias, (2015-16)	9 interviews with women 4 interviews with trade unionists: 3 women, 1 man <sup>7</sup>	women inspectors (2) long patrol experience (6)

<sup>1</sup> Fernández- Casado (2017: 200-3). <sup>2</sup> Maira-Vidal (2017: 167-8). <sup>3</sup> Ibáñez (2017: 40-1). <sup>4</sup> Ballesteros & Aguado (2018: 64). <sup>5</sup> In 2012 focused autobiographies. Ballesteros (2017: 276-9, 371-2 and 376). <sup>6</sup> Narocki & Narocki (2017: 225-226). <sup>7</sup> Ballesteros & Aguado (2018: 38).

**Table 2. System of gendered social closure mechanisms, agents and practices**

	<b>MECHANISM</b>	<b>CASE</b>	<b>PRACTICES</b>	<b>AGENTS</b>
S T R U C T U R A L	Mechanisms related to <b>property</b>	Small family businesses: Women painters and mechanics	Passing on business property or licence	State Family
	Mechanisms related to the <b>educational</b> system	Educational system influence: ICT	Secondary and Vocational Training already gendered	Educational system (counsellors, educators...)
	Mechanisms related to the <b>sector</b>	Sector's economic cycle: Women pilots, women painters and other trades in construction	New sector regulations	State Organizations
P R O F E S S I O N A L	Mechanisms related to <b>credentials</b> /qualifications	Credentials: train drivers and pilots	Expensive qualification Fierce competition for entry	Organization State
	Mechanisms related to the <b>regulations</b> ('legalistic')	Closed shops: women dock workers	Control of workers queues Trade union control	State Organization Workers
O R G A N I Z A T I O N A L	Mechanisms related to the <b>gendered construction</b> of the occupation/profession	Image of the professions: train drivers, pilots and police officers	Military aesthetic: uniforms, caps, etc. Organizational propaganda	Mass Media Organization
	Mechanisms related to the <b>internalization</b> of gendered profession	Informal networks: painters and mechanics	Family relationships and social networks	Workers Family and/or primary groups
	Mechanisms related to <b>interpersonal relations in organizations</b>	Apprenticeship system: painters and mechanics	Homophily in the apprenticeship system	Organization Workers/mentors

Source: Prepared by authors

**Figure 2. Plan of the social closure mechanisms and their timing (pre-existing, prior to, or threshold of access)**

