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Feminization and democratization: The influence of occupation perceptions on orientation choices in medical studies

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Abstract

This paper analyses feminization and democratisation through the orientation choices process for medicine studies. Our study, based on questionnaires with a sample of 176 scientific final year pupils of the Montpellier academy, focuses on gender-based differences in orientation choices and projects for girls and boys in medicine. We hypothesize that the increase of female students obtaining a scientific secondary school diploma does not have an immediate mechanical consequence on the feminization of medical studies. Moreover, for girls, traditional gender-based perceptions of female abilities for care-taking, plays an essential role in orientation choices in medicine. Our results confirm female career and orientation choices more precisely, but also confirm previous research results, and indicate that the girls seem to have more precise curriculum and career orientation choices than boys, yet gender-based perceptions persist. They are more likely than boys to aspire to choosing medical studies but seem to be more cautious about the affirmation of academic self-esteem. This paper aims to analyse this paradox: why the feminization isn't synonymous with democratisation and the perpetuation of gender-based divisions in occupations.

Keywords: *Feminisation, democratisation, orientation choices, gender-based perceptions of occupations*

The aim of this paper is to address the question of democratization in higher education in a specific context, that of the feminization of medical studies. In France, a mass access for women to medical studies was encouraged in the 1990s, the proportion of girls outnumbered that of boys in 1993-1994 with 50,2% enrolled, including all undergraduate and postgraduate courses (Lapeyre, 2006) and they became the clear majority (64%) amongst the first-year medical students in 2002 (Hérault & Labarthe, 2003). This feminization has continued into postgraduate medical studies with 55.9% female students in Residency and 53.6% in Internship (in 2002) (Hérault & Labarthe, 2003). Studies in medicine have experienced a mass men phenomenon of feminization regarding the enrolled students. Is this feminization synonymous to democratization for future female and male medical students? But also from a perspective of orientation and professional choices, does the feminization of medicine induce a feminization of career projections in specialized medical fields?

Within the framework of our thesis in educational research, aiming to carry out a study of the role of gender in the process of orientation leading to medical studies, we have chosen to focus on a specific population: that of female and male high school students specializing in scientific studies (S) representing a main pool of future medical students of both genders. The fourth-year S class appears to be an essential stage of orientation to

analyze because it represents the selective step, strongly conditioning access to medical studies. It must be noted that in 2002, 92.2% of male and female undergraduate first-year medical students (UMS1) had obtained a scientific secondary school diploma S (Hérault & Labarthe, 2003). It appears that it is at this moment of studies that certain explicative factors come into play regarding girls' and boys' orientation choices towards medical studies. This article is based on the results of a survey by questionnaire of 176 fourth-year scientific students (92 girls and 84 boys) in two urban secondary schools of the academy of Montpellier in 2009.

This paper propose to analyze the methods and consequences of this feminization on the orientation process studies and also careers for female and male fourth-year scientific secondary school students and wish to pursue medical studies. We have considered analyzing the democratization at the University in two focuses: which democratization when considering equality in professional plans, for medical studies in a context with gender differences? We wish to approach the latter through the analysis of professional plans and perceptions of professions and specialized medical fields of fourth-year scientific secondary school students of both genders choosing to pursue medical studies. But also which democratization, regarding equality in accessing medical studies in a context containing different social backgrounds?

The results of this survey show a significant consequence of this feminization, this opening-up of access to girls does not mechanically induce democratization, firstly for conditions for entry because social selection perpetuates for medical students of both genders. In addition to career possibilities for girls and boys through the persistency of gender-based representations in occupations and specialized medical fields, these factors interacting during the development of gender-based identity, remain pervading and thus can condition male and female medical students' occupational and orientation choices.

1. Our first focus will develop the question of democratization regarding which equality to access applies to medical studies in a context of different social backgrounds?

We observe that the social origin of male and female fourth-year scientific secondary school students of our sample group, having chosen medicine as their post-secondary school choice, is privileged. Nearly half of the fathers present in the Socio-Professional Categories (SPC) 'Executives and higher intellectual professions' (46.9%) and a third of the mothers belong to the SPC 'Executives and higher intellectual professions' (34.4%).

If we precisely observe, the male and female students' parents SPC are different. The fathers of the boys, having chosen medicine as their post-secondary school choice, are almost only represented in the SPC 'Executives and higher intellectual professions' (70%). The distribution of the fathers of the girls is more heterogeneous: 36.4% present in the SPC 'Executives and higher intellectual professions', 18.2% belong to the SPC 'Workmen' and 13.6% in the SPC the 'Employees'.

The boys and girls mothers are differently represented in the SPC. The half of the mothers of the boys present in the SPC 'Executives and higher intellectual professions'

then 20% belong to the SPC 'Intermediate professions'. The distribution of the mothers of the girls is more diversified, 27% of the mothers are 'Executives and higher intellectual professions', 27% present in the SPC 'Intermediate professions' then 23% belong to the 'Employees'. We especially observe that contrary to the fathers, 15.6% of the mothers (10% of the mothers of the boys and even 18% of the mothers of the girls) do not have an occupation. This analysis enables us to observe a high social selection among boys, as well as a stronger presence of the fathers in the privileged SPC.

The social origin of male and female fourth-year scientific secondary school students of our sample group, having chosen medicine as their post-secondary school choice, is higher than the national average: in 2009-10, amongst the students of third and fourth year general studies, 30.5% of the parents belong to the SPC 'Executives and higher intellectual professions' (Reference point and statistical references 2010). A study carried out in 2002 (Hérault & Labarthe) shows little change regarding the selection between 1992 and 2002, executives and higher intellectual professions remaining in the Socio-Professional Categories (SPC) being the most prevalent for the parents (44% of first-year students' fathers in 2002 were executives or held a higher intellectual profession). The results of our survey confirm the current relevancy of this report. Feminization is not synonymous to democratization for medical studies since the privileged SPC are depicted as a majority amongst the male and female students' parents (in the context of our survey, nearly half of the fathers present in the SPC 'Executives and higher intellectual professions' (46.9%) and a third of the mothers belong to the SPC 'Executives and higher intellectual professions' (34.4%)).

2. Our second focus will develop the question of democratization, regarding which equality in professional projections for medical studies in a context of gender differences?

We illustrate this question with a paradox, linked to the combination of three factors, which we gather from our survey.

2.1 Our first factor: the girls' plans appear to be more accomplished.

Concerning the post-secondary school orientation choices of our sample, 55% of students evoke the field of health. Amongst these students, 46.4% envisage medical studies, with a difference of 12 points between girls and boys as girls represent 56% of these students versus 44% for boys. More precisely, amongst the students in the sample defining the University as a choice after their secondary school degree, 29.4% have precisely chosen a course of study in medicine. Amongst these students, 68.8% are girls. The desire of an orientation in medicine for girls is representative of the national situation; at the beginning of the school year 2008-09, 66.1% of male and female students of UMS1 were girls (Reference point and statistical references 2009).

There is feminisation but gender-based differences between girls and boys who choose medical studies persist. The study results already confirm female career and orientation choices which seem to be more precise than male ones. First of all, the analysis of male

and female final-year scientific secondary student's, having already chosen medical studies, occupational projections confirms that the girls' plans appear to be more *accomplished*, both academic and professional. We note a few discrepancies, half of the boys consider that they have professional plans (and 36% of the girls) conversely 60% of girls declare having already defined their future occupation (for only 40% of the boys). If we precisely observe these professional plans, around 40% of the girls like the boys declare their professional plans to be in the medical-pharmaceutical and bio-chemical fields, 10% of the boys mention the profession of engineer (for only 5% of the girls). Concerning the affirmed choices of future professions, it is interesting to observe that all students both male and female cite the field of health, with a majority of girls (60%).

2.2 Our second factor: the persistence of female gender-based perceptions of professions.

Moreover this study confirms previous results about female orientation choices with more particularly the persistence of female gender-based perceptions. It is extremely interesting to analyse the current prevalence of gender-based representations of professions and specialized medical fields for male and female final-year scientific secondary students having chosen medical studies.

A part of our questionnaire concerned the occupation representations of our sample, we asked the scientific secondary school students to estimate if the named professions were exercised either "in majority by women", or "in majority by men" or "equally" that is to say exercised as much by women as by men. For example regarding the medical professions and specialized medical fields estimated by male and female scientific final-year secondary students (having chosen medical studies): the profession of midwife is seen as exercised in majority by women for both genders (100%); that of surgeon is only seen as a male occupation (with more than 80%). The secondary students' second estimation is very significant. The professions of doctor and physiotherapist are seen as being exercised as much by women as by men (with more than 50%). Then if we observe the second secondary student's estimation, and there are no differences between both genders in this case, female and male students consider that these professions are exercised in majority by men (with more than 40%). That is to say that both girls and boys estimate that these professions are exercised either "as much by women as by men" or "more by men".

The same observations were made concerning the professions of pediatrician and neurologist. Girls and boys estimate that a pediatrician is a profession exercised as much by women as by men (with 50%) whereas female and male secondary students estimate that it's more a female profession (with even 45% from girls). On the contrary, the profession of neurologist is estimated as a male profession with almost 60% from girls as well as from boys, then "equally" with more than 40%.

But to confirm these previous results about female orientation choices in the case of long and scientific studies such as medicine creates a real paradox. The girls seem to have more precise career and orientation choices than boys and yet gender-based perceptions persist, about medical occupations. The gender influence, with the traditional gender-

based perceptions of female abilities for care, has an essential role in orientation choices in medicine. Currently, girls are more likely to choose medical studies as long as gender-based perceptions, of themselves and occupations, persist. Representations do not evolve at the same rate as the increase of enrolled students. Despite co-ed classes, encouraged in France in the 60s-70s, and a feminisation movement of medical studies in the 1990s, gender stereotypes remain prevalent during socialisation, academic as well as in a family context, and during the development of girls' and boys' sexual identity. The results of this survey show the current prevalence of gender representations of professions, in male and female medical students, perpetuating a division by gender in orientation choices in studies but also in professions in specialized medical fields.

2.3 Our third factor: a female academic self-esteem is lower in mathematics and physics-chemistry.

In addition, the study results show female academic self-esteem is lower in mathematics and physics-chemistry. So, girls are more likely than boys to aspire to choosing medical studies but seem to be more cautious about the affirmation of academic self-esteem. Academic self-esteem (Oubrayrie, De Léonardis & Safont, 1994) is an essential factor when developing gender identity and in curriculum and career orientation during adolescence. Girls having already chosen medical studies during their scientific final year, consider themselves more than boys to be in the category "overall weak" and "overall very weak" in mathematics and physics-chemistry.

For example, in mathematics, boys (70%) consider themselves "overall good and very good" for only 31.8% of the girls; conversely 68.2% of girls consider themselves "overall weak" and "overall very weak" versus only 30% of the boys. And it's even more obvious in physics-chemistry, girls (54.5%) consider themselves "overall good" and "overall very good" while 80% (of boys) make this declaration; and conversely girls are 45.5% that consider themselves "overall weak and very weak" versus only 20% of the boys.

To finish with this last point, more girls plan on pursuing medical studies than boys after secondary school but appear to be more cautious concerning their assertion of their academic self esteem. That is to say that girls can undertake – plan on pursuing medical studies without developing an academic self esteem as high as boys. Many studies have shown that girls, during adolescence, have a lower evaluation of their self confidence than boys. Girls plan the future more fervently than boys to compensate for their current depreciation (Oubrayrie, De Léonardis & Safont, 1994). We propose to analyze the academic self esteem of these girls, not in regard to the esteem they have in their plans but rather in regard to a lesser awareness of girls of the difficulty of medical studies and a "self-limitation" of their potential in higher education.

To conclude, we would like to apply this question of democratization, of the equal opportunity in the university, precisely regarding equality of access between boys and girls to the best courses of study and professions, through medical studies and this phenomenon of feminization characterizing them. Thanks to the results of the survey, we can observe that a feminization of enrolled students in medicine does not "feminize"

professional projections of secondary students of both genders, nor does it democratize the entry to these studies. Despite this feminization, professional representations as well as professional projections of male and female students remain gendered. This prevalence of gendered representations, both with male and female secondary school students having chosen medicine during their scientific fourth year, of professions and specialized medical fields, can reveal a factor conditioning potential studies in higher education but also and especially the potential of medical careers according to a gendered division which is still present.

We do not deny the changes resulting from the feminization in gendered distribution of professions in specialized medical fields. In 2010, women represented 40% of all doctors (and 65.2%, in the under 30 group), 42% amongst specialized medical fields (65% of those in the under 30 group) but only 25% practice in surgical fields (42% in the under 30 group), or the most prestigious and highest paying. We feel it's important to point out, through the results of this survey, a parallel phenomenon to this feminization: the prevalence of gendered representations amongst adolescence of both genders including those male or female students planning on pursuing medical studies. The outcome remains ambivalent regarding the feminization and the equality of access to the best courses of study and medical professions. This feminization does not have as a consequence a change of social selection for future male and female students; feminization is not synonymous to democratization. These future medical students of both genders remain socially selected, upper socio-professional categories remain the current overall majority. The medical studies context is specific: the gendered division evolves, but changes without transformation of the traditional conceptions defining the male and female areas.

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