



The Education of Gender The Gender of Education Sociological Research in Italy

Maddalena Colombo
Luca Salmieri

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1
Gender and Education in Italy

Maddalena Colombo and Luca Salmieri

INTRODUCTION

Historically and culturally, gender seems to be the most die-hard inequality. Gender equality is no doubt a current global and local priority for organizations, policy makers and progressive thinkers in society at large and is inextricably linked to efforts to promote the right to education and support citizens' achievement in relation to a fast-growing set of societal, economic, political and cultural challenges. Yet, although there are laws and regulations sanctioning inequality and promoting equality between women and men in almost all the countries of the world the status of women remains lower than that of men whatever indicator is chosen. Globally, there are gaps between women and men in almost all areas of social life (ILO, 2019). Worldwide, barely 55% of women are active in the labour market compared to 78% of men, and in no country does the share of women in employment approach or equal that of men. Inequalities are also evident in terms of the wage gap: women earn 40% on average less than men. Their presence at the helm of companies is limited: globally, just 18.2% of companies are headed by a woman (WEF, 2020). In developing countries, most women in waged employment are positioned in the informal sector, where workers lack protection, exploitation is widespread, social security rights are not guaranteed and working conditions are very harsh (UNDP, 2019). The combination of low wages and family members dependent on women's economic income also leads women to be over-represented in the poor population. Inequalities in the political realm are even more marked: in 2019, women occupied just 25% of parliamentary seats and 21% of ministries worldwide (WBG, 2019). Women's political representation is often violently opposed and subject to harassment and, where it is scarce, women are also more often the victims of violence and threats (WHO, 2013).

In most developing countries, girls leave education earlier than their male peers. Only about 60 out of 150 countries had achieved gender parity in access to primary and secondary education in 2019 (UNDP, 2019). Furthermore, on a global scale, more girls than boys are not in school; 16 million girls will never set foot in a classroom and women account for two-thirds of the 750 million adults without basic literacy skills. However, in Western countries and the countries of the Northern hemisphere,

educational gaps between men and women have been eliminated over the last few decades. Data even show women overtaking men in university enrolment rates and total graduates (Becker et al., 2010; Pekkarinen, 2012).

Nevertheless, a substantial body of analyses and research carried out by gender studies scholars has highlighted that the very recent dominance of young Western women in secondary and tertiary educational attainment has not yet translated into a reducing of the gender gap in the labour market, politics and contemporary social gender relations of power (Blossfeld et al., 2015; Eurofound, 2018, 2020; Paxton et al., 2020). The finding that women's rising educational prestige does not convert into higher economic, social, and political returns relative to those of men requires further analyses focused on the social factors influencing gender inequalities at large.

Despite a universal consensus that gender equality requires policies ensuring that girls and boys not only have access to and complete educational cycles but are «empowered equally in and through education» (UNESCO, 2016: 28), several forms of gender difference and imbalance persist. These can be seen in the realm of study programs and content choices, in the context of preferences and learning orientations, and in the ways in which teachers, counsellors, families and peer groups treat and condition the educational careers of girls and boys. Additional trends that play an equally significant role in reproducing old and new forms of horizontal gender segregation include the continuing feminization of the teaching workforce in preschool, primary and secondary schools, the advent of new teaching practices, methodologies, tools and technologies and key, innovative disciplinary fields of learning. The multi-faceted relationship between education and gender is therefore one of the central themes of the 21st- century social sciences not only in terms of disparities but overall, as regard to neglected differences.

In this volume, we examine the relationship between gender and education with respect to the Italian context. The purpose is to forge a space for a progressively varied and dense area of interdisciplinary research on gender and education. As new gender studies fields are rapidly developing and becoming pivotal in the traditional social disciplines of sociology, educational studies, pedagogy, anthropology, we felt a greater need for a dynamic and intersectional examination that plots emerging definitions and debates while uncovering the critical complexities of gender and education in Italy. These include issues relating to:

- the influence that family socialization and pre-school education have on both the formation of gender identities and the development of educational paths;
- the female hegemony in the demography of the teaching staff and the repercussions of this numerical dominance for both male and female colleagues and students in terms of patterns and methodologies;
- the reproduction of women and men's traditional choices in fields of study such as STEM in the tracks of the Italian secondary education and university system;

- the barriers to a gender neutral vision of university career choices; the influence of parents' educational attainment – especially that of mothers – on the educational achievements of younger men and women over time;
- the growing importance of learning IT and digital skills for employability - especially for women;
- the efficacy of experiments in coding, robotics and computational learning as part of innovative programs for pupils;
- gender gaps in financial literacy and gender divides in more complex financial skills;
- the social construction of gender categories in standardized assessments of adolescents' competences. In adopting a critical approach to gender and education as the complex intertwining of these crucial issues, we recognize the importance of probing beyond the boundaries of specific domains in order to develop a more intersectional focus.

We are interested in addressing both the *education of gender* – given that gender identities are not only causal factors but also educational outcomes – and the *gender of education* – given that education is itself gendered. By the education of gender, we mean the set of processes, actors and educational contexts that directly and indirectly shape the development of gender identities and, above, all the complex formation of students' preferences, orientations, practices and experiences as they pursue learning paths, experience academic (in)success, and enter into both the labour market and adult life. We use the phrase “gender of education” to refer to gender differences in the multiple dimensions of education that involve observing and analysing education and learning systems according to a gender perspective. That is, we propose to also focus on the comparison between female and male learning paths, women's and men's learning achievements, gaps in the return on such investment in the labour market and other social dimensions more generally. At the same time, the gender of education also concerns teachers and other staff involved in education, the currently consolidated trend of feminization and the power relations stemming from gendered teaching models.

1. THE EDUCATION OF GENDER

Despite centuries and decades of progressive thought, intellectual advancements and women's struggles for equality, it was not until the 1960s that there developed a consensus around the principle that men and women are biologically born equal, and it is instead social-cultural factors and mechanisms of distinction and discrimination that go on to render them unequal. A revolutionary concept exported from feminist studies – the idea of “gender” – aided in this process and made its way permanently into the social sciences. This long silence explains at least in part the

difficulties that feminists in the Sixties and Seventies faced in trying to incorporate the concept of gender into the body of scientific theories and convince scholars of various approaches that gender should join established terminology and scientific speculation.

What exactly does “gender” mean and why was it preferred to “sex”? Gender is the word for the sexually differentiated way in which human beings are perceived in and by society. Two sexes coexist in society, and the term “gender” signals their dual presence: men as well as women constitute gender. However, it also signals the set of processes by which each society shapes biological sexuality into products of human activity and thereby structures the lives and experiences of men and women according to differentiated and opposite categories, usually prohibiting the coexistence of other genders. The physical and biological substratum of sexual difference, the body, is subsumed into the concept of gender: diverse historical and social contexts have attributed changing cultural meanings to this founding layer, but this layer has ubiquitously served as an axis of discrimination. In other words, gender is not some kind of “garment” passively hanging on the “coatrack” of biological sex; gender also actively shapes sex. According to the scholar Linda Nicholson (1994), gender is itself a plastic entity, an active changing medium; this plasticity has been demonstrated by comparative research in history and anthropology and can be seen in the claims made by the many individuals who refuse to be shoehorned into one of the two available and opposite categories of male and female.

Two essential corollaries go hand in hand with the introduction of the notion of gender. The first concerns inequality between the sexes and, therefore, the distribution of power. «Naming gender immediately means evoking power» warns historian Joan Scott (1986: 1067), alluding to one of the historical constellations with which feminist research has been most concerned: patriarchy. As scholars have documented, relationships between men and women have proceeded in an unbalanced, asymmetrical, and unequal way in the historic race taking place over the centuries. Differences between the two sexes found in nature - a female body which has its own characteristics, different from those of the male body - have lent themselves to the construction of a disparity that has been perpetuated over time. Taking advantage of this disparity, men have been able to establish an advantage in the division of labour and privileged access to the intellectual and symbolic sphere to the detriment of women. Feminism challenged the legitimacy of this historical advantage and the supremacy that men had assigned to themselves. The first target of the feminist movement was therefore inequality and the asymmetrical distribution of power between the two genders.

The second corollary has an epistemological value. The creation of the unprecedented category “gender” opens up a new horizon of freedom and reveals the presence of masculine and feminine models in all areas of human and social experience, in terms of both their diversity and their intertwining. As such, the concept of gender has the disruptive potential to reformulate traditional concepts, the analytical tools with which social observers operate, and to introduce a new perspective in the act of interpreting phenomena.

Systematic attention to gender has indeed helped to combine the questions posed by scientific investigation and critical reflection in a more complex and articulated way, to equip them with a sharper eye and more sophisticated methods. In other words, the theoretical development linked to the category of gender has not only added new information to the already available data on inequalities, but has given rise to different perspectives on the objects of study available to the social sciences. Not only to fill a gap – as if “gender” concerned only the female sex, so long neglected by history – but to critically reassess all the premises and parameters of social investigation, history, politics, economics and even the hard sciences.

Simultaneously, however, our ability to overturn both social structures and common sense about gendered realities is blocked when we are faced with the observation that inequalities between men and women persist. The challenging project of reshaping existing policy projects, including those concerning equal opportunity in education, is progressing relatively slowly.

In this book, we approach gender as it relates to behaviour, not just a label but a form of acting and doing. From this standpoint, gender can be defined as a complex set of institutional and individual practices that are culturally reinforced if not overdetermined, although not necessarily consciously, and frequently contested. In examining behaviour, psychology, pedagogy, sociology and gender studies initially delved more deeply into the family and parents’ roles and only subsequently began to focus on formal educational contexts, on the belief that universalistic education is concerned only with guaranteeing and stimulating girls’ access while maintaining as neutral as possible a stance in the face of gender differences. Targeting the dynamics through which stereotypes and inequalities are produced and reproduced meant prioritising the family and its early childhood socialization practices as the primal core of “doing gender”. Almost all disciplines paid relatively little attention to gender issues in education until the Seventies. But the same can be said for gender differences and female subordination in many sectors of social life such as labour market, politics, science, knowledge, health, technologies. Based on manifest evidence that family contained the basic relations of male societal dominance, this realm was shaken by feminist consciousness and subjected to critical scrutiny in the preceding decade, the ‘Sixties (Mitchell, 1968; Thompson, 1975; Chodorow, 1978; Baumrind, 1980; Hartmann, 1981; Roopnarine, 1986; Ferree, 1990).

However, it was later recognized that the school environment is by no means “neutral” in the face of gender and, if anything, is of primary importance in forging preferences, attitudes, talents and points of reluctance, as well as in orienting students’ choices of programs, subjects, and fields of study as they advance in their educational careers. Researchers thus began to view pre-primary and primary education as the encompassing problem area where it was necessary to address the stereotypes and established gender roles nurtured in the domestic realm: psychology, pedagogy and educational sciences embarked on the challenging enterprise of understanding and eventually deconstructing the mechanisms through which the school environment differently forged preferences and

attitudes, roles and representational schemes according to gender (Wilkinson, Marrett, 1985; Measor, Sykes, 1992; Torne, 1993).

Researchers in Europe and the USA observed the prevalence of gender stereotypes in books for children. Numerous studies showed that females were typically portrayed as passive, dependent and generally incapable, while males were predictably portrayed as active, independent, and generally competent (Weitzman et al., 1972; Sadker, Sadker, 1980; Abraham, 1989; Crabb, Bielwaski, 1994; Gooden, Gooden, 2001). Stereotypical patterns were found to be consistent across a variety of reading materials, including picture-books, fiction for older readers and of course textbooks. Researchers have been investigating the potential effects of such stereotypes on students for years (Lloyd, Duveen, 1990; Peterson, Lach, 1990; Blumberg, 2009). Undoubtedly, increased awareness about the potentially detrimental effects of gender stereotypes has encouraged editors to exert greater control over textbooks intended for students. Nevertheless, such stereotypes are an integral part of an entire mass culture and the classical pillars on which it rests: it is a very challenging task to eradicate the impact of this full culture. On one hand, it is still necessary and deserving to discuss the effects of gender stereotypes conveyed by textbooks on the affective and cognitive development of children; on the other hand, it might be time for a new pathway involving well-reasoned critique among teachers and students about the stereotypes populating classical and contemporary mass culture.

In the very recent past, a widespread understanding of girls' accepted role was so commonplace that it drew little attention from the general population. Up until the mid-century, most girls across Western societies were seen as destined first and foremost to become wives and mothers, and their schooling thus centred on developing domestic economy, care-taking and arts. In the last five decades, girls have shed this quiet image of standing on the side-lines and emerged instead as first-class students and top performers in school subjects and examinations, recognized as reliable in school-related tasks such as homework, with neat writing, excellent bookwork, and good classroom behaved (Albisetti et al., 2010). They are "model pupils" whose achievements might well be expected to lead them to serious higher education careers and then whatever high-profile positions and professions they choose. Only to discover, as is especially common in the Italian context, that the labour market tends to betray these meritocratic expectations (Colombo, 2003; Furno, 2014; Salmieri, 2017). A partial explanation for this betrayal might lie in the fact that old stereotypes have evolved into new ones while the realization of both female and male expectations are still intensely conditioned by inequalities. For instance, in accordance with new gender stereotypes, teachers as well as parents view STEM subjects as suitable for top-performing girls provided that these girls go on to choose caregiving roles from within the STEM professions; on the flipside, they consider languages and teaching less suitable for boys even when these latter express an inclination for language- and education-related jobs.

Gender stereotypes are extremely important for individual development. Agents of schooling – teachers, school settings, and peers' interactions – transfer these gender-stereotyped expectations to students,

resulting in the perpetuation of gender stratification. Students tend to behave in the way culture defines appropriate for their gender (Berenbaum et al., 2008). Social learning theory has found that children's gender-appropriate behaviour is explicitly reinforced by important others such as parents and teachers, alongside indirect learning via observation and modelling (Mischel, 1966; Bandura, 1986). Cognitive-developmental theory posits children's cognition about their own gender as the basis for gender-typical preferences and differentiation, and stresses the importance of recognizing that a person's gender is stable over time and in spite of situations involving gender typing: a child knows about his/her gender before showing gender typical behaviour (Kohlberg, 1966). At any rate, both approaches have their foundations in the recognition that school settings, teachers' unintentional or explicit stances, the content of curricula and peers' tendency to gender differentiation between the sexes and isomorphism within them contributes a great deal to reproducing stereotypes and influencing the education of gender. Children then adjust their behaviour to align with the gender norms of their culture, gender norms that school environments and educational curricula as well as teaching patterns tend to reproduce in the classroom, serving as factors of influence. Children learn to recognize and organize incoming information into gender-based categories that can be framed as schemes. A gender schema comprises networks of ideas and information that filter children's perceptions even before they are aware of this process. The gender schematic processing implies automatically a whole alignment of objects, qualities, and behaviours into rigid and opposite categories of masculine and feminine. This happens irrespective of how different they might be in areas apparently irrelevant to gender (Bem, 1981; 1983).

Due to widespread changes in the roles and activities of men and women, people witness violations of these gender stereotypes every day. Nevertheless, the content of gender stereotypes has not changed much over the years (Prentice, Carranza, 2003) precisely because of reinforcing agents such as school and the family. Whereas all categorical stereotypes (presumably) contain descriptive information about category members, gender stereotypes have both descriptive and prescriptive components; as such, they tend to be reiterated over time. The descriptive component of gender stereotypes leads to disadvantages for women or men who are perceived as lacking the necessary attributes to succeed in fields dominated by the opposite gender; the prescriptive component, instead, leads to disadvantages for women or men who violate shared beliefs about how women or men should behave (Burgess, Borgida, 1999).

Traditional gender expectations especially affect the interests, passions, skills, and professional predispositions credited to girls and boys. It is precisely these expectations that produce a sharp effect on the choices and educational paths of girls and boys. Very often students' understandings of what teachers' beliefs are in a school subject - i.e. what teachers value in students and their idea of the prestige of that school subject - classroom fixed goals - i.e. approaches focused on performance - and expectations of which students will be successful in assigned tasks seem significantly impact girls' and boys' intentions of pursuing careers in STEM fields (Lazarides, Watt, 2015). Likewise, individual actions by

sympathetic teachers have been proven to help girls break down the filter in the STEM pipeline and foster equal participation (Clark Blickenstaff, 2005).

Gender differences continue to manifest not only in student motivations, but also in student performances (Meece et al., 2006; Wigfield et al., 2002). For instance, in most western countries, girls perform better than boys in reading but worse in mathematics. There has been a long-standing debate about whether the gender gap in maths achievement stems from biological differences in brain functioning or from culture and social conditioning (Baron-Cohen, 2003). Wide variations across countries support the latter view: cultures in which gender stereotypes are weaker show a smaller gender gap in maths performance (Guiso et al. 2008; Nosek et al. 2009). The crucial issue is that the factors behind these gender gaps include the organisation of school systems, students' and teachers' expectations, and macro-societal elements. This is a sign that educational systems, teaching practices and the value models used in education can be shaped in ways that effectively reduce gender gaps in learning (Marks, 2008).

While the differences in girls' and boys' interests or performance in early childhood and in the first years of schooling are slight, they become increasingly apparent at adolescence (Evans et al., 2002; Retelsdorf et al., 2015). The gender differences outlined here thus indicate that socialization increases gender disparity in education and restricts men and women from realizing their full potential. At the same time, however, socialization is not a fixed and rigid set of processes; it can be altered and shifted in the course of educational careers.

It is common that a double version is on, a chasm between the way teachers present themselves and the way they actually behave: they can loudly affirm to be progressive, but then in the closed classroom they may even implicitly transmit traditional visions of gender roles. Symbolization of the world and representations gender norms and identity that teachers convey in this way be predominantly detrimental to students as they alter the development of educational self-concept. The most dangerous among stereotype is when teachers become convinced that specific fields of study fits better to boys than girls or vice versa (Gunderson et al., 2012) and implicitly replicate these stereotypes via classroom instructions and evaluations (Philipp, 2007). Teachers' defective expectations can also lead to a self-fulfilling prophecy (Rosenthal, Jacobson, 1968) whereby previous gender biases are self-confirmed, as generally happens in social labelling processes at large: it can happen that flawed teachers mat set a lower than average threshold for males' achievements rather than for females' ones or vice-versa on the extent to what is considered too difficult for males or females or they unconsciously prefer to encourage one gender at the disadvantage of the other.

Finally, the education of gender speaks to the fact that school curricula and programs, teachers and/or out-of-school experts can play a significant role in providing and conveying content on "learning about gender" via gender-responsive pedagogy in childhood education. It is not only a matter of recognizing the entire gender spectrum and implementing anti-sexist approaches to the education of pupils: before venturing to teach

students about gender, it is critical for teachers to be fully aware of the preconceived notions most of their students may hold about, because the concept of gender and its implications are difficult to grasp and dismantle for students. A misleading ideological position that equates gender theories with attempts to impose and forge sexual behaviours, preferences and orientations has hampered or slowed the introduction of educational policies designed to give all pupils the information they would need to acknowledge and develop an awareness of gender roles and inequalities (Besozzi, 2003). The strong partisan ideologization of gender issues in the Italian public education is also confirmed by the so-called “question of gender”, raised in 2015 when a reform of education system was promulgated by the left-wing government. The article 5 of Law n.107 (“The Good School” reform) mentioned the duty of each school to «promote the realization of equal opportunity for girls and boys, by teaching the *education of gender parity* in every school grades, the prevention of gender violence and of all forms of discrimination, through sensibilization and information». A strong movement, inspired by some conservative and fundamentalist Catholic groups, claimed for removing this article, envisioning the danger the law would have generated by “dictating all children to learn sex at school” and “prescribing all children to betray their own gender and in order to become transgender”. Such a claiming discourse confirms that there are many taboos about sex and gender operating underneath the Italian culture (and not only because of the Catholic Church magisterium): talking to youth about gender issues rises among lay people a moral censure and disapproval however it takes place.

2. THE GENDER OF EDUCATION

As above mentioned, social scientists and educational researchers paid relatively little attention to gender issues in education until the Seventies, when questions emerged about the lack of equity in girls’ and women’s access to education across the world (Becker et al., 2010). In the context of development policies in emerging countries, surging female representation in primary, secondary and tertiary education has long been mentioned as a key factor in promoting national economy and citizenship rights, and therefore fittingly seen as vehicle for change and social improvement.

Despite differences in national and regional teacher education programmes in terms of content, duration and qualification levels, women make up the vast majority of teachers at the primary and secondary levels (OECD, 2019a). However, female teachers are much less present at the tertiary levels and hold many fewer senior decision-making positions in schools and teacher-education institutions (OECD, 2019b).

Teaching, like all other occupations, has been organized, changed and framed by gender. While the number and kinds of teaching jobs that are available have changed over time and the global expansion of formal

teaching positions has provided opportunities for many women, teaching jobs have been continually reorganized and redefined so that women remain in low-status positions relative to men. The women who teach has consistently been framed through images of traditional femininity, described and represented through maternal metaphors, and equated with social or, even worse, familial and care-taking work rather than intellectual labour. It is not by case that often university professors (a mostly male job) are not considered as a teaching job. but something more in terms of wages, autonomy, and status. It is itself a reflection of gendered conceptions of work. Given that university teaching is intertwined with research activities, it is in fact associated more with intellectual development than social development. And yet, one of the principal tasks of university professors is to teach students.

Teaching around the world has become a more feminized occupation over the last few decades (Albisetti, 1993; Cortina et al., 2006; Drudy, 2008). Nevertheless, women are most highly represented at the primary level. In most countries including Italy, women make up 80% or more of the teaching staff in public and private education (OECD, 2019a). At the secondary level, women are somewhat more evenly represented (Acker, 1989). There is also a gender differentiation by field which becomes pronounced at the secondary level of education, where men are more likely to teach business, science and technology while women are more often found in the languages, history and special education. In Italy, the gender division of teaching fields parallels the tripartition of the upper secondary system: male teachers are more likely to work in technical and vocational schools that tend to enrol more male students than female ones, while female teachers are more likely to work in *licei* where female students are more likely to study.

Our portrait of the gender of education would not be complete without considering the role of men and women in school leadership. At the primary and secondary levels, administrative jobs are overwhelmingly held by men (OECD, 2019b). Many of the findings regarding men's and women's positions as teachers or school leaders/supervisors reflect the same patterns of gender segregation and the devaluing of women's work seen in the larger labour market: cross-countries comparisons have shown that the higher the teaching job in relation to the average pay for other jobs, the higher the share of men among the teaching population. Gender segregation contributes to women's lower pay and degree of authority because occupations that are predominantly female tend to pay less than male-dominated ones. Furthermore, the devaluation of women and their work is a prime factor in reproducing the pay gap between the genders (Cohen, Huffman, 2003).

There is also an extensive body of literature on women as educational role models, suggesting they are more likely to emphasize relationships, collaboration and "caring" than trouble-making and change. And yet this discourse is far too essentialized and decontextualized. Changes and reforms in the organization of teaching may explain how female teachers likewise display contesting and conflictual attitudes. Teachers often fight for their autonomy to make one specific pedagogical and didactical choice rather than another, and they are eager to prevent centralized

hierarchical and bureaucratic intrusions from interfering in the content of their jobs (EIGE, 2017; OECD, 2019b; EPRS, 2020).

While men have historically received more education on average than women, women began to outperform men in tertiary education in the last decades of the twentieth century in a growing number of high- and middle-income countries (Schofer, Meyer, 2005). In American and European media and popular books, the reversal of the gender gap in education has given rise to accounts of the “decline of men” and concerns about the excessive size of the gender gap in higher education. However, as male dropout rates and the share of boys accounting for low-performing primary and secondary level students began to increase in many western countries and especially Italy, the feminization of teaching trend came under harsh scrutiny (Colombo, 2019). Calls have been made for more male teachers as role models in elementary schools and a variegation of manifestations of «recuperative masculinity politics» (Douglas, Lingard, 1999), thus overturning the debate on gender equality in compulsory education. On the shortage of male teachers in primary schools, it was pointed out that there is a clear difference between neoliberal education policies claims and the accurate findings of research-based literature, the latter stressing a complex reality in which the impacts of gender relations on male teachers’ lives and professional identity are nuanced, heterogeneous and not necessarily negative in outcomes. Evidence suggests that what is really happening is that male role model rhetoric is being exhumed and revamped as a basis for understanding the politics of “doing women’s work” and anxieties about the status of male pre-primary and primary school teachers’ masculinity that such politics provoke. Popular media outlets seldom convey such anxieties about the extinction of male teachers. The hidden model that resurfaces in cases of “men doing women’s work” is often based on homophobia, compulsory heterosexuality, and hegemonic masculinity. While refuting arguments about the supposed detrimental repercussions that the feminization of elementary schooling has on boys, it must nonetheless be stressed that the debate about male teachers has the potential to open up rather than foreclose opportunities for raising critical questions about the de-gendering and re-gendering of infant elementary school teaching (John Martino, 2008).

The discourses that have been used to frame debates about boys’ schooling are unhelpfully narrow in their conceptualization of the terms “achievement” and “education”, masculinist in style, and lacking in historical perspective. It is counterproductive to set up a binary opposition between the schooling of girls and that of boys according to which one group wins at the expense of the other. Rather, we argue that the key to understanding what is happening in schools lies in questions of equity and difference both *among* boys and girls and *between* them. In this regard, the “gender of education” refers to the urgent need to investigate the different versions of masculinity that are available to and adopted by boys in schools, examining how these models may produce problems for educators and or boys themselves, and how boys come to inhabit them.

Another key discourse that has achieved the status of general common sense is that of “boys will be boys”. This problematic idea manages, at one and the same time, to posit an unchanging and unchangeable “manliness”

characterized by aggression, fighting, competition, rebellious and anti-schooling behaviour as well as delayed maturity even while framing poor educational achievement as extrinsic to boys themselves. Too often, this set of assumptions implies using girls to police, teach, guide and control boys (Skelton, 2002; 2012). This should not surprise us, for it draws on well-established notions that women are responsible for controlling men across a range of activities, but especially in relation to sexuality. Not only will boys be boys, but it also seems they will be heterosexual and hyper-masculinized boys on whom, presumably, girls' civilizing influence will operate.

Most studies of gender and students' social relations have adhered to this "two worlds" model, describing and comparing the subcultures of girls and of boys separately. The separate worlds model essentially involves searching for sex-based differences between the groups and, as such, it is hampered by the same limitations as individual sex difference research. Differences tend to be exaggerated and similarities downplayed, with little theoretical attention paid to the integration of similarity and difference. The problem with this approach is that sex segregation is not static but a variable and complicated process. A full understanding of gender and educational relations should encompass cross-gender as well as intra-gender interactions.

At times it seems scholars grant too much emphasis to gender divides in educational performance and attainment: there is more overlap between the attainment of boys and girls in different subjects and at different levels than there is divergence and, while there are many substantive gender gaps in favour of boys or girls, comparisons are based on averages. The bigger the assessment scale used in the research, the more standardized is the test claiming to measure divides in competences. This tendency holds true, even though any population of students not performing well on school tests includes many individuals who are doing very well indeed in their practical daily use of competences. The analytical and comparative measurement of boys' and girls' scores on standardized tests do not seem to us the area most deserving of attention, unless these results indicate remarkably significant differences. At least for Italy, we would do well to instead reflect on two issues: *i*) the decrease in the share of male young students who enrol in tertiary education and in the share of male university students who succeed in obtaining a degree, as compared to the corresponding female populations; *ii*) the persistence of horizontal gender segregation in secondary and tertiary education, a tendency that continues to manifest under new guises: although scholars have pointed out the divide between humanistic and scientific fields, recent trends show that the degree of gender imbalance is becoming variable within scientific fields as well as within humanistic fields, while there are increasing and equally significant gender gaps to be seen along the care-technical divide. This finding suggests that cultural pressures, gendered expectations and traditional sex-role stereotypes underlying gender segregation are proving resilient despite women's generally increasing participation in tertiary education.

3. EMBEDDING THE GENDER-EDUCATION NEXUS IN THE ITALIAN CONTEXT

With one of the largest gaps between high and surging female rates of educational achievement and the lowest female employment rates among industrialized countries, Italy is undoubtedly a national context for which it would be worthwhile to keep research and discussion focused on the articulation between gender and education. The feminization of Italian higher and tertiary education and women's overtaking men in enrolment and educational achievements do not seem to be curbing gender inequalities in the Italian labour market, but they do signal the rise of an opposite cultural pattern in young men's investment in education.

There is no simple relationship between education and gender equality. As with social class relations, education both reinforces evaluation of student's background and create new possibilities for liberation, and this contradiction appears at every level and in every aspect of the Italian educational system (Biemmi, 2015). Schools and universities are sites of intensive gender socialization, but they also offer girls and boys the opportunity to exploit their gifted talents and develop their skills. Education, therefore, is not limited to reproducing gender inequalities; sometimes it spurs students to think beyond the ideological limits set for them by society. In the past as well, the Italian feminist movement made visible both the entrenched gender discrimination of schools and young women's rebellion against such challenges and barriers (Gianini Belotti, 1973). Research and analyses on the nexus between education and gender in Italy have been expanding the range of topics and issues under investigation since the vibrant peak of the last feminist wave in the Seventies: fifty years of changes and shifts in the Italian educational scape have accompanied reflections on gender inequalities and segregation, male and female achievements, men's and women's educational choices, their preferences for subjects and the reversing gap in secondary and tertiary education enrolment and attainment. Nevertheless, for many reasons this whole body of reflections and achievements suffers from alternate fortune in visibility and invisibility, hangs on cultural revivals and cultural removals, receives appreciations and dismissals both from the female and the male audience.

Now it is time to reinvigorate the framework and provide new evidences by investigating – through updated gender perspectives – challenges and opportunities such as digital educational tools, counselling schemes to guide educational choices, innovative teaching and learning methodologies, teacher training on gender issues, policies and programmes to combat male dropout, and new sociological approaches to critically interpreting the data from large-scale assessments.

Moving from this purpose, a double session of paper presentations on the gender-education nexus was held by AIS (the Italian Sociological Association), within the 12th national congress *Sociology in Dialogue* (Naples, 23-25 January 2020). The session dealt with *Gender and learnings: new cognitive, didactic and educational challenges* and hosted two paralleled debates on *Teaching and Learning* and *Outlooks for the future*.

This volume stemmed from the initiative: many of the essays collected here were selected during the AIS meeting, with the attempt to bridge the gap between the sociology of education and gender studies.

The chapters focus on several topics, such as cognitive development and the impact of gender stereotypes; playing, games and learning experiences during socialization; gender inequalities in education and training; peer groups, digital devices and lines of gender differentiation; coding, robotics, STEM and web-based skills; gender and teaching at schools and universities; graduate women's effective opportunities to secure high-profile jobs; and the overwhelming presence of female teachers primary and secondary schools as well as the contributions made by the few male teachers. This list is by no means exhaustive; many of the foremost features of the relationship between gender and education remain to be addressed. The volume is only a seminal starting point, however, and we leave to readers the task of judging whether and how the contents of the chapters interact with each other, enriching the overall landscape of the Italian state of the art in this field.

REFERENCES

- Abraham, J. (1989), «Teacher ideology and sex roles in curriculum texts», *British Journal of Sociology of Education*, 10, 1, 33-51 [link](#)
- Acker, S. (1989), *Teachers, gender, and careers*, Psychology Press.
- Albisetti, J. C. (1993), «The Feminization of Teaching in the Nineteenth Century: A Comparative Perspective», *History of Education*, 22, 3, 253-63 [link](#)
- Albisetti, J. C., Goodman, J., Rogers, R. (2010), *Girls' Secondary Education in the Western World. From the 18th to the 20th Century*, London, Palgrave&MacMillan
- Bandura, A. (1986), *Social foundations of thought and action: A social cognitive theory*, Englewood Cliffs, New Jersey, Prentice-Hall, Inc.
- Baron-Cohen, S. (2003), *The Essential Difference: Men, Women, and the Extreme Male Brain*, London, Allen Lane
- Baumrind, D. (1980), «New directions in socialization research», *American psychologist*, 35, 7, 639-52
- Becker, G. S., Hubbard, W. H., Murphy, K. M. (2010), «Explaining the worldwide boom in higher education of women», *Journal of Human Capital*, 4, 3, 203-41 [link](#)
- Bem, S. L. (1983), «Gender Schema theory and its implications for child development: Raising gender-aschematic children in a gender-schematic society», *Signs*, 8, 598-616 [link](#)
- Bem, S. L. (1981), «Gender schema theory: A cognitive account of sex typing», *Psychological Review*, 88, 354-64 [link](#)
- Berenbaum, S. A., Martin, C. L., Ruble, D. N. (2008), «Gender development», in W. Damon, R. Lerner (Eds.), *Advanced child and adolescent development*, New York, NY, Wiley, pp. 647-96

- Besozzi, E. (2003), *Il genere come risorsa comunicativa. Maschile e femminile nei processi di crescita*, Milan, Franco Angeli.
- Biemmi, I. (2015), «Gender in schools and culture: taking stock of education in Italy», *Gender and Education*, 27, 7, 812-27 [link](#)
- Blossfeld, H. P., Skopek, J., Triventi, M., Buchholz, S. (2015), *Gender, education and employment: an international comparison of school-to-work transitions*, Cheltenham, Northampton Edward Elgar Publishing
- Blumberg, R. L. (2009), «The Invisible Obstacle to Educational Equality: Gender Bias in Textbooks», *Prospects: quarterly review of comparative education*, 38, 3, 345-61 [link](#)
- Burgess, D., Borgida, E. (1999), «Who women are, who women should be: Descriptive and prescriptive gender stereotyping in sex discrimination», *Psychology, Public Policy, and Law*, 5, 665-92
- Chodorow, N. J. (1978), *The reproduction of mothering: Psychoanalysis and the sociology of gender*, Berkely, University of California Press
- Clark Blickenstaff, J. (2005), «Women and science careers: leaky pipeline or gender filter?», *Gender and education*, 17, 4, 369-86 [link](#)
- Cohen, P. N., Huffman, M. L. (2003), «Individuals, jobs, and labor markets: The devaluation of women's work», *American Sociological Review*, 68, 3, 443-63 [link](#)
- Colombo, M. (2019), «Policy Against Drop-out in Italy», *Central European Journal of Educational Research*, 1, 1, 1-9 [link](#)
- Colombo, M. (2003), «Differenze di genere nella formazione», *Studi di sociologia*, 40, 1, 81-108 [link](#)
- Cortina, R., San Román, S., San Román, S. (2006), *Women and teaching: Global perspectives on the feminization of a profession*, Switzerland, Springer
- Crabb, P. B., Bielwaski, D. (1994), «The social representation of material culture and gender in children's books», *Sex Roles*, 30, 69-79 [link](#)
- Douglas, P., Lingard, R. L. (1999), *Men engaging feminisms: Pro-feminism, backlashes and schooling*, Philadelphia, Open University Press.
- Drudy, S. (2008), «Gender balance/gender bias: The teaching profession and the impact of feminisation», *Gender and education*, 20, 4, 309-23 [link](#)
- EIGE, (2017), *Gender segregation in education, training and the labour market*, European Institute for Gender Equality, Vilnius [link](#)
- EPRS, (2020), *Teaching careers in the EU. Why boys do not want to be teachers*, European Parliamentary Research Service [link](#)
- Eurofound, (2018), *Women in management: Underrepresented and overstretched?*, Luxembourg, Publications Office of the European Union [link](#)
- Eurofound, (2020), *Gender equality at work*, European Working Conditions Survey 2015 series, Publications Office of the European Union, Luxembourg [link](#)
- Evans, E. M., Schweingruber, H., Stevenson, H. W. (2002), «Gender differences in interest and knowledge acquisition: The United States, Taiwan and Japan», *Sex Roles*, 47, 153-67 [link](#)
- Ferree, M.M. (1990), «Beyond Separate Spheres: Feminism and Family Research», *Journal of Marriage and the Family*, 52, 866-84
- Furno, M. (2014), «Returns to education and gender gap», *International Review of Applied Economics*, 28, 5, 628-49 [link](#)

- Gianini Belotti, E. (1973), *Little girls: Social conditioning and its effects on the stereotyped role of women during infancy*, London, Writers and Readers Publishing Cooperative
- Gooden, A. M., Gooden, M. A. (2001), «Gender representation in notable children's picture books: 1995–1999», *Sex roles*, 45, 1-2, 89-101 [link](#)
- Guiso, L., Monte, F., Sapienza, P., Zingales, L. (2008), «Culture, Gender, and Math», *Science*, 320, 1164–5 [link](#)
- Gunderson, E. A., Ramirez, G., Levine, S. C., Beilock, S. L. (2012), «The role of parents and teachers in the development of gender-related math attitudes», *Sex roles*, 66, 3-4, 153-66 [link](#)
- Hartmann, H. I. (1981), «The family as the locus of gender, class, and political struggle: The example of housework», *Signs*, 6, 3, 366-94 [link](#)
- ILO, (2019), *World Employment Social Outlook: Trends 2019*, Geneva, International Labour Office [link](#)
- John Martino, W. (2008), «Male teachers as role models: Addressing issues of masculinity, pedagogy and the re-masculinization of schooling», *Curriculum inquiry*, 38, 2, 189-223 [link](#)
- Kohlberg, L. (1966), «A cognitive-developmental analysis of children's sex-role concepts and attitudes», in E. E. Maccoby (Ed.), *The development of sex differences*, Stanford, CA, Stanford University Press, pp. 82-173
- Lazarides, R., Watt, H. M. (2015), «Girls' and boys' perceived mathematics teacher beliefs, classroom learning environments and mathematical career intentions», *Contemporary educational psychology*, 41, 51-61 [link](#)
- Lloyd, B., Duveen, G. (1990), «A semiotic analysis of the development of social representations of gender», in G. Duveen, B. Lloyd (Eds.), *Social representations and the development of knowledge*, Cambridge, Cambridge University Press, pp. 27-46
- Marks, G. N. (2008), «Accounting for the gender gaps in student performance in reading and mathematics: evidence from 31 countries», *Oxford Review of Education*, 34, 1, 89-109 [link](#)
- Mearor, L., Sykes, P. (1992). *Gender and schools*, New York, Cassell.
- Meece, J. L., Glienke, B. B., Burg, S. (2006), «Gender and motivation», *Journal of School Psychology*, 44, 351-73 [link](#)
- Mischel, W. A. (1966), «A Social learning view of sex differences in behaviour», in E. E. Maccoby (Ed.), *The Development of Sex Differences*, Stanford, CA, Stanford University Press, pp. 56-81.
- Mitchell, J. (1968), *Psychoanalysis and feminism*, Harmondsworth: Penguin Books.
- Nicholson, L. (1994), «Interpreting Gender», *Signs*, 20, 1, 79-105 [link](#)
- Nosek, B.A., Smyth, F. L., Sriram, N., M. Lindner, N., Devos, T., Ayala, A., Bar-Anan, Y., Bergh, R., Cai, H., Gonsalkorale, K. (2009), «National Differences in Gender–Science Stereotypes Predict National Sex Differences in Science and Math Achievement», *Proceedings of the National Academy of Sciences*, 106, 10593-7 [link](#)
- OECD, (2019a), *TALIS 2018 Results (Volume I): Teachers and School Leaders as Lifelong Learners*, Paris, TALIS, OECD Publishing [link](#)
- OECD, (2019b), *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, Paris, TALIS, OECD Publishing [link](#)

- Paxton, P. M., Hughes, M. M., Barnes, T. (2020), *Women, politics, and power: A global perspective*, Lanham, Maryland, Rowman & Littlefield Publishers
- Pekkarinen, T. (2012), «Gender differences in education», *Nordic Economic Policy Review*, 1, 1, 165-94 [link](#)
- Peterson, S. B., Lach, M. A. (1990), «Gender stereotypes in children's books: Their prevalence and influence on cognitive and affective development», *Gender and education*, 2, 2, 185-97 [link](#)
- Philipp, R. A. (2007), «Mathematics teachers' beliefs and affect», in Lester, F. K. (Ed.), *Second handbook of research on mathematics teaching and learning*, Charlotte, NC, IAP, pp. 257-315 [link](#)
- Prentice, D. A., Carranza, E. (2003), «Sustaining cultural beliefs in the face of their violation: The case of gender stereotypes», in M. Schaller, C. S. Crandall (Eds.), *The Psychological Foundations of Culture*, Mahwah, NJ, Erlbaum, pp. 259-80
- Retelsdorf, J., Schwartz, K., Asbrock, F. (2015), «“Michael can't read!” Teachers' gender stereotypes and boys' reading self-concept», *Journal of Educational Psychology*, 107, 186-94 [link](#)
- Roopnarine, J. (1986), «Mothers' and fathers' behaviours toward the play of their infant sons and daughters», *Sex Roles*, 14, 59-68 [link](#)
- Rosenthal, R., Jacobson, L. (1968), «Pygmalion in the classroom», *The Urban Review*, 3, 16-20 [link](#)
- Salmieri, L. (2017), «Education and the utopia of gender equality: treacheries in the labour market», *Journal of Gender and Power*, 7, 1, 9-26 [link](#)
- Sadker, M., Sadker, D. (1980), «Sexism in teacher education texts», *Harvard Educational Review*, 50, 36-46
- Schofer, E., Meyer, J. W. (2005), «The worldwide expansion of higher education in the twentieth century», *American sociological review*, 70, 6, 898-920 [link](#)
- Scott, J. (1986), «Gender: A Useful Category of Historical Analysis», *The American Historical Review*, 91, 5, 1053-75 [link](#)
- Skelton, C. (2012), «Men teachers and the “feminised” primary school: a review of the literature», *Educational Review*, 64, 1, 1-19 [link](#)
- Skelton, C. (2002), «The “feminisation of schooling” or “re-masculinising” primary education?», *International Studies in Sociology of Education*, 12, 1, 77-96 [link](#)
- Thompson, S. K. (1975), «Gender labels and early sex role development», *Child Development*, 46, 339-47
- Torne, B. (1993), *Gender play: Boys and girls in school*, New Brunswick, NJ, Rutgers University Press
- UNDP, (2019), *Gender Equality as an Accelerator for Achieving the Sustainable Development Goals*, New York, UNDP – United Nations Development Programme [link](#)
- UNESCO, (2016), *Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning* [link](#)
- WBG, (2019), *The Little Data Book on Gender*, Washington DC, WBG – The World Bank [link](#)
- WEF, (2020), *The Global Gender Gap Report, 2020*, Cologny-Geneva, World Economic Forum [link](#)

- Weitzman, L. J., Eifler, D., Hokada, E., Ross, C. (1972), «Sex-role socialization in picture books for preschool children», *American Journal of Sociology*, 77, 1125-50 [link](#)
- WHO, (2013), *Global and Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*, Geneva, WHO – World Health Organization [link](#)
- Wigfield, A., Battle, A., Keller, L. B., Eccles, J. S. (2002), «Sex differences in motivation, selfconcept, career aspiration, and career choice: Implications for cognitive development», in A. McGillicuddy-DeLisi (Ed.), *The development of sex differences in cognition*, Westport, CT, Ablex, pp. 93-124
- Wilkinson, L., Marrett, C. (1985), *Gender influences in classroom interaction*, Orlando, FL, Academic Press

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