



Gender relations, teaching and Mathematics

Relações de gênero, docência e Matemática

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Abstract

Mathematics is an area marked by rigidity in Mathematics Education, as a field of knowledge. In the midst of a patriarchal and sexist society, naturalizations such as supposed male superiority result in the framing of roles traditionally linked to the feminine and masculine and in the invisibility of dissident bodies of cis-hetero-normativity, in the face of knowledge and mathematical competence. Using concepts such as discourse, recognition, framing, among others, we intend to think about which bodies weigh heavily in the mathematical educational field, in what ways they are recognized and the power relations that contribute to these movements continuing to prosper. To this end, we present some scenes highlighted in the transcription of the dialogues established in a focus group, originating from the excerpt of a research that sought to understand how gender relations occur in the training of mathematics teachers. The scenes presented here equip us to recognize that cis-male bodies weigh more in this space.

Keywords: Gender; Mathematics Education; Teacher Education; Higher Education.

Resumo

A Matemática é uma área marcada pela rigidez na Educação Matemática, enquanto campo do conhecimento. No bojo de uma sociedade patriarcal e machista, naturalizações como a de uma suposta superioridade masculina, resultam no enquadramento dos papéis tradicionalmente ligados ao feminino e ao masculino e na invisibilidade de corpos dissidentes da cis-hétero-normatividade, frente ao conhecimento e a competência matemática. A partir de conceitos como discurso, reconhecimento, enquadramento, dentre outros, pretendemos pensar quais corpos pesam no campo educativo matemático, de que maneiras eles são reconhecidos e as relações de poder que contribuem para que esses movimentos continuem a prosperar. Para isso, apresentamos algumas cenas destacadas na transcrição dos diálogos estabelecidos em um grupo focal, oriundas do recorte de uma pesquisa que buscou compreender como se dão as relações de gênero na formação de professoras de matemática. As cenas aqui apresentadas, nos instrumentalizam ao reconhecimento de que os corpos-cis-homens pesam mais nesse espaço.

Palavras-chave: Gênero; Educação Matemática; Formação Docente; Ensino Superior.

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Case report

Ana³ is a student in her last semester of mathematics at a public university. She once attended a workshop on pure and applied mathematics. During the event, one of the lecturers was unable to attend, and a teacher, Teresa, was invited to participate in the activity. This was an opportunity for Teresa to discuss the representation of women in mathematics, a discussion that was not part of the Pure and Applied Mathematics program. "When she came to speak, you have to see the discussion that took place. (...) She just said that women in mathematics are not very well appreciated; there is little recognition for them; we hardly see them, and that already caused a lot of confusion," comments Ana.

The event covered topics related to pure and applied mathematics. Most of the teachers in this area at the educational institution were men, as were the speakers, with only one woman scheduled to speak. This situation did not intimidate Teresa. At the end of her presentation, another student questioned the lack of female speakers. The organizers of the event claimed that female professors had been invited, but that they had declined the invitations. This provoked further protests and murmurs from some faculty members, who were unaware of the invitation.

Faced with a comment from a teacher at the workshop who said he didn't know how to deal with a female student in the classroom because it was difficult, Maria responded: "If you don't know how to treat a female student in the classroom, treat her the same way you treat your students. But the teacher is not convinced. For him, male and female students should be treated differently because they are different subjects. "Relationships with male students allow for more freedom, with more conversations and jokes, which is not possible with a female student who may end up interpreting a certain situation differently," he explains.

The teacher also says that he has experienced situations where female students have teased him to get good grades in exams or academic work or to pass certain subjects. The teacher, Teresa, enters the scene again, claiming to have experienced such situations, since they don't only happen in student-teacher relationships but are also common in student-teacher contact. The discussion turned to gender relations in a mathematics department, where female professors in the area of mathematics education presented situations of contempt and sexism for professors in other areas. It is in this discursive universe that our research is positioned.

Objects and assumptions of our reflection

The narratives presented in the above section are part of a study conducted with five students in the mathematics program at a public university. Through the transcription of the audio recordings of the dialogues established in a focus group, we discussed gender relations in the process of training mathematics teachers. Based on the aforementioned scenes, we

³ The subjects mentioned in this article have their identities protected by pseudonyms.

present gender relations and oppressions in the field of education and mathematics training, their effects, and possible actions to confront these scenarios, reflecting on which bodies are weighted and recognized in these spaces (Butler, 2018). Frameworks determine the spaces in which subjects and mathematics have been, and continue to be, subject to knowledge and mathematical knowledge in different ways. These frames produce uneven recognition for bodies-men, bodies-women, and bodies that escape cis-hetero-normativity in the field of mathematics education.

We dare to analyze and articulate the situations presented, based on the scenes, as reflections of a time when female teachers were seen "as spinsters or 'aunts,' as gentle normalists, skilled literacy teachers, models of virtue, educational workers" (Louro, 1997, p. 100). In addition to the naturalized status of mathematics as a masculine field, the teacher carries a double weight. The frameworks attributed to them, as also proposed by Souza and Fonseca (2010, p. 13), have repercussions on the production and reproduction of discursive practices that position women as irrational and, on the other hand, as "women" (Souza & Fonseca, 2010, p. 13),

[...] This production positions men as "beings of reason" and therefore "naturally good at mathematics.". As a result of their "capacity for reasoning," men are considered "naturally capable of the business world and of managing their own lives" and often "the lives of women". Thus, history goes on forever repeating itself; in this history, it has been produced as proper to men, as if it were in men's very nature to "be good at mathematics".

In the field of mathematical education, norms have always operated to guarantee the recognition of the male subject as the holder of rationalized knowledge. Faced with this situation, other institutions, which could not do more than "educate" the children, were left to the male teachers. These were considered "wise teachers, models of citizenship" (Louro, 1997, p. 100), endowed with knowledge, techniques, and practices. Even with the subversion of these roles, which have been constructed and imposed on female teachers throughout history, situations like this are still common. According to Louro (1997), these representations of teachers continue to affect teachers and society today. As a result, they determine which bodies are recognized in the field and which are not (Butler, 2018).

Based on women's struggles for representation and occupation of spaces and positions that were not allowed to them - or allowed according to male rules - and continuous resistance against a patriarchal, chauvinistic, and sexist society, the representations of women teachers have been transformed. In the teaching profession, they have gradually acquired their rights. In the field of mathematics, female teachers have to deal with oppressive and intimidating naturalization, such as the notion that care is a woman's responsibility, gendered pedagogical practices, and the constant reaffirmation of discourses that produce inequalities, such as that of supposed male superiority (Souza & Fonseca, 2010).

When we think about teaching, we are accustomed, culturally and habitually, to conceiving of it as an environment characterized by attributes traditionally associated with women. It is enough to briefly analyze the characteristics of the student body in pedagogy

courses or the characteristics of the people who work in early childhood education in kindergartens and primary schools. Women predominate in these social contexts since "school activity is characterized by care, supervision and education, traditionally feminine tasks" (Louro, 1997, p. 88). However, women's entry into the field was not due to the "generosity" or "compassion" of the men who dominated and continue to dominate. Women's entry into teaching was a power play: it was allowed by men, and for a long time, it was - and still is - regulated and transformed according to their laws and beliefs (Foucault, 1982).

Drawing on Foucault (1982), Nascimento et al. (2018) show how, in Brazil, the fields of education and health have worked together to establish a process of domination and subordination of women's bodies and other bodies that differ from cis-hetero-normativity to a certain logic of power. Although health often changes over time, it develops through the maintenance of biopower. This is understood by Foucault (1982) as state control that seeks to provide education about what is or is not desirable for a given social group. By pursuing a given idea of normality, medicine serves capitalist progress. New standards of behavior are imposed, and this includes how bodies that fall outside the norm are viewed in our society.

With this in mind, we join Louro (1997) in asking: What is the gender of teaching? According to the author, "what is undoubtedly evident is that the school is crossed by genders" (ibid., p. 89) - we dare say that this is also a reality perceived in the university environment. A hierarchy persists in relation to teaching and gender. For example, if we take the levels of basic education, especially in early childhood education and the early years, we find more female bodies and/or LGBTQIA+ bodies occupying teaching positions. As the level increases, the teaching staff of educational institutions becomes more gender-diverse, until we reach higher education, where the number of male teachers exceeds the number of female teachers. According to the Statistical Synopsis of Higher Education, in 2022, of the 316,792 teachers in post, 167,082 were male and 149,710 were female (Inep, 2023).

To say that teaching is "a woman's job" is no longer a valid argument when trying to talk about or describe the field, since teaching refers to all levels of education. When analyzed from different angles, we come to the conclusion that teaching is feminine and masculine - gender binarism is used here because subjects that deviate from these heteronormative standards are not considered, do not weigh in discourses or educational legislation⁴. It is feminine and masculine to the extent that men use power to represent and women are only represented (Louro, 1997).

Men were the ones who "spoke" about women teachers, who built and disseminated their representation with more force and legitimacy: religious men, legislators, fathers, and doctors. They were many more objects than subjects of these representations. For them, about them, in their name, poems were written, pictures were painted, speeches and prayers were made, caricatures and symbols were created, dates and tributes were paid, and songs were sung (Louro, 1997, p. 103).

⁴ It's important to point out that there are already literatures and research groups in Mathematics Education that question these hegemonic discourses and break with gender binarity. One example is "MatematiQuer", the Research and Extension Group on Gender and Sexuality Studies in Mathematics Education at the Federal University of Rio Grande de Janeiro.

It is worth reflecting on how women entered the field. Because it involves power games (Foucault, 1982), women were not simply fraternally welcomed into the teaching profession. Surrounded by controversy, this entry took place through processes of re-signification of these activities; "in other words, teaching is represented in a new way to the extent that it becomes feminized and so that it can actually become feminized" (Louro, 1997, p. 95). Thus, even with the presence of women, there were still different roles assigned to the sexes: women educated girls and men educated boys. This fact brings us back to the teacher's account of the event described by Ana, who said that he didn't know how to "treat" a female student in the classroom, and as a result, the relationship with the students was easier. This was the perception at the time when women entered the teaching profession: different knowledge implied the need for curricula and programs that distinguished the knowledge and skills appropriate for women and men.

Considering the contribution of women in teaching to the maintenance of a society according to hegemonic norms - we can see the low capacity for action of women and their subordination to men - they began to gain space and, relatively speaking, a voice in the field. Again, this inclusion did not occur because of male generosity but because of strategies and games of power and dominance (Foucault, 1982). It was people like her who were able to reflect everything they experienced—subordination and control—in the classroom, with girls and, after a while, with boys.

Since these are strategies of power, other factors are involved in this process (Foucault, 1982). Opportunities such as these were offered to women as a result of an understanding of teaching as an extension of the home, the family, and thus of the moral family values of the time, which persist. Other activities that did not conform to these goals were considered deviations from women's roles (Louro, 1997) and were not offered to women. We can see this as what Freire (1987) once called false generosity: "the denunciation we make of the oppressive situation, a situation in which the oppressors 'satisfy' themselves" (Freire, 1987, p. 13), a relationship of oppression disguised as solidarity and understanding.

The activities of the teaching profession were transformed, and teacher training colleges were increasingly filled with women (Louro, 1997), a movement that can still be seen today. Along the way, they were recognized as "aunts," women who could not have a family and who were deprived of their sexuality at various levels, from their clothing to their intimate lives. As a result of this whole process, "conflicting and contradictory practices and representations coexist today and always, causing divisions and impasses" (ibid., p. 108). The accounts of the discussion at the mathematics course event illustrate these divisions and impasses very well.

After all, what is the gender of teaching? Gender relations in the field of Mathematics Education

*[...] First philosophy: you have to kill ATICA
You know that TICA is a girl in Spanish*

*And that A is a negation particle
So, from this term, we can say:
To learn mathematics is to free oneself from
everything that denies childhood in us.
(Pellegrino, 1982 apud Fernandes, 2018, p. 149).*

We open this section with a fragment of the poem by Pellegrino apud Fernandes (2018), who takes up the feminine in mathematics to think about educability and curriculum. In his poetics, the poet plays with words in Spanish in a disturbing way, and by decomposing the word MATEMATICA, he brings us a powerful reflection: "it is necessary to kill ATICA"; it is necessary to kill the female negation in/of mathematics. The poem ends with "childhood" as the beginning of something, the first steps. To learn mathematics, therefore, "ATICA" must also be killed, so that mathematics, in its femininity, can prevail, recovering its origin in us and freeing us from impositions, here mainly in the context of gender relations - towards an epistemological rescue (or emergence) of the relations between bodies and mathematics. A movement that denounces or criticizes the macho, sexist, and patriarchal culture imposed on our culture and on our society is also present in the field of mathematics education.

There is complexity in the process of learning mathematics because it is necessary to free oneself from everything that has been imposed on us: a single truth, an incontestable logic, rational and superior knowledge, rigid knowledge. The queen of the exact sciences is deposed in a "reign" ruled by men. To guarantee this status for mathematics, these roots are endowed with powerful ramifications that operate strategically in articulations with other fields of knowledge/power. The classroom is one of the spaces in which we encounter the remnants of masculine mathematics. In the classroom, pedagogical practices are produced and/or endorsed that ultimately contribute to the maintenance and/or reinforcement of this social position.

It is this status, which is conferred and maintained, that allows mathematics to be associated with masculinity and, consequently, to be distanced from femininity. As a result, we find that in addition to producing and/or maintaining 'truths' about mathematics, the mathematics classroom also produces and/or maintains certain 'ideas' about gendered issues. According to Fernandes (2018, p. 142),

[...] it is not difficult to consider that a science that has so marked modern thought has affinities with the sign of the masculine. It appears that the relationships between mathematics and the masculine are intertwined in their modes of constitution and expression: while the masculine was attributed the ability to think, mathematics was clothed in the most legitimate thinking; while the masculine was shamed for emotion and the expression of the senses, mathematics was confused with a rationality distant from the senses of the world; if the masculine was attributed order, certainty, and control, the same was conferred on mathematics. Masculinity and mathematics then went hand in hand, establishing themselves at the center of the history of thought.

Since mathematics and masculinity have walked - and walked - side by side throughout history, both, when threatened with the loss of the status and power they have

been granted, impose themselves in "continuous exercise and surveillance" (Souza & Fonseca, 2010, p. 60). This exercise and vigilance become real obstacles when the goal is to "de-masculinize" mathematics, in other words, to subversively (re)think the space and relationships between bodies and mathematical knowledge to help problematize, destabilize, and even eradicate the "truths" and "realities" that produce different meanings for the field and the bodies that inhabit it.

This vigilance, as Souza and Fonseca (2010) point out, contributes to the maintenance and repercussions of certain statements about women, men, and mathematics, such as those related to supposed male superiority and female fragility, which associate rationality with the masculine and distance it from the feminine.

These statements that circulate in our culture, in the ways we organize ourselves and live our lives, as women and men, in social arrangements - which are more advantageous for men than for women - are constantly reactivated in discourses from various fields, being presented as if they were part of feminine nature and masculine nature (Souza & Fonseca, 2010, p. 65).

Naturalization of gestures, attitudes, and arguments regarding the body and mathematics then emerge: different reactions to women's and men's errors in situations involving mathematical thinking; irony and sarcasm regarding women's mathematical competence; synonymy between rationality and masculinity; men considered better at mental calculation than women, etc. As a result, there is a silencing and obstruction of women's recognition, as witnessed in attitudes and speeches mostly uttered by male mathematicians. Although the word mathematics is considered feminine in linguistic terms, it is denied to the women who appropriate it.

In this sense, we believe that there is a need to focus on and discuss issues, behaviors, gestures, and speeches in the context of gender relations in the educational-mathematical field. Thus, we reflect on how, in the classroom, it is up to us, the people who teach mathematics, to detach ourselves from what is taken for granted in our pedagogical practices and in our relationships with the bodies that inhabit them—the hegemonic discourses and mathematics. As suggested by Souza and Fonseca (2010, p. 30),

it will be necessary to be suspicious of all essences, homogeneity and universalities: "the woman," "the man", "the dominated woman", "the dominating man", "Mathematics", among many other notions taken as natural and fixed" because the naturalization of our conceptions ends up producing and legitimizing situations of inequality between men and women.

Considering these arguments, we suggest that it is necessary to aim for more democratic, fair and inclusive educational spaces. These environments are not created without first carrying out a movement of deconstruction and detachment from the ways in which they have been framed (Butler, 2018), in the different bodies in relation to mathematics. School institutions, teachers, and the school community itself must (re)think more democratic pedagogical practices, in a move that goes against the "essentialization of women (and men) and the 'universalization' of a certain mathematics" (Souza & Fonseca,

2010, p. 31). Another useful measure to reduce this asymmetry between roles is to work on the cis-hetero-normative patterns that produce differences and inequalities, with a view to a more critical and problematizing mathematics education.

Research methodology: the importance of talking about gender relations in math teaching

Our research methodology considers the importance of scientific investigation as an opportunity to promote human emancipation. Our research questions are essential for problematizing reality, and we are responsible for questioning and modifying them. As Freitas (2003, p. 11) puts it, "Educational research is at the service of whom and what? Does our research provide subsidies for new, more emancipatory, and democratic educational policies?" Thus, prompted by an understanding of the dichotomies surrounding women's mathematics education, we sought to relate the historical domination of men over women, aware that "we need the power of modern critical theories about how meanings and bodies are constructed not to deny meanings and bodies, but to live in meanings and bodies that have the possibility of a future" (Haraway, 1995, p. 16).

Using the focus group technique, we sought to identify and understand what students in the mathematics program think about the treatment of gender issues in education in relation to their initial educational process. We are also interested in what discourses and how the pedagogical practices of teachers in teacher education programs support and produce/reproduce 'truths' in the area of gender. According to Powell and Single (1996 apud Gatti, 2005, p. 7), this procedural approach consists of "a group of people selected and brought together by researchers to discuss and comment on a topic that is the objective of the research, based on their personal experience."

The focus group was conducted with five students: two men and three women, who were in their final semester of a mathematics degree at a public federal institution. They were chosen because they had already experienced the teaching practice subjects and the first subjects related to the teaching internship in primary education. We felt that these subjects could provide complete evidence of discussions on gender issues in the teacher education process, as well as share with us their experiences in this area of discourse. We used a semi-structured script for the focus group, which helped us to maintain the original proposal for the discussion.

The focus group meeting was audio recorded so that we could later organize and categorize the main ideas and discussions raised by the students. We met on December 13, 2019, in the room where the mathematics education laboratory of the course is located. The room is located on the second floor of the main building on one of the university's campuses. When we arrived, three students were already waiting for us - a colleague helped us with the notes.

In dialogue, the researcher and the researcher meet in interaction. The researcher tried

to meet the other (subject), listen to him, understand him, translate him, influence him or be influenced by him (Amorim, 2001), bearing in mind the commitments he had made as such. This construction began through a dialog between these subjects and influences, whether from the researcher or the researched. However, the act of putting oneself in the other's shoes did not only take place during the intervention but also during contact with the participants. The researcher must also empathize when writing the text, when interpreting and analyzing the data obtained - here even more responsibly, since the researched "becomes absent from the writing scene" (Amorim, 2001, p. 50).

On the diversity of subjects in the classroom: who are we talking about in teacher training?

We began by proposing a reflection on how the course positions itself in the face of debates about gender in teacher education, with the question: "How are you, as quasi-teachers of mathematics, prepared to face these issues?" The students denounced the (almost) total absence of discussion and debate on the subject in their initial training. Esther gave us a wry smile, followed by Ana's statement: "I don't think this topic will be discussed in the course anytime soon" (Ana, Focus Group Report, 2020). In addition, the student commented on missed opportunities by teachers to problematize and bring the debate into courses, mini-courses, or workshops promoted by the course. Returning briefly to Ana's comment that opens this article, she recounts the case in which Professor Teresa was included in the team of lecturers to compensate for the absence of a male lecturer.

After Ana discussed the case, there were a few seconds of silence. John, who broke the silence, said that he hadn't been present at the event where the situation took place but that he had heard about the "breaking of sticks". Esther, Maria, and João didn't comment on the situation, but with their heads down or their eyes fixed on some point in the room, they seemed to be thinking about it. Would it really have been better to keep quiet, as Ana said, given the reaction of the people in the room?

To find out more about this episode, we spoke with Ana a few weeks after the focus group. We asked her to tell us more about what had happened. Contact with the student was made possible through an instant messaging application, since the researcher had access to the participant. On January 2, 2020, we sent her a voice message asking her to explain the situation in more detail, if possible. The student responded with two voice messages, which were transcribed and analyzed.

According to Ana, another teacher was supposed to give the presentation at the event. However, for personal or professional reasons, he was unable to attend on the scheduled date. As a result, another teacher offered to give a presentation at the same time as this teacher's presentation. However, the topic would be different from the one originally planned. Nevertheless, the workshop organizers accepted the proposal and included the new lecture and speaker in the event.

According to Ana, the event covered topics related to pure and applied mathematics. Most of the professors in this field were men, as were the speakers listed for the event, with

only one woman among the speakers. This did not detract from the topic addressed by the "substitute" speaker, who discussed the role and representation of women in mathematics. In proposing a discussion at the end of the lecture, one of the points raised by a student who attended the event as a listener was precisely the lack of female speakers and teachers in lectures, mini-courses, and other activities.

When she questioned the organizers about this "lack" of women in the program, the student was told that female professors had been invited, but that they had declined the invitations. However, during the event, there were other female professors from the area who attended the lecture as audience members. They claimed that they had not been invited to lead mini-courses or lectures at the event. They also claimed that there was no call for papers, mini-courses, or lectures. The organization had chosen certain people to fill these positions. Curiously, the people chosen by the organization to make up the groups of speakers, paper presenters, and mini-course leaders were mostly men.

The discussion at the event led to the problematization of gender relations in the mathematics department of the university itself, between professors in the area of mathematics education and professors in the area of pure and applied mathematics. This situation allowed us to understand the importance of creating moments of discussion on the subject, which are rare in the daily training of mathematics teachers.

There was also another part where they started discussing things about the department, about mathematics, because at the time of this lecture, there were some professors from education. They commented that within the department itself, within the university itself, there is a difference... That the pure mathematics people undo... It started to generate a lot of uproar... (Ana, Focus Group Report, 13/12/2019).

Without further recollection of the events, Ana said that after a presentation on apparent sexist attitudes and practices by professors in the department (which she did not name specifically), the speaker commented near the end of the discussions that she had not expected such a controversial discussion. As far as she was concerned, the organizers undertook to reconsider the invitations and schedule for future editions of the event.

By critically analyzing the situation, we can conclude that even when moments of discussion about gender relations are not allowed or built into the teacher training process for mathematics educators, such discussions end up appearing in some situations. This unexpected manifestation characterizes such an approach as controversial or even radical, since it surprises and destabilizes relationships that are considered natural in the field of mathematics education, in an environment where such a manifestation was not expected.

This event gave us the opportunity to reflect on the absence of women in academic-critical events at the university and is just one example of the aspirations that the discussion of gender issues can generate. When asked if they were adequately prepared to deal with these issues in the classroom, the participants stressed that these issues should be part of the curriculum of their courses, as this would also be a way of equipping teachers to deal with incidents such as LGBTQIA+phobia. Before concluding our presentation, we would also like to highlight some information about the approach to

issues such as gender and sexualities - since debates related to the field of gender end up in the field of sexualities and vice versa - in teacher training courses as well as in Brazilian primary and secondary schools.

Considering the impact that the debate on this issue can have in the school environment, we would like to point out that Brazil currently leads the world in the number of murders of LGBTQIA+ people. The Gay Group of Bahia (GGB) has conducted an annual report on the violent deaths of LGBTQIA+ people since 1980. The survey is based on news published in the press, as there are no government statistics on hate crimes. This shows that these numbers are just the tip of an iceberg of violence and bloodshed (Mott, Michels & Paulinho, 2017). The same is true for work on issues such as violence against women, teen pregnancy prevention, and sexually transmitted infections.

There is silence in the face of this bleak picture of lives tormented and eliminated because they do not fit into the frames that determine which lives are worthy of recognition and mourning and which lives should be silenced and eliminated without a fuss. Butler (2018), in problematizing the frames that society takes as determinative of whether a life is recognized as alive and worthy of mourning, brings us the notion of "frames" that "decide which lives are recognizable as lives and which are not" (Butler, 2018, p. 28). There are instances that invest significantly in the production of these frames of recognition, such as the family, the church, the media, medicine, law, and school. These bodies, which could provide the conditions for an unrecognized life to become a livable life, play a power game aimed at controlling bodies, maximizing insecurity and precariousness for some and minimizing it for others (Foucault, 1982).

Creating the conditions for a life to be recognized as alive does not consist in shaping the subject until they are in a certain condition of recognition, as it happens through complex investments of bodies that determine what to say, what to silence, what to show, what to hide, who can speak, and who must be silenced (Louro, 2018). Normative ideals are established as conditions that determine whether a life should be recognized or not. "It is a matter, however, of knowing how these norms operate to make certain subjects 'recognizable' people and others decidedly more difficult to recognize" (Butler, 2018, p. 20).

One way forward may be to problematize, among other things, the attitudes of educational professionals toward gender and sexuality issues, the clash with moral conceptions, and, as proposed here, the process of initial teacher education and its curricular proposals in teacher education programs in relation to gender and sexuality issues. We are aware that this is not a task for teachers alone. It must be part of a larger project (Zeichner, Saul & Diniz-Pereira, 2014). When we propose our objectives and research problem, we do not consider students to be "saviors of the fatherland," nor as subjects who will "transform" society with their hands, with their individual effort and strength. To paraphrase Zeichner, Saul and Diniz-Pereira (2014), it is as if we were saying, "You are going out to join a larger effort of people committed to transforming society".

Searching for some considerations

"Some days you feel

*Like someone who's gone or died
We've suddenly stopped
Or the world has grown up
We want to have a say
In our destiny
But here comes the living wheel
And carries our destiny away".*

Chico Buarque (1968)..

Finally, we return to some of the questions that have been directly and indirectly identified in the course of this study: How can we create conditions in the field of mathematics education that allow the recognition of other bodies to emerge? What are the possible ways to make this a more democratic space that contributes to progress in building a welcoming, liberating, and inclusive environment? In this social sphere, as in other spheres and areas, are there possibilities for building places of resistance and insurrection?

Insurgency. Perhaps this is the way to create the conditions for the recognition of other bodies and subjects in the field of mathematics education, which is characterized by rigidity, objectivity, neutrality, and masculinity. Insurgency, then, would consist of taking a counter-hegemonic path, a bet on the new, allowing and permitting other paths marked by revolts and disobedience to regulatory and oppressive norms, norms that (re)produce inequalities. It's about going against the current until you can't resist anymore, but still resisting. Disobedience that opens paths of resistance is also discussed in the writings of Giraldo and Fernandes (2019), when they take a decolonial option to discuss and analyze the process of training mathematics teachers. We believe in the need to know, understand, and problematize the discourses, situations, and pedagogical practices that (re)produce inequalities and exclusions in the field of gender and sexuality in the field of mathematics education as a condition to think and reflect on other ways of (re)existing while aiming at paths of transgression in the field (Giraldo, 2021) and the recognition of other bodies.

The space and the process of training mathematics teachers, as they stand, end up hindering or preventing the construction of these paths. Perhaps there is a status given to mathematics that ends up (re)producing the feeling that the field has nothing to do with discussions about diversity and the recognition of other subjects and the dimensions that constitute them. The insistence on marking the mathematical (educational) field as neutral and objective ends up becoming a major contradiction since "claims of neutrality and exemption are almost always disguises for strategies to occupy political niches and maintain privileges" (Giraldo, 2021, p. 4).

The scenes presented, and the discussions held made us even more convinced of the need to politically mark the space of mathematical education: the mathematics that we teach and that is taught to us is at the service of what and whom? What is behind its status, its naturalization, and its discourse? As obvious as the answers may seem, especially in the light of the discussions that have taken place here, it is necessary to understand and critically analyze them to achieve transformations in the field. Through studies such as those developed in this article, it is possible to begin to question the power relations in which bodies working

in professions historically understood as "natural male gifts" are inserted, and to counter this understanding with a more inclusive and integrative vision (Foucault, 1982; Butler, 2018).

The critical mathematics education movement, which is concerned with the political aspects of mathematics education (Skovsmose, 2001), also becomes a light and inspiration for this process of searching for final considerations by bringing to the center of the debate questions about "how to avoid prejudices in the processes analyzed by mathematics education that are harmful to oppressed groups such as workers, blacks, Indians, and women?" (ibid., p. 7). Reflection on issues like this is almost non-existent in the face of a system focused on 'quality' in mathematics education, expressed in indices of teaching and learning development that frame the acceptance of these discussions as a hindrance to achieving these goals.

Being able to think and reflect on the process of training mathematics teachers, taking gender as a category of analysis, makes us understand that a mathematical educational environment that increases our capacity to be free is possible (Hooks, 2017). The paths to achieving a liberating education can be diverse and often difficult to follow. As Chico Buarque's song "Roda viva" proposes, the living wheel can also represent a movement of changes and transformations. In its comings and goings, we come across how much still needs to be done, and, despite everything, in this cycle, new possibilities and voices for a more democratic Mathematics Education are always born.

Our intention in discussing the latest writings in our study is not to exhaust the discussion, nor to present a recipe or a roadmap for achieving a more democratic and inclusive mathematical educational space when analyzed from the perspective of established gender relations. Perhaps, in the face of encounters and dialogues, it is possible to think about building spaces through which new stories can be told and taken as part of reality. Stories of other mathematics, other educations, and other mathematical educational instances. Stories about and told by them and by bodies that are considered in the organization of curricula, pedagogical practices, and the mathematical space, even if, to achieve these, it is necessary to disobey the norms and legislation that contribute to the silencing of other voices in the field.

A critical analysis of the facts presented in the mathematics workshop leads us to reflect that, even when moments for discussion of gender relations are not allowed or built into the training process for mathematics educators or in the mathematical field, such discussions emerge all the time and, in some circumstances, explicitly. This unexpected manifestation characterizes such a discussion as controversial or even radical, because it surprises and destabilizes relationships that are taken for granted in the field of mathematics education, in an environment where such immersion was not expected. Unpreparedness and the lack of a repertoire of dialogue and understanding in the face of such discussions end up making their presence felt.

The frames to which bodies and mathematics have been and continue to be subjected end up making situations like the one Ana experienced at the event something to be expected. These are the effects of frames. Everything we can understand and legitimize depends on the norms of recognition that continue to operate to guarantee the privileges of those who have

always agreed to them. As Butler (2018) suggests, breaking these frameworks favors the necessary conditions to free ourselves from all this acceptance of discourses and attitudes that are taken for granted in the context of gender relations in mathematics education and that produce inequalities.

The frameworks are loosened when we question the presence of other bodies in the field of mathematics education and how gender relations take place in this space. They are broken when we disagree with what was once said by and about them, legitimizing it and making it all seem true. They are broken when discussions about gender relations are established in a space marked by masculinity. They are broken when actions are proposed that aim to break other frameworks. Thinking about which bodies weigh in the field of mathematics education is to contribute to breaking other frameworks and to thinking about other realities and other (re)knowledge.

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