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CANTATA summer school 2017
brief report on *Unconscious Bias vs. Gender bias*

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1 Summary

This is a report of the gender balance activity held on Saturday morning on the occasion of the CANTATA summer school 2017. All of the participants to the school and the lecturers were present. An heterogeneous panel was a prerequisite for the discussion.

Among many topics about gender balance we focused in particular on *Implicit Bias*, firstly introducing a dedicated presentation, then proposing two sets of questions formulated by taking into account the recent literature. In-between we made the implicit Harvard test, the Evolution of Trust test, and, finally, a role game on group diversity.

A follow-up of the discussion was done on Monday evening, as requested by the students themselves, as they wanted to point out more controversial aspects on how gender unbalance/discrimination can be mitigated in STEM careers.

2 Activity description

The goal of the session was to get "unconsciously" engaged the students into the gender balance issue and, secondarily, show the persistence of the lack in gender representation and of female leadership through the statistics, specifically aimed at the youngest who often take for granted that nowadays gender prejudice is outdated.

We aimed to focus on 1) enlightening them about the problem trough interactive games and prepared questions, 2) putting the issue in the context of their daily life, 3) making them come with suggestions on how they can change something (even if very small). There was no intention to focus on hiring processes, grant applications etc. where they could not directly affect anything (or be affected) at their PhD stage.

Even though the workshop was about gender bias, we highlighted that all of this also applies to race-ethnicity/religion/belief/sexuality and every other grouping one can think of.

The STEM statistical analysis was addressed only to better contextualize what is happening in the workplace (where large portion of scientist's daily life takes place) and that

any PhD student will have to deal with. For example, the difficulty for women in pursuing research after their PhD simply shows, on one side, what situation women have to face in hiring process, but on the other side it offers the opportunity to discuss how race-ethnicity/religion/belief/sexuality issues/stereotypes could prevent a conscious choice.

2.1 Questionnaire

The questionnaire was based on the recent studies presented in the literature and on some common misunderstandings, e.g.: gender versus biological characteristics, social role versus professional skills, diversity versus discrimination, diversity/minority inclusion versus privileges, equality in gender representation versus merit, under-representation versus lack of interest, indicators of excellence in science versus number of citations/publications, affermative action versus women quota obligation, and so on. On the one hand the questionnaire was prepared just to check the level of awareness of the students about some standard topics on gender balance issue, on the other hand it aimed at checking what could be considered trivial or not by the students and test their personal disposition to follow the proposed activities.

Having in mind to set-up a background for the final discussion and, at the same time, in order to avoid filtering existent biases, the first set of questions was sent to each participant before the beginning of the session, and the second one just after the group activity.

In appendix A we report the results of the questionnaire with some comments. We choose to keep the text after the YES/NOT answers in order to not influence the reader and respect the participant's writing.

2.2 Presentation on "Unconscius bias"

We exposed the students to the issue of *unconscious bias*. When we are put in the position of evaluating others, we think that we will handle that responsibility professionally and objectively, that we will judge people based solely on their credentials and achievements. But each of us inherits experiences and cultural histories that create in our mind certain schemas or non-conscious hypotheses (expectations or stereotypes) that affect our judgments of others. Schemas allow efficient, yet sometimes inaccurate, processing of information. They are unintentional, automatic and outside of our awareness. Our schemas can even conflict with our conscious or explicit attitudes.

Unconscious bias affects us all, regardless of gender, race, sexual orientation, ability, etc.. It represents an impediment to achieving diversity goals and affects the evaluation of CVs and job credentials, applications and letters of recommendation.

The negative effects of the unconscious bias can be mitigated mainly through the exposure to new information.

2.3 Implicit bias tests

The Harvard Implicit Association Test (https://implicit.harvard.edu/implicit/) is a measure of implicit attitudes and how to detect the strength of a person's automatic association between mental representations of concepts in memory. We asked the students to test their implicit stereotypes on gender versus science and/or career versus family.

2.4 Role playing and interactive game

Role game allows playing with different situations where the participants can reflect on their behavior, wordings etc.

The *Evolution of Trust* (http://ncase.me/trust/) was the interactive game performed during the gender balance activity. One of the biggest issue in science (and in today's society) is how to implement collaborations. Most scientific research today is based on team work, the myth of the lone genius working on his desk has little relevance with respect to the complexity of big projects and advanced specializations (both in theory and experimentation).

In addition to being very intriguing, the game is very useful in understanding how trust creates (or destroys) one's neighbor, suggests ways to find the best strategy in dealing with others starting from a small set of rules. As far as gender balance is concerned, the game helps to understand how the interaction based on similar attitudes/belief may have destructive impact, whereas a small chance given to someone in an unfair situation, even against to own value schema, can really improve the quality of the relationships and the results.

We performed also a *Diversity and Discrimination In-Class Activity* realized by the Kent State University. This in-classroom activity was created to begin teaching students on what it feels like to accept others, reject others, be rejected by others and be accepted by others, based on predefined rules of engagement in a semi-controlled environment.

The participants were divided into four groups that had to interact in silence according to some prescribed communication signals. The main goal was to reach the dominant group that could accept only few new members. The expelled ones, instead of insisting on being accepted, and the members of the dominant group, instead of being stuck in the situation of constantly refusing the others, had the chance to change the rules by creating a new group or a new "cultural" approach.

It had occurred that adherence to the rules of the game, especially in the case of the group considered "strong", was unconsciously accepted in most simulations.

2.5 Discussion

Finally we had "world cafe" type discussions (6-8 person groups with different questions, swap groups after 5-10min) with questions to put the games/questionnaire in the context

of gender bias and a plenum discussion of what one can do. Each group wrote some statements about the topics raised along with the questionnaire.

3 Conclusions

We were facilitated in presenting the issue of gender bias: the gender of the participants, 13 female out of a total number of around 45, confirmed the statistic on STEM.

Most of the students showed awareness about the gender unbalance problem and related issues on discrimination/diversity. However several of them still believe that the problem is outdated and more women will be represented in STEM in the near future once the existent generation gap will be over.

This reasoning could be dangerous since it removes the causes which generates the problem (even the historical ones) due mainly to unconscious bias (constantly present and changing with social evolution) and disparities in the unavoidable social cathegorization. Post-gender discourse, just like post-racial discourse, works in oblivion of history, i.e. it works in the oblivion of those same historical/social conditions in which hierarchies have been formed, along with the privileges and the oppressions. Then, to make an effort to foster discussion on gender/minority representation in STEM and on the criteria for affirmative action in research should be a target in any conference, workshop, school, and so on. Many students seemed willing to be engaged in such a discussion as it made them an active part in understanding the intersectionality between science and social identities/schemas, and not just passive executors of a scientific role/assignment.

The latest discussions were more focused on the fact that, at least in the view of some of the students, talking about gender inequality creates "the problem" rather than eliminating it, and the selection criteria for conference speakers should be adopted only in terms of merit or brilliant mind.[1]

Scientists are supposed to be objective, able to evaluate data and results without being biased by emotions or preferences, but they are subject to the same cultural norms and beliefs as the rest of society. Statistically speaking, just being an advantaged person will automatically give a chance. Everyone wants to believe that we deserve the success and awards thanks to our own merit. But this is a typical "Ouroboros" situation: the criteria for the selection are biased, consequently the choice is "model" dependent and prevents to be objective. Asking to force the inclusion of the minority/diversity seems to imply that the field is admitting less-deserving person simply to increase their numbers. But studies show that many of the women in science can be more capable than the men, the problem is how to admit and empower this fact. Ignoring the gender problem has just the opposite effect and what we ignore, we permit. Addressing gender balance is not inconsistent with a high-quality program.

[1]The six main lecturers at the CANTATA Summer School 2017 were a-priori chosen with a gender-balance target in mind: three women and three men.

Moreover everyone should have the opportunity to develop expertise (and in science we need to show our results, regardless of our innate brilliance), then the "good speaker" paradigm should be put in a different perspective. As Aristotele said: the outcome of an exposure depends on the habit of the listener.

Finally, a scarse knowledge of female scientists and inventors (actually, in a few cases also for the male ones) seems evident. Probably this lack of "memory" is more general and reflects the absence of appropriate references in the literature and should be considered a concern for the quality of our cultural level, especially if one uses the own knowledge for professional purpose. Culture and representations play an important role in perpetuating gender bias within and beyond academia. It would be advisable to foster a session devoted to highlight female contributions (past or present) related to the topics of a school/conference. The positive examples, as just as exposing people to a new information, prevent cognitive schema bias/invisible inequities, and could be an efficient strategy to raise the awareness on gender balance problem in STEM.

4 Participants

Appendix A

Questionnaire: first part

1. **Question**: *Imagine that that you and a partner of the other sex perform a task together. Then the experimenter tells you privately that your partner performed worse than you did and gives you a small reward, say 5 $, to divide between you and your partner. It's up to you to decide how much you will get and how much your partner will get. How will you divide it up?*
   Answers:
   MALE (tot. 38)

   - 50% (32/38);
   - 0 for both;
   - Less amount but based on performance;
   - I am just think about my partner perform and i judge if i have to give her more than me or the same;
   - 3.5$ for me and 1.5$ for her;
   - Although those kind of rewards tend to create worse working condition due to unnecessary competition which pollute partnership relations, I would divide it evenly;
   - 5$ is meaningless, I will pay my partner a beer round if its company is nice;

- If my partner worked willingly, i will give half to her.

FEMALE (tot. 13):

- 50% (11/13);
- 2 for them, 3 for me;
- Equally. Because no matter how each of us works, we are in it together;
- Evenly, as a reward for participating in the experiment, not based on performance;
- if its first time to collaborate I will probably give its half to him;
- I will divide it into equal parts because it is not a competition.

2. **Question**: *If your partner performed better than you, how will you divide up the reward?*
   Answers:
   MALE (tot. 38)

   - 50% (27/38);
   - 3:2;
   - 0 for both;
   - 3.5 euro to her;
   - a higher amount but based on performance;
   - Give him/her a bigger share;
   - I give more for her for sure;
   - 2/3 and 1/3;
   - $3.5 for her and $1.5 for me;
   - $5 to my partner;
   - 2 for me 3 for her;
   - Same reward, another beer;
   - 20 % - 80%;

   FEMALE (tot. 13):

   - 50 % (8/13);
   - $2 for me, $3 for them;
   - not sure: slightly more to them depending on how better they performed;
   - 70 %-30%;

- I would probably discuss this with them;
- Give more importance to who did the better performace;
- I would give him the reward or at least the largest part of it;
- $2.50 each, unless I performed worse because I invested less time;
- Same reasoning as before. Evenly;

3. **Question**: *Instead, the experimenter just asks the participant to say how much the other person should receive. What do you decide?*
   Answers:
   MALE(tot. 38):

   - 50% (33/38);
   - from 0 to $5 for colleague $0 me;
   - Listen to their opinion;
   - First i judge the perform and then i decide how much the other person should receive;
   - I think none of us should receive any amount;
   - I will try to get a better salary for everyone. For that purpose, the first step can be without problem to increase my partner's salary. If we are still talking about 5$, equivalentely;
   - I would try to decide what a fair reward could be

   FEMALE (tot. 11/13):

   - 50% (8/13);
   - Evenly? I don't really understand this question;
   - I will say the other person should get more if he/ she performed well or if he/she didn't, he/she should the equal as mine;
   - The same amount which I receive

   [Explanation from ref: http://www.hunter.cuny.edu/gendertutorial/slides/gt03.htmf: "Expectations shape what people believe they are entitled to. If you're a man, you will probably divide the money equitably. That is, you'll divide the money according to how well each person performed. If you performed better, you'll give yourself more than you give your partner. But if you're a woman, you will probably divide the money equally, even though you have performed better. If the experimenter tells you that your partner performed better than you, men and women are more similar. Both men and women give the other person more than they give themselves, but men still take more for themselves than women do."]

4. **Question**: *Social norms dictate that men are the breadwinners and women are the caregivers. Do you agree? If not, why?*
   Answers:
   MALE (tot. 38):

   - I do not agree although i was breed with these beliefs and it is difficult to get rid of them. These beliefs are not functional anymore.
   - I don't think people are still pushed to such kind of "divisions". It happened in the past, but now we are quite protected from these stereotypes
   - I do not agree. Simply, also the opposite It would be fine for me.
   - No (3/38)
   - Not fully sure it's a matter of only social norms. But anyway, in nowadays society that idea is obsolete.
   - I don't agree. That labelling is far to simplistic.
   - Despite the fact this has been a well established (on the basis of raw strength) social paradigm, production, appropriation and distribution of goods and services has dramatically changed since the 18 hundreds, hence, establishing a social norm based on such an outdated paradigm is unproductive and daft. A priori, a woman can be as good a breadwinner as a man and similarly for the caregiver role. It is completely immature however to not realize that at the moment those roles have largely been attributed due to the existent social structure and the political system. Men are being born into the breadwinner role (/cite : boys toys include plumber's set and woodworker's table) whereas women are born into a baby-raising, home-caring reality (/cite: all girls' toys assume and impose such a social role) and because of that men are better at doing what they are prepared to and women are better at what they are prepared to be. It doesn't have to be like that, it probably should not be (arguments can easily be found) like that. We need to admit it first and then decide whether we are interested in changing it, and if yes assume such a course of action.
   - I do not agree because I am personally against any kind of gender biased division
   - No, because the society has evolved and such social norms are outdated.
   - I disagree. Many opposite examples exist nowadays.
   - I agree.
   - Yes, that is the dominating way of thinking in society, but I think it is wrong. Since I do not think women and men are essentially different in terms of capacities, I believe they should not be pressed, by society or anyone, to follow a given path in their lives. Besides, this distinction in particular (between breadwinners and caregivers) empowers men, as those in charge of what is considered most important, and undermines women, leaving a less valued task to them.

- No. It is just a social convention that even is not true in all cultures around the world.
- Not at all, a woman can provide as much as a man (or even more than a man) for their family.
- Not. Women can perform equal or better a job than a men
- No. Clear both capable of fulfilling breadwinner role, and that whilst in the case of children women are the ones who are giving birth, after that either could take the "caregiver" role
- No, I do not agree because I think that should not exist categories in a family.
- No, I don't. I think that everyone should do what they can or what they are able to do.
- I do not agree with this idea. I think it is up to everyone to decide if they want to be the breadwinner or the caregiver
- It's no a necessary paradigm. In the past, it was the paradigm and we inherit it, but nowadays its no more the paradigm. In addition, that situation created differences between men and woman at the economical level, and this is a problem for the individual person paradigm (no a problem for the family paradigm).
- No, because I believe such role stereotypes do not apply anymore in a modern society where we mostly interact as independent individuals in the same work places
- I don't agree, both can have the same mission
- Don't understand
- No, the roles can be interchanged according to mutual agreement between couples.
- Totally
- no. it doesn't make sense in modern society
- I think it is so, but of course i don't agree with that.
- no, it depends on the person
- Don't agree / not true
- No. When one has access to education allowing for multiple job choices one should pursue the job that they want in order to have a higher life quality(quality here does not imply money. It can be happiness etc). This, in my opinion, does most definitely NOT allow such stereotypical norms
- I do not agree, because the work you do is not dictated by biology
- No. Men and women can do equally well in both duties.

- No, cultural bulshit
- In principle no but the answer is more complicated
- yes
- No, I see no reason why it should be this way
- no. it is a difficult question, the answer depends a lot on the real situation

FEMALE (tot. 13):

- I do not agree totally, because I think that women need to be economically independent and develop their own potential to feel fully accomplished
- No, I think each person can be both if we all help each other out.
- No, because I don't see it widely done that way in 2017.
- I agree because it is related to being a mother. it is a gender difference not social norms
- No, both can have brains, sentiments and abilities. This is nothing but a social norm and even if we assume that it has some basis, person with different personalities can contribute to a team in their one way and lead to "breadwinning". A caregiver, male or female, can also be a breadwinner
- I don't agree. I find everyone equal and you will get success depending on the dedication and sincerity.
- I think in general in the west these days it is expected that both men and women are bread winners as a single income is no longer enough to support a whole family. The stereotype listed above is only held by a small percentage of society nowadays, I believe. However I do not agree personally with this stereotype.
- No I don't. Nowadays most people share the jobs. There are even stay-at-home dads who take care of the family while their wives work outside. I think it's very nice.
- no
- Yes
- When it happens it's a direct consequence of social norms, it's not intrinsically true, necessary or even desirable for a society
- No, I don't agree. This is what the society imposes but it is not true.
- I agree that it is a social norm but I disagree that it should remain this way. Men and women should be able to choose whatever career they want.

5. **Question**: *Do men and women have different ways to express their emotions? If Yes, which kind of expression?*
   Answer:
   MALE (37/38)

- By default we all have the same ways of expression as human beings. Our society set us some unwritten rules eg men don't cry
- Obviously yes. I don't need to explain
- yes (3/38)
- Yes, we usually express differently. But that shouldn't be a problem if the person is expressing the way s/he wants.
- I can't see in the terms presented in the question why it should be like that. Biologically it is clear that men and women had different evolutionary pressures and this can be behind the difference when considering emotions and how do they express it.
- Again. Social structures have dictated that men need be more straightforward and bland whereas women are to be more tactful and stealthy and acquire the things they want/need through emotional manipulation. This is not what we are genetically built up to do, but the social norm has forced us into viewing the emotion of these two sexes under the scope of dominance and prevalence.
- I think they do have the same way to express them. If some differences are present, it is my personal opinion this is due to some expectations from the society where we live in which push us to adapt to some stereotypes.
- Yes, men are more clear in expressing their emotions, while women can be mysterious.
- Sometimes
- No (4/38)
- Nowadays, I think so. Society establishes very different roles for men and women, and this includes emotional expression. This is related to the question above: men, as the breadwinners, have to be strong, and it is usually considered a weakness to express emotions other than rage. On the other hand, women, as the caregivers, are supposed to be mostly emotional which is, again, considered a weakness.
- At the biological level I do not think reason for that but It is true that our culture states than men should not be "weak", do not cry, etc, in opposition to women.
- Not necessarily, some men usually express their emotions more strongly than women or viceversa.
- Yes, in my own personal thinking, is more easy for women to share their feelings.
- Yes, tendency for men to be more vocal about certain things (not all, and not all men/women)

- Yes, in the average men are more ashamed to express emotions and they try to cover them (which kind of expression? well, it depends case by case)
- I think that social norms say that they have to so many people express their emotions in order to be right with these "rules".
- I do think so. Women are in general more expressive about their emotions than men. They are not afraid to talk about their feelings and to show them to other people. On the other hand, men are more used to hide their emotions and to make it look as they are always fine. I think that is what society has taught each one of us to do.
- In practice and in average, probably yes, but it is a social effect.
- Yes for sure, is a biological true. Women are more sensitive persons in average, but this is no a synonym of weakness.
- No. In my exp. individuals have different ways
- It depends on personality
- Yes, women talk more about what they feel
- Yes. Depends on whom is the person is interacting with.
- Yes! I have to remain in control, and get carried by emotions to make sure my partner can feel ease.
- yes on average, but there are huge variations in each group. Man are not as good as women at verbally expressing their emotions.
- Yes: sadness, anxiety, worries. Men are more internal about that, no really expressive
- usually yes, men have a sort of social pressure to not show emotions much
- Probably men express anger in a different way, and women express sadness in a different way.
- Yes depends on culture
- Yes. Sorrow happiness etc
- I don't know (what does science say?)

FEMALE (tot. 13)

- Maybe yes. I think that women express more freely their emotions. It's more common seeing a woman crying on the workplace than a man, but I think that this difference is not really linked to the gender but to social constraints.
- I think it mostly depends on the individual, rather than on gender... although society makes it more difficult for males to express their emotions freely.

- Yes. Women are better at expressing emotion verbally. Men tend to be more physical.
- yes men does not show their feelings compared to women.
- The way someone expresses their feelings is mostly depended on their personality. The social norms may have affected the way men and women express their feelings (i.e. men should not be that emotional, women should not express their anger etc. General direction: Strong men, elegant and fragile women) but I think this has started fading out in the latest decades.
- I find men more short-tempered than women. I find they are so impulsive
- No men and women are free to express any way. We experience the same emotions. However a small percentage of society may still hold the view that women are more emotional than men in general and may find it 'effeminate' if a man were to cry for example.
- Well biologically it does make a difference. But if it is said that men shouldn't cry when they feel like, that is unfair. Everyone should have the right to express emotions like they want to.
- women are more open to emotions and manifest them more explicitly
- Yes
- It's highly influenced by the culture: people tend to conform to what their culture tell them is a 'good' way to be for them. In Italy, men are supposed to stay calm and lead, whereas women are supposed to rely on men rather than themselves. This, of course, doesn't necessarily happen in the end.
- Depends on the person. Not in gender.
- Yes, but only due to socialization based on gender from a young age. In general, men are taught to suppress emotion, which is detrimental to their mental health. Everyone should be able to express their emotions in a healthy way.

6. **Question**: *Do men and women have different values and preferences, producing gender discrepancies?*
   Answers:
   FEMALE(tot. 13)

   - I think that we cannot affirm that women and men have different values and preferences neither the opposite thing because each individual has different values and preferences.
   - Different values - I guess this depends on the individual. Different preferences - this depends on the object/issue in question.
   - Yes (4/13)

- yes I think these differences have a background in our conscious.
- Partialy yes (mostly regarding preferences), but that's due to gender discrepancies. So, it's a circle.
- No a man or women can have any values they want and act accordingly.
- Yes to some extent. It's mainly because there are many restrictions on women from the society and religion which men don't have.
- Women just try to stay safe by not breaking away from these norms.
- I would say differences are nearly always acquired, as gender biased even affects infants. It's plausible that some effect is due to biological differences, but I would say it's extremely subdominant. This is supposed by the huge difference between women's values in sexist and less sexist societies.
- If so, it is because the society.
- No, I think fundamentally we do not. But children are socialized in this way.

MALE (tot. 38):

- In general, no. Because we live in a society that enforce us different values.
- Probably yes
- It could be, in both directions
- Yes (7/39)
- I don't think so.
- No (7/39)
- Socially imposed, yes. Women are forced to assume the role of the mother ("no woman is fulfilled if they haven't been a mother" is an often used argument which I find appalling and disgusting as it objectified women to the point of human producing machines while imposing the sentiment of happiness and fulfillment into this role). Similarly, men are forced to assume a leading alpha male role, through sheer dominance, resulting in profession-oriented emotionally deprived and unevolved people.
- I think so. However, these differences are due to a biased education received since they were very young.
- Sometimes
- I do not think so. I think differences exist, but they are induced by society.
- In our culture, given the learning processes that reproduce it, there exists a bias. Women are encouraged to caring activities while men are to innovative, physical, etc activities.

- The values and preferences do not have anything to do with gender discrepancies, usually those discrepancies are product of ignorance
- No. I've seen to many times men and women sharing the very same interest in something. I believe the differences are mostly due to stereotypical thoughts
- Yes, different values and preferences resulting at least in part from societal pressures
- In general I think no, but again social norms could create some differenties.
- I don't think it is a matter of gender. Each individual person do have different values and preferences due to their own education and background. It is not a matter of gender
- Maybe different preferences, but no the important values.
- Certain biological differences cause different preferences e.g. "biological clock" in timing of family planning. But core values vary more between individuals than between gender
- I dont think so
- Yes, however it's not the main cause
- Different viewpoints which might generate the gender discrepancies but it doesn't necessarily have to.
- Yes. But different roles which complement each other, like balance
- for sure no different values based on gender. preferences might be dictated by social convention (e.g. for toys) but this seems to be changing recently
- Men and women can have different preferences and values but I believe this is a result of their upbringing and the surrounding culture rather than biological. Additionally, within gender, there is a very high level of difference so it depends per person more than per gender.
- Probably yes

7. **Question**: *Which kind of diversity do you see in your workplace?*
   Answers:
   FEMALE (tot. 13):

   - I see that women are less represented than men at each level of the career and their number decrease reaching the top
   - There are people coming from different countries. We also have religious diversity.
   - Mostly ethnic, also gender diversity.
   - Men's helpful behavior may feel women as she needs a help and if someone asks about your needs you can be used to.

- I see no discriminations in my workplace
- I find men are having more ability to do deeper in a task while women can amazingly do multi tasking.
- In terms of gender there are a lot of female PhD and postdocs (almost 50%) but not as many women faculty. I work with people from all over the world.
- The ratio of men to women is not alarmingly high but we definitely need more women professors.
- I'm the diversity ;)
- Ethnicity, religious beliefs
- A woman has to prove herself, a man hasn't.
- Quite a lot! Men, women working together from different places.
- Men and women, yes, but fewer ethnic minorities.

MALE (tot. 36/38):

- All programming jobs were held by men and most administration jobs by women
- In my workplace there are more people who come from wealthy families than poor families. This is bad, but probably it depends on the opportunity that the society gives to people born in poor families
- nothing in particular
- None (4/36)
- Quite correct, I guess
- A broad range of different fields of research.
- A female dominant office where my voice is suppressed for the mere reason that is coming from a man, hence regarded as man's planning.
- In scientific faculties, I guess there are more men than women enrolled
- Both male and female researchers are well represented.
- Few women
- The percentage of workers who are not white, adult males is very low (around 10%).
- In my workplace most people are men so I cannot see much gender diversity.
- I see a lot of diversity, a half of the people working are from different countries and a 30% are women
- All kind.
- $\sim$ 3:1 male:female, mix of nationalities but mostly european

- In my workplace I don't see many differences. I'm new there but probably we are a small group of people and we know each others so maybe it could not happen many problems like these.
- In my workspace there are more men than women. We are from different nationalities and creeds.
- In my department, almost all of us are men.
- The proportion is like 90 % men and 10% women. But this proportion is inherit from the master studies and from the degree? Do men prefer theoretical physics than women? I don't know, but for master and degree studies people are free to choose "no"?
- At work, I honestly see more the diversity related to strength and interest of individuals in specific research fields than their diversity in gender, race, nationality, social background, religion etc
- More men than women
- Mostly male dominated.
- Male dominated
- many nationalities, many different cultures
- We are four phds students: 1 girl and three boys
- in my experience, my current workplace has a good diversity with people from several "categories" represented
- Lack of. The percentage of women is severely low. When it comes to race diversity it is also lacking but that is less surprising as whites dominate in my country. When it comes to sexual orientation, I am not sure as it is not a frequent discussion. On the outside it seems that the majority is heterosexual.
- my colleagues are mostly males
- More men than women
- gender and racial
- Women and men, older and younger, singles and ppl with families
- a mess

8. **Question**:*Do you think that diversity can foster a climate that allows more enrichment in a workplace? If yes/not, why?*
   Answer:
   FEMALE (tot. 13)

   - I think that diversity can enrich every workplace.
   - Yes, it the people involved are willing to use diversity to their advantage.

- Yes. It exposes people to different viewpoints and experiences that can challenge their world view and force them to reevaluate their approach to things.
- sometimes yes, sometimes no. It should enrich.
- Of course, each person can contribute in their own way to a workplace. Different skills, points of view and characters enrich a workplace.
- Yes. When you interact, help each other it can produce productive results.
- In general yes because people have a variety of backgrounds which will lead to more creativity and more learning to share.
- Possibly yes. But for me it is more about engaging women in workplace than thinking about the outcome of it.
- yes (2/13)
- Totally. I experienced two different academic environments, one very diverse and one very homogeneous. In the diverse environment it was much easier to ask questions, get help, and generally perform better as a scientist because it was also more collaborative.
- Yes, because more cultures and ways of thinking are introduced in the game.
- Yes, because it helps bring in new ideas from different perspectives.

MALE (tot. 38)

- Yes and no. It depends of the initial conditions
- Yes, diversity is stimulating.
- Yes, diversity is often useful in long-term. People become more versatile
- Yes (4/38)
- Yes, different points of view
- Yes. From my answer above, people working in different fields of research under the same roof can have interesting ideas together.
- Yes, but it is not a matter of just numbers. The more educated people are and more understanding, the more rich and productive the workplace could be.
- yes, assuming diversity in the most general sense
- Yes, it contributes to a more vibrant atmosphere, conducive to productivity.
- Yes. Diversity produces diversity.
- Of course, interaction is always enriching. But that is not the reason for promoting diversity: the reason for diversity is equality of opportunities.
- Diversity is always good. It makes debates to come up and allow people to be more open to different cultures, ideas, situations, etc.

- Yes, diversity is good because allows us to know more about different cultures and ways of thinking.
- Yes. Of course, I believe it's better when you meet someone who don't share the same interest as you because you will never finish to learn new things.
- Yes, increased diversity can result in improved exchange of ideas and different ways of thinking.
- Yes, in fact intellectual diversity may help to face problems in different ways
- Yes, totally. More people and more diversity mean new ideas and point of view to solve problems.
- Yes. Through diversity we can have different perspectives of the same problem and we can then find a better solution to it. It is also a way of personal enrichment as you can learn from the others experiences.
- Yes. Diversity of personalities and interests lead to diversity of opinions and then it should increase the originality of the ideas.
- I think that the climate of work is independent of the diversity of men and women. If you mean about the foreign diversity, for sure its better for the climate of work.
- Neither. It may create tensions between people who cannot deal with non-work related differences among people, but also enrich it since people with different background may get different pov on a problem.
- Not necessarily, we only need brilliant mind
- No. Every person should be happy in order to be productive
- Yes, different points of view give better possibilities
- Maybe, depends on the person.
- We should have the freedom to be different but put our skills in collaborative way
- yes, diversity is a positive thing that drives evolution
- Yes, diversity gives variety of opinion and that is fundamental in a workplace
- Definitely yes, interacting with people with different experiences, ideas, origin is necessary to mature as a person
- Yes, women have to be represented in the workplace (but you can't force such a thing in science/research)
- Yes. Diversity of ideas, backgrounds and life experiences can allow for different approaches and a better working climate
- yes, because it allows to see a certain problem with different points of view

- Yes. Diversity is always good.
- Yes, but should based on the persons abilities.
- yes, lots of different perspectives allow for better discussions
- Yes, it gives more diverse view points and makes the environment less uniform and generally more pleasant

9. **Question**: *Studies of the psychology of asking questions tend to focus on student participation in classroom discussions, or contributions to conversation in general rather than question-asking at professional research conferences. It appears that a lower engagement from women than men is a fairly ubiquitous finding in such studies, which tend to conclude that men/boys on average dominate most kinds of mixed discussions, and if women participate equally they risk being perceived (negatively) as dominating the conversation. Do you agree? Have you experienced this?*
   Answers:
   FEMALE (tot. 13)

   - Yes, I agree and I have experienced this.
   - I have never had any experience of this.
   - Seems likely, but I've never experienced this.
   - I didn't experience. I think it is not about the gender difference. If you are ok, people appreciate you.
   - No, I haven't.
   - I don't know
   - I have experienced this myself. I was once in a group discussion where I was the only women in the group and I challenged an idea the speaker had and was shut down and told "you would be a good boss" in a way I found sarcastic and when I asked the speaker what was wrong with my idea he simply responded "what's right with it"
   - No I don't think so. I have seen both genders participating equally and being acknowledged.
   - I agree that this can happen
   - Yes, yes
   - Yes. Women are socially requested to say something interesting when they speak in public, whereas men are just requested to speak.
   - I haven't experienced this.
   - Yes I agree. Even at this summer school, men have asked more questions (one or two individuals dominating).

MALE (tot. 38)

- i don't agree. Never had seen this.
- I absolutely don't agree on the fact that " if women participate equally they risk being perceived (negatively) as dominating the conversation"
- I agree, it could be
- Yes (4/38)
- Not really, but not sure.
- It is natural for some people to feel more pressure to be better than other, so I don't perceive this as if they are dominating the conversation, but just as a bias.
- From the other side of the coin, I have. In a female dominant office where my opinion is largely suppressed on the value of me being male. I can understand how in a male dominant world this would cause a discomfort of far greater extent than the one I experience in my office.
- I have never experienced this situation
- No idea. Never experienced.
- Yes, almost daily..
- I cannot say for sure. But in general men tend to monopolize discussions. (That so called leadership)
- I am not agreed with this. I have never experienced something like that.
- I don't agree but as a men, I've experienced this. This way of thinking was taught to us since kids because the society we use to live, but when you grow you can see this is clearly wrong! and seems society is changing for the better in this mater.
- I agree that men tend to dominate these types of discussion, but disagree that I perceive women who do the same as doing so negatively.
- Not totally. I think that everybody want to success in a discussion and sometime this create contrast especially against female winner.
- I do agree with this observation. I have experienced it almost daily both in my workspace as in meetings with friends
- No (4/38)
- I am at most agree, i think this is a phenomenon that was established at the past and we are changing it.
- Not sure. In my courses, there were more males than females. So while I definitely noticed that male students contributed more but that could be due to their proportionally higher numbers

- I never noticed that
- No, in my limited experience the situation was opposite, women were more talkative
- No and no.
- No. I value every one's thought, even for a woman. It matters what they say, and can sometimes bring degeneracies among male thinking pattern.
- Yes, one can see that women sometime hesitate more to ask questions at conferences
- Yes, totally. In school mostly but sometimes in some physics conferences also
- During my studies I experienced the opposite with women more keen to ask questions during lecture, although it's true that men were those starting discussions rather than asking questions
- I don't agree, but I have experienced it.
- Yes this is definitely a problematic phenomenon that I have witnessed.
- No. I know many cases which is on the opposite
- i have not experienced this
- I don't know

10. **Question**: *What, in your view, is excellence in science and research?*
    Answers:
    FEMALE (tot. 13)

    - Excellence in science is being opened to each new discovery
    - A rigorous, in-depth investigation, honesty when communicating results, and humbleness in discussions - the latter makes one open to new ideas.
    - Producing results (or developing techniques) that can be applied in useful, inventive, or novel ways or provide greater insight into the world we live in.
    - being able to lead the research on your own.
    - Getting a better understanding of the area of research and trying to make a small contribution from your side.
    - Creativity and understanding
    - Being able to perform original research and sticking to one's goal even if things don't work out in the beginning new ideas and collaborative efforts
    - A paradigm shift.
    - High Quality in teaching and research
    - Fair and open methods, new and innovative ideas, no discrimination.

MALE (tot. 36/ 38)

- Pushing the human understanding of fundamental problems beyond the current limit.
- Excellence is to explain natural phenomena, that's why science exists.
- Hard work, low profile, kind character in public relationships
- Discover things?
- Difficult to explain in such brief answer, but I would condense this in the novelty of ideas and how do they improve the knowledge underlying their field.
- Results. Changing the world on step at a time.
- Finding unforeseen ways to tackle problems which can lead to a great impact on the state of the art in the field. This should translate in a great number of citations.
- Producing tangible findings that will further the advancement of knowledge or contribute to the improvement of living conditions and eradication of ailments of humans.
- Excellence is the improvement of skills and knowledge in group level
- No.
- Achievements
- I do not know.
- Excellence in science and research is the way of how one can share the knowledge, i.e., be eloquent, good writer, supporting and a good leader and obviously an expert in the area.
- Hard work and contributions.
- Producing high quality papers that advance understanding in field. In non-research science then high quality teaching that brings understanding of the topic to more people and/or population at large
- Knowledge sharing and ideas mixing
- To achieve good results using good methods.
- Excellence in scientific production.
- Its a relative thing, but i think that the interest and the good attitude for work its the most important.
- Personal outstanding contributions to expand the knowledge of humankind, but at the same time also the necessary management and teaching skills to help fellow researchers to succeed as well
- Be innovative and productive

- Improving the way of living in the best and the most efficient way
- Publications and recognition in your work.
- Precise, reproducible, ground-breaking results
- doing research of high standard (more important than producing a lot), being good at driving collaborations, being good at mentoring younger people
- A mix between pure scientific success and fundamental values as equality and freedom.
- Excellence in science should be the ability to have new ideas, interesting to the scientific community, and the ability to communicate them, also to the general public
- Doing great research
- Integrity, hard working to a certain degree (one can overdo it), being civilized in scientific discussions and a positive force in collaborations
- to know accurately your field and being able to find solutions to all the problems you face
- Many papers and publications
- Simple theory that can predicts the experiment
- To attempt to broaden our awareness
- being truthful and relevant in your work
- Coming up with innovative ideas and tackling/solving challenging problems that advance the state of the field (understanding, knowledge, tools, ...)
- citations, good collaborations, etc...

11. **Question**: *In your view, what are the indicators of excellence in science and research?*
Answers:
FEMALE (tot. 11/13)

- number of publications , number of nobel prizes, number of women
- Good-quality publications, as well as collaborators who have fun at what they do!
- How many people your research reaches.
- the result: papers, citations, not your position.
- When theoretical prediction matches with the experimental results.
- Original ideas in published papers.
- Having some substantial results that help to carry the research forward

- nobel prize
- If 300 years later people are still talking about it, then it was probably excellent.
- Multi diverse group.
- If an institution has policies which enforce the above.

MALE (tot. 32/38)

- Good understanding of the physical and philosophical aspects of a mathematical formalism.
- Probably the number of publications, h factor and so on are good indicators, but we can do better
- Publications, citations, awards
- Don't know
- Number of Citations/Papers/Collaborations/Co-authors vs Papers as single author
- The revolutions a paper or idea can lead to. Example: Emily Noether. She changed our perception of reality at large. This is my indicator and definitely not the institutionalized and close minded number of citations.
- Impact of the produced works in the field. Citations.
- Number of citations and number of publications in high impact factor peer-reviewed journals.
- The smile
- Good papers, rich collaborating networks, being a good lecturer
- Probably how much scientific community can engage people into science and critic thought.
- Eloquence, leadership and experience
- Hard work
- Publications in well regarded journals, number of citations (although this is not a very good metric), "renown" (poorly quantifiable and again not always very good)
- attend many conference as a relator.
- I don't think it is not even a quantitative parameter
- Originality of the work, impact on the field and honesty with your own results.
- The good and interesting publications.
- Creativity (i.e. thinking out of the box), curiosity

- Productivity
- Number of useful papers and patents, application in industry and everyday life
- Journal citations, being invited to conferences.
- Collaborative social dynamics, Performance and delivery of academics, innovation and creativity, and constant grittiness reputation, citations, prizes, publications in top journals
- Usual indicators just care about the numbers (publications, students...)
- Quality of research papers should be the main indicator. It's however difficult to judge this, and current methods, such as h index, might be biased
- Personality traits might show this but recent scandals have shown that, especially in regard to integrity, this can lead to false conclusions.
- if you are able to produce some new theory, which solves a problem many attempted to solve before you
- Many papers and publications
- An experiments
- many citations on papers
- Very difficult question, funding bodies generically fail to answer this question, so I am not sure if I am able to

12. **Question**: *Historically, women have been stereotyped as being untalented at mathematics. Can we affirm the same nowadays?*
Answers:
FEMALE (tot. 13)

    - Totally no, because recently we can see that in many countries women are the most excellent students in mathematics at high school
    - No - a number of famous mathematicians are women.
    - Not really. Stereotypes on who is good or isn't at maths seem to have many more factors than just gender coming into play. (Eg. Nerd girl will be seem as better at maths vs athletic jock.)
    - yes the prize distribution in maths confirms it. the result is important but this is about the discrimination also
    - Of course not.
    - No
    - I think this stereotype is only held by a small percentage of society. This stereotype is incorrect.

- No. Maybe there are less women mathematicians, but they are definitely talented.
- yes (2/13)
- In less sexist countries (like Scandinavian countries) women outperform men at math.
- No! More and more women are joining science
- The stereotype still exists, but it is not true.

MALE (tot. 38)

- No. There are many women mathematicians.
- No (13/38)
- I don't have enough statistics, but I have a lot of friends who don't like maths for both genders
- No, never
- No. Your chromosome has no effect on your ability to do maths. The social effect imposed upon one due to their chromosomes though can greatly affect whereas they feel secure and confident to follow a stem career.
- I do not think so. I think the idea has changed in time, even if some improvements are still required
- This stereotype is a thing of the past.
- Yes, sadly I think this is still a major belief.
- I do not know. But I.am. pretty sure that when they are born they are not thought to be mathematitians.nor anything similar.
- No, I know women researchers who are excellent physicists and mathematicians
- Of course not!
- No! most of my women colleagues are better than me in maths
- I think they are as talented as men in maths, but they are pretty less than men, but not because they don't have these kind of skills.
- No, they are more talented in Mathematica
- No, I have had plenty of classmates and friends that were excellent in maths.
- It's a stupid thing.
- It is unfunded
- Yes, in some places at least nothing changed
- Possibly in some countries/states.

- Yeas!
- The stereotype survives, in certain countries more than others, leading to less girls taking STEM subjects
- I don't see this stereotype within academic environment, although it is still present in society
- No, not true
- Most definitely not. Some of the best mathematicians I met are women.
- not in my experience
- Probably Yes.
- Not in my opinion

13. **Question**:*Many people believe that a possible gender gap in STEM (Science Technology Engineering Mathematics) fields can be explained by biological differences between men and women. Do you have an opinion on it?*
Answers:
FEMALE (tot. 13)

- I think that this is more dependent on the social constraint
- I am not sure about this.
- There may be a small biological factor, but I think social and cultural factors should be weighted far more heavily.
- I do not believe. the force may differ but effort is much more important
- Yes. I think it is not true.
- No
- I think it is almost 100% societal and not biology.
- That is meaningless. It is up to an individual to decide how much effort they can put in their work, regardless of gender.
- I don't agree
- Not true
- Strong opinion against it. There are countless barriers preventing women from succeeding as much as men in STEM: caring responsibilities, absence of role women, being underrepresented in decision panels, stereotype threat, gender pay gap... It's interesting to note that women perform better at math in countries where they are not expected to perform worse.
- I do believe that women and men have different biological differences. But this is not an excuse for this gap to exist.

- Biology makes no difference in ability. What about intersex people? Are they excluded from STEM 50% of the time?

MALE (tot. 37/38)

- I believe that the main source of this gap is the society. I am not a biologist though.
- Probably they are right
- At most it could be due to a different way of thinking. Anyway, I don't
- No (5/37)
- Could be, there are very interesting works about that ("norwegian problem" documentary, if I recall correctly)
- No. Social differences.
- I think this cannot be proved. Therefore I do not see any reasons to believe it true.
- I do not think that this gender gap is due to biological references.
- Fruitful research is time consuming and women face pregnancy time restrictions
- I don't have.
- I think that is very unlikely. I have not heard of any study confirming it (which, if it existed, would have been largely spread in our patriarchist society), and I think the differences are much more likely to come from social prejudice.
- It cannot. It is purely a cultural thing.
- Biological differences have nothing to do whit gender gap in STEM
- I think this is mostly because stereotypes and lack of scientific divulgation for women in the past.
- Disagree. Much more likely it is caused by societal pressures including expectations and upbringing leading people to regard certain subjects as "for men" or "for women"
- I totally disagree. Men and women have similar skills for sure.
- I think it is rather cultural than biological. It is all about how we are educating our young students. They perceive that STEM is for men and arts are for women but it is not the reality.
- There must be biological differences, but I have no clue what they are. I think that differences between individuals are more significant.
- Yes I have an opinion .... I still believe that socialization and gender-specific role models play a far bigger role

- It is a societal problem
- Biology has nothing to do with it
- No, however if you repeat to someone that one can not be good at something, one will never try
- I disagree
- I don't think research in this area, particularly on the brain, has yet reached any conclusive evidence either ways. In this situation, the null hypothesis seems the most plausible
- I don't think so. It is always social. However maybe social finally became biological after so many years.
- I think this doesn't make much sense
- The gap can be explained in a different way, but the biological difference is true.
- I don't agree with it. While men and women have some biological differences(one carries children for example) I am not aware of
- conclusive evidence suggesting that there is a biological source to this gender gap. Hence having the attitude that the reason is biological hampers the improvement of this gap. And if, say, there is some difference it cant for sure not explain the 90-10% ratio in theoretical physics.
- in my opinion the roots of this gap are not in biology, but in the society we live in. Since we are kids they teach us what kind of job is more suitable for your gender
- It might be true.
- STEM is sold more heavily towards men
- see discussion at dinner yesterday ;-) (yes : babies)
- any difference is cultural in my opinion

14. **Question**: *Name at least 10 famous male inventors*
    Answers:
    FEMALE (tot. 11/13)

    - Newton, Galileo,
    - Tesla, Marconi, Newton, Einstein, Maxwell, Galileo Galilei, da Vinci, Kepler, Peter Higgs, Adam Riess
    - Wright brothers. Alan Turing. I'm not going to get to ten.
    - Edison, Einstein, Steve jobs, Paul Dirac, Friedman,
    - Thomas Alva Edison, Tesla, Benjamin Franklin, Charles Babbage, Galileo Galilei.

- Tesla, Turring,
- Nikola Tesla, Leonardo da Vinci, Thomas Edison, Alexander Graham Bell, James Watt, Charles Townsend, The Wright Brothers, Alan Turing, Charles Babbage, Benjamin Franklin
- Galileo, Fibonacci, Maxwell, Boltzmann, Einstein, Curie, Eddington, Kelvin, Hertz,
- Meucci, Leonardo da Vinci, Steve Jobs, Bartolomeo Cristofori, Archimede,
- Da Vinci, Graham Bell, Edison, Tesla, Touring,
- Einstein, Maxwell, Faraday, George Stephenson, Archimedes, Newton, James Joule, Peter Higgs, Gauss, Alexander Graham Bell.

MALE (tot. 36/38)

- too lazy on this one
- Leonardo Da Vinci, Galileo Galilei, Isaac Newton, Guglielmo Marconi, Albert Einstein, Paul Dirac, Enrico Fermi, Gauss, Zeldovich, Niels Bohr
- Nikolai Tesla
- Edison, Tesla, Frankling,.... Not good at names, but I could recall 10 guys
- Edison, Tesla, da Vinci, Archimedes, Ford, Bill Gates,
- Leonardo da vinci, Nicola tesla
- Galileo Galilei, Leonardo da Vinci, Bell, Tesla, Edison, Hertz, Wright brothers
- Edison, Graham Bell, Da Vinci, Galileo, Benjamin Franklin, Tesla, Hertz, Christopher Nolan, Alan Turing, Charles Babbage Peter..
- Da Vinci, Edison, Tesla, Archimedes, Einstein, Newton, Maxwell, Darwin, Neumann, Heisenberg, Ehrenfest, Boltzmann, Schrdinger
- Eddinson, Thomson, Pauli, Newton, Friedmann, Einstein, Archimedes, Laplace, Maxwell, Boltzmann
- Tesla, Edison, Watt, Mario Molina, Elon Muskov,
- Tesla, Mario Molina, Edison, Watt, Elon Muskov, Da vinci
- Tim Berners Lee, Charles Babbage, Nikola Tesla, James Watt, Isambard Kingdom Brunel, Thomas Edison, Alexander Graham Bell, De Havilland, Sopwith, One of the Wright brothers
- Einstein, Faraday, Maxwell, Boltzmann, Bell, Fermi, Majorana, Oppenheimer, Fermat, Newton
- Einstein, Newton, Fermi, Tesla, Wrigth brothers, Jobs, Marconi, Bell, Maxwell, Darwin.

- Tesla, Edison, Elon Musk, Steve Wozniak, Steve Jobs, Benjamin Franklin,
- W. Heisenberg, W. Pauli, E. Schrodinger, H. Poincare, H. Lorentz, M. Born, R. Feynman, E. Witten, M. Planck, L. Boltzman
- Zuse, Tesla, DaVinci,
- Einstein, Pauli, Bohr, Dirac, heisenberg, poincare, Planck, Friedmann, Lemaitre , Hubble
- Tesla, Eddison, Da Vinci, Bell, Dirac, Pauli, Newton, Einstein, Higgs
- Bill Gates, Max Planck, Tesla, Albert Einstein, Boltzmann, Cauchy, Freidmann, Lemaitre, Robertson, Abel Bell, Wright brothers, bill gates,
- 10?! :) Leonardo, Marconi, Franklin, Fermi, Archimede, Pitagora, Pasteur
- Dirac, Einstein, Newton, Marconi, Born, Bohr, Feynamn, Weyl, Walker, Lemaitre
- Tesla, Morse, Edison,
- Meucci, Morse, Tesla, Edison,
- Archimedes, Edison, Watt, Wright, Da vinci, etc
- Ada Yonat, Mari Quri, Ruth Lewrence
- Eddison Tesla Right Bros Faraday Archimedes Anaximander Ampere
- Thomas Edison, Nikolas Tesla, James Dyson, Elon Musk, Mark Zuckerberg, Alan Turing, Tim Burnerd Lee,
- sorry, too lazy
- Franklin, Marconi, Leonardo,

15. **Question**: *Suppose an equal numbers of male and female applicants, do you think female researchers are less likely to be successfully funded by research granting agencies?*
Answers:
FEMALE (tot. 13)

    - Yes, i think this
    - I think it depends on which entity is providing the funding.
    - Maybe. Depends on who's in charge at the agency.
    - No (2/13)
    - Yes (4/13)
    - Never.
    - If the awarding of the money is not blind there could be a chance of this happening if bias is not controlled in an appropriate way

- Maybe or maybe not. I don't really know.
- Yes, it actually happens

MALE (tot. 37/38)

- I do not know (4/37)
- No (16/37)
- It could be
- They shouldn't
- Yes (6/37))
- I do.
- No, I think that dependes on the proposal research
- I think it's the other way. Women may have more opportunities nowadays because universities have to fill a gap and statistics says women apply less than men.
- No, I do not think but really I do not know
- Unfortunally yes, but not beacause they are not smart as men.
- I don't think so it is about merits
- No. It has nothing to do with biology
- I hope not
- this might happen
- Nowadays that is changing to some extent in some departments as there is a higher focus on women inclusion. In the past it was much worse and still many departments have some bias I expect.

16. **Question**: *Does the lists on publications reflect the gender distribution in the field?*
Answers:
FEMALE (tot. 13):

- I think they do not reflect at all the gender distribution
- Probably, yes.
- You can't tell from the (initial) (last name) style of listing authors, but otherwise yes.
- yes women cosmologists are rare, compared to other fields
- Yes (2/13)
- No

- I don't know you would have to look at the statistics. I wouldn't like to guess
- Yes it does
- Don't know
- I don't know, but there may be en effect due to unequal caring responsibilities weighing more on women on average
- No. Complication in identifying names.
- Not sure.

MALE (tot. 36/38)

- I don't know (5/36)
- I do not think so
- No (5/36)
- no idea
- No. Men are dominant. Women are forced to be weaker and hence their work will be stolen and their rights not reserved. Evidently the contribution of women is not as highly appreciated as it should. Same with all forms of Oppression.
- If the bias is present, then publications are more performed by men
- Yes (10/36)
- It can be.a first order approach but it would require further research.
- Maybe, by knowing the number of papers published we can know the number of authors (women and men) in the field
- Impossible to know for sure as many people publish in "initial-surname" format
- Probably not.
- I think so
- Probably
- I don't know, provably yes
- Yes, to some extent
- yes i think it does
- Yes, in a way
- On average yes
- No, the science is in a progress and more and more women come.

17. **Question**: *In your opinion, are women underrepresented in science?*
Answers:
FEMALE (13)

- yes (9/13)
- No - I think it's more a question of why there is a discrepancy in the number of males and females who opt for STEM subjects.
- Yes. I attended a summer school with a ration of women:men 10:1, which is way too low. Similar with conferences and science departments, but not as extreme.
- yes, because if you are a women researcher, you have more responsibilities than men's about your family.
- No

MALE (tot. 38)

- No (5/38)
- Probably yes, but it's not a matter of "representation"
- Honestly I don't know, but if we are doing this questionnaire, probably it is
- Yes (16/38)
- not sure
- Yes, largely
- Unfortunately there are less women in science than men. Hopefully in the near future women would be well represented in science
- I don't know, seems nowadays there are a lot of fundings and science programs for women only but at the same time I think there's still not enough women in the field
- yes, in some field there are more differences than others
- Probably
- Yes, at least in theoretical physics
- While there is a far smaller gap among students, it is undeniable that women are underrepresented in faculty
- Yes in sheer number, possibly in terms of voicing their opinions.
- Very much
- yes, i think this is due more to a social pressure for women to study in not scientific faculties
- Dramatically so.
- the majority of physicist are probably males
- No, it depends on papers and good research.

- This may depend on the definition of 'underrepresented' – if they should participate in equal numbers then yes, but if they don't want to do science then it's less clear?

18. **Question**: *Suppose that in a conference the speakers are not balanced in terms of women, minorities,etc.. what do you think about it?*
Answers:
FEMALE (13)

    - It happens very often
    - I'd expect the speakers to be chosen only in terms of merit.
    - Conferences reflect the makeup of the broader science community. More could be done to encourage diverse conference attendees, but it needs to start with more diversity in the field in general.
    - comparatively No.
    - if the field is dominated by men, then it's normal that the conference is not balanced. We should not force percentages on conferences etc, as if there are protected species among the participants. Instead we should face the real reasons that led to the field being dominated by a certain gender etc
    - I prefer a good talk than the speaker's gender.
    - The best people should be selected, although it is nice to see women who are leading there field and I find it inspiring. It is always noticeable, but it is also important to include someone only if they deserve it. Doesn't matter of they are men or women.
    - it's the usual story...
    - I don't care
    - Depending on the country, it may or may not be difficult to get it even recognized as a problem
    - I can be okey with that if the people who speak are the best ones in order to carry out that task.
    - Sometimes you don't notice. In fact, it's always more obvious (and a nice surprise) when speakers are 50/50 men/women.

    MALE (tot. 37/38)

    - The gender/ethnicity of the speaker is none of my business. I just want to learn new staff
    - The speakers should be selected using merit criteria.

- It could be due to anything, so I would try to do not think about it. Surely if there are 9 men and 1 woman, it seems suspect
- If it wasn't on purpose, I don't mind
- nothing special, just listen them
- Generally I'm concerned with the content of the talks, not with the gender, color, etc. of the lecturer.
- We live in a problematic capitalistic world. The cure for cancer died in the beautiful mind of a subsaharan child with the potential to become the greatest scientist in history. We have merely politically evolved from an apartheid-imperialistic nazi/fascist infused Era of the 19th and 20th century. Oppression of minorities and women is the way capitalism works and everyone who chooses to ignore this for their petty little gender equality agenda is part of the problem. We cannot fight for gender equality without fighting for a unification of humanity under one great sociopolitical system for all from all.
- I think it is a mirror of a gender biased vision of scientific formation
- The speakers should be chosen based on the quality and relevance of work to be presented, regardless of gender etc.
- Representative
- Its ok.
- I think that is wrong and should be changed.
- That it is a normal (not good) conference.
- Maybe the speakers were invited to train researchers with different background
- I think it should be the same in both parts
- Not always possible to provide proportional representation (especially in fields which are already highly imbalanced, but statistically significant deviations from the expected proportions may indicate an issue in the conference organization
- I think it could not be possible that the speakers could be balanced.
- Nothing at all, it's about their work
- Women should have more or less the same representation (they are half of us all). It is normal that minorities are underrepresented (hence the name).
- Nothing. I care about the content of the speeches not the speakers
- disappointing
- I think that the sex is irrelevant. The speaker should be able to give a proper lecture independently of his sex
- Lower number of applications or bad selection, depends on balance in the audience also

- Nothing as long as the speakers are knowledgeable of the subject.
- It happened already, I raise the point to the organizers.
- there should be a balance
- It depends of the topic of the conference, but it is always better to have balance
- If the distribution is very different from the diversity of the field i would find it odd.
- Nothing about it
- I am not surprised as in research itself it is highly unbalanced. Conferences mirror the research field. Some push to include more minorities is welcome in my eyes.
- I do not care as soon they are good speaker.
- It might be not ideal
- An opinion. But any good scientists have to be pushed
- Ok
- This is bad
- Certainly not optimal, the organizers should at least have tried (but maybe they did and failed)
- there should be an effort toward 50%

19. **Question**:*Name at least 10 famous female inventors* **Answers**:
FEMALE (11/13)

    - Marie Curie, Rita Levi Montalcini
    - Mary Shelley invented science fiction.
    - Marie-Curie, Meitner, Randall, Franklin
    - Marie Curie,
    - I don't know any
    - Hedy Lamarr, Emmy Noether, Rosalind Franklin, Lise Meitner, Marie Curie, .. oh no I can't think of more :(
    - M.Curie, Meitner, Rubin, Mangano
    - Ada Lovelace,
    - Ada Lovelace,
    - Emmy Noether, Jocelyn Burnell, Ada Lovelace... the fact that answering this question is really hard is reason enough to demand more women in science.

    MALE (tot. 34/38)

- I can not remember even 1 name.
- Marie Curie, Rita Levi Montalcini, Margherita Hack, I don't remember other names now, but there are at least other 6 women that I remember and I could mention!
- Marie Curie
- Again, I'm really bad at names, but I don't recall 10 females inventors
- Emily Noether (not inventor, mathematician)
- Goeppert Mayer
- Marie Curie, Emmy Noether
- Marie Curie, Emmy Noether, Vera Rubin, Katherine Johnson, Dorothy Vaughan, Mary Jackson, Beyoncè, J. K. Rowling, Mary Magdalene, Mother Theresa
- Helen..
- Noether, Curie, Atwood, Boole
- Marie Curie, Noether,
- Vera Rubin, Noether, Curie,
- Nother, Curie
- Emmy Noether, Ada Lovelace, Rosalind Franklin, Marie Curie, Mary Shelley, Elizabeth Fry, Florence Nightingale, Margaret Thatcher
- Curie, Rita Levi Montalcini, Margherita Hack.
- I can't recall
- M. Curie, V. Rubin, R. Franklin, L. Randall, C. deRham, C. deWitt , Y. Choquet-Bruhat, L. Margulis, A. Lovelace, E. Noether,
- Lovelace,
- Marie Curie, Noether, ..?
- Curie
- Marie Curie, Vera Rubin,
- Marie Curie,
- I don't know!
- Noether, Curie, Vera Rubin, Lisa Meitner, Bell
- Marie Curie
- Marie Curie,
- Curie
- Curie
- Marie Curie
- uh oh! :)

Questionnaire: second part

1. **Question**: Same three questions of the first part
   Answers:
   FEMALE (11/12)

   - Equally (8/11); 2 for them, 3 for me; 2.50 each, provided my partner didn't perform worse out of negligence; 30 %
   - half-half (6/11);Discussion; 3 for them, 2 for me;$ 2.50 each, provided I didn't perform worse because I invested less time in the task;70%; largest part to them
   - Equally (10/11); I will give him the same amount that I receive

   MALE (31)

   - half-half (25/31); Less but dividing according to performance; 1000 to me and -995 to the partner; beers for everyone; This extra money is bad for partnership since it increase unhealthy competition. Consequently, I would divide it evenly; 0 for both (2/30)
   - half half (22/31); more but dividing according to performance; 66-33 ;Just learn about my partner and then keep the 5 for me; beers for everyone; Give more to partner; 0 each (2/30); 3.0; 3:2
   - 2.5 each (22/31); Listen to their decision; He should be kicked from the job; beers for everyone, the better for others, better also for me; Same amount for both (3/31); 0 ; $5 for colleague / $0 for me; I try to decide what she earn considering the quality of her task

2. **Question**: *There is a rule-of-thumb, that members of a minority group will stop noticing they are in a minority when more than about a third of people they interact with is made up of people from the group they identify with. Do you agree?*
   Answers:
   FEMALE (12)

   - Yes (7/12)
   - No necessarily
   - I don't know
   - Depends on the individual.
   - I'm not sure.
   - no

MALE (30/31):

- no (5/31)
- Yes (13/30)
- In some situations it is the case but it also comes from the working group to be able to interact with each other.
- I don't know, no idea (3/30)
- no opinion, i never felt as a minority
- As I do not belong in a minority group I can't really say. It is true that minorities cluster but I can't judge how they feel once that has happened
- probably depends on the minority group and the problems they encounter as part of a mintority group
- No opinion
- Sounds reasonable
- No sure.
- well, then they are no longer really a minority? And how do you deal with a case where there are four different identities or more? I don't think so. Also if you are refused 1/10 of the times, if it is because you are different, i think you could still believe you are in a minority
- Not so much

3. **Question**: *Which kind of diversity do you see in your workplace? Which kind of diversity is missing in your workplace?*
   Answers:
   FEMALE (11/12)

   - Ethnic diversity is prominent. Gender diversity is okay but can be better.
   - Black women
   - Ethnicity, religious beliefs, age
   - We have all diversity in the workplace across gender nationality, sexuality, disability etc
   - There are 1/3 women, openly gay people, people of many religions. However, nearly everybody is white, and the vast majority was born in a rich country.
   - I haven't started my PhD yet so I don't really know. I think my future department is quite diverse (women, ethnic minorities, LGBT (maybe?))
   - There is a degree of ethnic and gender diversity, but there could be more.

- There are people from different countries. I also notice religious diversity, as well as the inclusion of people with special needs. What's missing: ethnic and cultural diversity.
- gender, culture, education
- I think that in italian universities is still missing a representation of minorities, like women and migrants.

MALE (26/31)

- more male than females
- 50% foreign people, 30% women
- Mostly a male majority. A more presence of female scientists might be needed.
- None
- Gender, Age and Racial. My workplace is quite diverse.
- Very few women in my department
- my work environment has some gender, cultural and origin diversity, some particular origin might be under represented but i'm not sure about that
- Female/male is ok. I don't feel there is anything missing
- People from around the world
- We have a goat, we have diversity.
- More racial diversity could be, but taking into account locality it isn't so bad
- We have diversity in Ethnicity, nationality, gender, political view, social view, ...
- There are many nationalities in my department yet when it comes to gender and race diversity it is severely lacking
- I see gender diversity and some ethinical diversities. I don't see any sexual orientation diversity disproportionately few women and certain ethnicities
- I think that my workplace could have an improvement if more non-local people join it
- Mainly all my colleage are men but from different places around the world. There is a huge lack of women.
- I see ethnic diversity. We are lacking gender diversity
- Sex diversity
- There is no diversity
- Racial/economic diversity, gender diversity

- I see diversities; I do not think there are any diversities missing
- Very diversified racially, not by gender
- There is a lot of people working in different things. This is the kind of diversity that I like to see.
- The workplace is diverse enough
- missing: race diversity
- gender and nationality for sure. I don't know yet if there are diversity about sexual, religion and/or political orientation

4. **Question**:*Do you think that diversity can foster a climate that allows more enrichment in a workplace?*
   Answers:
   FEMALE (10/12)

   - Yes through exchange of ideas from different perspectives
   - Yes, more upbringing ideas.
   - Yes(5/9)
   - Yes, if people are willing to use that diversity to their advantage.
   - no, it affects in a negative way
   - I think that diversity brings always an enrichment,

   MALE (30/31)

   - yes (17/29)
   - Possibly
   - Depends on initial conditions
   - Of course! (3/29)
   - Yeah because we can play with the goat.
   - Definitely (2/29)
   - yes. It makes.people.more.openminded.
   - No
   - Each person carries a contribution. Diverse brings more to that
   - Indeed
   - Yes, because in order to accept diversity (because everyone is a little bit scared by diversity at the beginning) you become more versatile and open-mind

5. **Question**:*Is gender equality a concern for men?*
   Answers:
   FEMALE (12):

   - Yes (4/11)
   - Yes. Men are also treated in an unfair way in many cases. And everyone should stand up for women in general.
   - I don't know
   - Yes - in general
   - To some of them: they're not all equal ;-)
   - Yes, sexism and its effects harm men as well as women. Men should not be looked down on for wanting a career in flower arranging or dancing, just as women should be able to become mathematicians or Formula 1 drivers.
   - I think not (2/11)
   - Yes, I think that the entire society must care about gender equality

   MALE (31):

   - for some yes
   - Yes (13/30)
   - For certain jobs, yes. It is not common for men to be the caretaker and in some instances, they are not considered to be men since they are not the breadmakers.
   - I dont know.
   - It should be
   - it is for me
   - I think it wasn't 10 years ago but now it maters for mens
   - No (4/31)
   - And for the hole society
   - In general,.sadly, I do.not think so.
   - I think that, statistically, it is not. And when it is, it is usually not enough of a concern for us men to make the efforts necessary to become fully aware of every aspect of sexism and renounce our gender privileges.
   - For me personally it is, but probably it is not on average
   - Never
   - Don't know the opinion of every man neither I'm aware of research on the statistics of gender equality concerning men's opinions.

- yes, because some people doesn't want lo lose power. Personally, I am only a little bit worried about a possible inverse inequality in the future against men
- Yes, but we have to think also of all other kinds of inequality!

6. **Question**:*Do you consider plausible the fact that woman does not pursue careers in STEM (Science Technology Engineering Mathematics)?*
   Answers:
   FEMALE (12)

   - No (3/12)
   - Yes, but unfortunately I don't understand the reason
   - I don't understand this question... do women not want careers in stem? Well in general yes but only because of societal influence from a young age
   - Yes, it's a result of societal influences
   - It's plausible in the sense that there is a lot of discrimination against women and therefore they will be discouraged from pursuing such a career.
   - Possibly. There are lots of factors to consider.
   - In general, less females than males seem to prefer these subjects.
   - No it is not meaningful.
   - yes
   - No , I think it is not reasonable.

   MALE (30/31)

   - yes (13/30)
   - No (7/30)
   - Yes due to pressure from the society to have family at their thirties.
   - yes, they might be less willing to pursue this career
   - For sure.
   - Maybe
   - It can be a partial reason for the disallowance as they are not stimulated to do so. even worse, in many cultures, they are told its not a job for women. So the reasons are environmental not the fact that their sex is female
   - I think it is a possibility, but not justifiable or right
   - No, I think that's social prejudice and should be dealt with.
   - They are usually brainwashed by society norms and the perceived ideal woman. Sometimes maths is considered tough and women are imagined too emotional to engage in that.

- Question unclear
- I don't know. Not in principle, but I have lots of female friends that don't like maths (the majority of them)

7. **Question**:*Do men and women have different values and preferences, producing gender discrepancies?* **Answers**:
   FEMALE (12)

   - Don't know
   - Yes, based on the restrictions imposed upon them
   - No, and if so, this is because of society
   - Yes (3/12)
   - No in general
   - Yes, as a result of societal norms, not intrinsically
   - No, all differences are due to society and culture, not biology.
   - Different values: This depends on the individual. Different preferences: This depends on what the object/issue in question is.
   - No
   - Maybe they have different inputs from the family and the society that causes different behaviors.

   MALE (30/31)

   - no (9/30)
   - Possibly
   - No by default, yes in the context of our society.
   - Yes (7/30)
   - Yes to all.
   - could be
   - No. Case by case these things differ but not from a gender point of view. Within the same gender one can find a very big discrepancy when it comes to values and preferences.
   - no, I think that society creates some standard model and many people want to accept them to feel accepted themselves
   - Yes, probably largely down to societal pressures
   - Yes, but as.a cultural result. I do not think it has a biological origin.

- I think they do, but mostly because of society: there should not be such a difference in an equalitarian society.
- Yes, but they are in turn induced by a gender biased education
- Everyone have different values and preferences.
- Not in general
- probably
- I think so.

8. **Question**: *In your opinion, do women advance more slowly than men?* **Answers**: FEMALE (12)

    - Yes (2/12)
    - Not at all
    - No!
    - No (3/12)
    - I think in general yes but I think I would agree more if you said mothers instead of women
    - Yes, primarily as a result of caring responsibilities
    - Yes, due to discrimination.
    - Yes, mostly due to societal expectations and disadvantages
    - Yes, this is what I can see around me actually.

    MALE (30/31):

    - No 18/30
    - career advancement seem slower for women
    - Yes, social pressure is always pushing them back
    - Yes to all.
    - Advance in what?
    - Yes
    - Yes, in certain contexts - due to institutional issues rather than the fact they are less capable
    - Not at all. It depends on who we are talking about.
    - Not at all (2/30)
    - As for my personal experience, no
    - I don't know

- it is possible

9. **Question**:*Imagine your are taking a science course. Would you perceive a male or female teaching assistant most competent. Why?*
   Answers:
   FEMALE (12)

   - Male
   - No it doesn't matter to me
   - Neither of the two. Both can be equally competent.
   - Neither
   - It doesn't depend on gender
   - Rationally: no difference. Irrationally: male, because my society taught me so
   - It's hard to say, as I have never been in this situation. I would work hard to counteract any unconscious bias that certainly exists in my mind.
   - Depends how competent they actually are. I wouldn't judge until I've experienced their teaching.
   - Gender wouldn't make a difference to me.
   - female is more competent because they need to succeed.
   - NO
   - I would not see any differences.

   MALE (31)

   - No (2/30)
   - Both are equally competent
   - Neither. As long as the teaching assistant is knowledgeable of the subject, then it is fine.
   - No. Science is not affected by the gender of the lecturer.
   - There is no difference for me
   - Neither, I would rate their competency based on their ability to help me.
   - I do not care
   - i won't judge by the gender
   - Either will be good o bad
   - Both. Why should be a difference?
   - I think black people is the most competent.

- No. They can be equally good.
- I value the teacher's capacity to transmit knowledge
- I would not mind. I would judge based on the interaction not the gender
- I don't mind. It's probably the same
- Whichever demonstrates most ability - their gender is clearly not relevant to their competency
- I do not think that genders are linked with personal competences in science
- I.hope.not.
- No. All that matters is their expertise
- Female
- I think that the most capable one should be the teaching assistant.
- None, I don't care about their gender
- Women in science are generally more competent, because due to the existing bias they have to perform better on average than men in order to get the same position.
- No, I perceive both in the same way. In my life I have met both male and female researchers who were very good at their job in the same way.
- It doesn't matter
- No. Gender has nothing to do with competence.
- I would not have any pre-conceived opinion before the course. My judgment will solely depend on their proficiency at teaching, irrespective of gender.
- Difficult to say, but admittedly the possibility exists
- I want the most competent. If it is the female, I want her
- It would be exactly the same, I would judge him/her from competence

10. **Question**: *What can be done in order to increase the attractiveness of STEM domain for women/minorities..etc?* **Answers**:
FEMALE (10/12)

    - Give more funding
    - Encouragement with examples of successful women in these fields
    - Early introduction to these topics in education
    - Intervention from a very young age - regarding societal norms
    - Change the way scientists are portrayed in the media, tackle poverty, implement affirmative actions, implement policies helping people with caring responsibilities, having diversity at the top so that all of this is a concern to policymakers

- Hard to answer in such a small space! Have more women in senior roles eg professors, this gives early career women something to aspire to and see that it is possible.
- Better opportunities for career advancement.
- Women in jobs relating to STEM subjects (such as engineers and architects) could give talks in schools during career seminars. to educate them and encourage them that they can do also, simplify their lives (family, responsibilities...)
- Make sure that their environment points out the importance of science and boost equally their self esteem
- We can give more grants to minorities and also change a bit the educational approach at the primary school

MALE (29/31)

- start to change their education at young age
- Offer more positions for women/minorities
- Allowing for women/minorities to decide for themselves which careers they want to pursue. This should not be only restricted in the STEM domain.
- i do not know.
- Teach kids that the STEM is open to everyone, show more good examples of successful women/minorities, add benefits for them (additional grants etc)
- Encourage more girls in schools at a young age.
- Increase the representation
- less cultural stereotypes that science are for men
- Try to stop bias, make more laws to stop discrimination, educate and inform people...
- Scientific diffusion in early years of school
- Just let black people do the job, they know what to do.
- Accept more women
- Not know
- Provide positive role models
- Courses and creation of awareness regarding the issues. Improve the educational focus on STEM that women receive. Help in the case they want to get children without making it a career issue. Try to create role models for the younger generations.
- creates bigger and mixed group selectors

- Increased recognition of challenges and difficulties faced. Change of societal values to show that women can and should pursue STEM subjects etc.
- We have to let people pursue their inclinations and let them develop their skills (in general not only in science!)
- Leaving aside the education system. Promote internal reflexion in scientific community and encourage them to join to discuss their situation and support their actions
- Reinforce STEM related issues during school
- Education
- Better science advertising at early age
- The mentality of western society has to change, and that goes from primary and secondary education to cultural expressions such as music, cinema, literature, tv shows, advertisements, beauty industry, etc. As well as proper laws against sexist violence and the universal right to abortion.
- Change the entire educational system, the messages conveyed by our societies and provide courses on the topic at the level of families, no matter if they are involved in science or not. In fact, I think the problem is deeply-rooted in our society.
- Create more female role models in science which should marketed on social media and tv
- I don't think that discrimination (either positive or negative) is good in this case.
- First there should be an array of fulfilling career opportunities, that must be conveyed at an early stage in the educational programme. That may be difficult as you need to increase the attractiveness for the minority group without also increasing the attractiveness for the majority group
- Show better the beauty of science during the middle/high school
- Increase STEM courses during the school, encourage excellence independently of social extraction, sex, religion, and so on.

11. **Question**: *Do we need a policy in order to include as much as possible all the diversity in your research domain? If yes, outline few ideas on how an inclusiveness process could be.*
Answers:
FEMALE (9/12)

- Make inclusion less stringent in terms of nationalities and genders
- Early education, but not positive discrimination

- No. The best applicant should be awarded the position regardless of gender or ethic background
- We need a policy that means all positions and tests are blind - to get the best people - not positively discriminating 1) It should be a stated goal. It helps acknowledge the problem. 2) In the UK, funding is subject to satisfactory result in the gender diversity Athena/SWAN program, and I believe it works. 3) Organize diversity events (like this one!) 4) organize outreach events aimed at underrepresented categories 5) create 'safe spaces' where underrepresented people can express themselves and voice their issues 6) ban open discrimination
- Yes, I think such policies are helpful. I think hiring decisions should always be made up of a panel, and that panel should have at least one woman on it. This may help to counteract bias.
- Anonymize job applications.
- I think the presence of women in STEM subject areas can mainly be increased by making it more possible for women to work flexible hours, subsidizing child-care centers etc...
- Yes, the inclusiveness process must begin at the high school , with activities for women students focused on science and basic programming languages

MALE (27/31)

- yes, change the way education and research are perceived from elementary schools.
- Yes (3,27)
- No, freedom of choice of subject is what should be taken care of. If a policy is implemented, you would be favoring a diversity but possibly neglecting other potential workers which would be more capable in the working place.
- We need a change of policy in more fundamental level. All the inequalities in our society comes from the underlying economical dynamics.
- Yes, add additional grants, set lower requests
- I think maybe we need to remove the gender bias, but not force equality. This could be done by taking applications without names or gender/race, and judging them based purely on their research.
- educate young people to get rid of their bias, when they will be the one deciding diversity should be represented
- Yes. Based on statistic try to arrange a representational distribution of people in each sector.
- Yes, but the process have to be fairly for all parts in order to avoid discriminations.

- Yes, we can use the army to preserve the peace and order in the galaxy.
- Start from improving school system on that
- Ideally, this should be an intrinsic behavior in academia to favor diversity and the opportunities thereof. So rather than providing policies
- Yes, when it comes to hiring a specific policy needs to be created. The mandatory quota works to some extent but has as main issue that women face scrutiny in their environment as they have been perceived to have gotten the job unfairly. Of course in a system that favors white males, giving a boost like that to women is completely fair yet it does not help in their inclusion on the workforce ad the removal of biases/stereotypes.
- Special budgets for female/minority students might be an intermediate way to go.
- we need to eliminate any limits, but not create a new order imposed from the top
- Ensure education of bias (both conscious and unconscious) so as to normalize a diverse workplace. Encourage students of all kinds to apply and to take up STEM subjects, as well as adopting (as far as possible) anonymized admissions processes etc.
- It is something that goes beyond hiring processes. One of them is people have no access to resources .
- No. We need to make a blind selection of candidates
- No
- Yes. For instance, quotas should be applied in order to compensate gender bias.
- I think that what have been done so far is extremely good. The important think is to shift the values of our educational system in order not make the policies being felt as imposed.
- University is too late. We should begin the process at primary school, when the initial conditions are not tampered with. Have female scientists visit school to share their ambition.
- From my perspective these would be discriminating policies. Considering research positions any policy should be just (qualitatively speaking) not fair, in order to get the best professionals for a given position.
- Whilst it is important to have diversity at the workplace, there should also be enough positions made available to make the academic career choice appealing.
- Depends on which diversity you are targeting, but probably difficult to achieve w/o some affirmative action like giving female assistant professors a 'free' postdoc. Also society needs to support women who want to work, with enough child

care places, etc I don't like the idea for the long-term, but surely it would be the best approach to solve the problem in the short-term.

- We need a policy that gives same opportunities to all, starting from the school.

12. **Question**: *The PhD students of today are the scientists of tomorrow, but their journey depends on a positive work environment in which they can thrive and improve. What do you suggest in order to thrive and improve your workplace environment in term of equality? Give just few examples.*
Answers:
FEMALE (9/12)

- Have some colloquium on Women in Science or similar. Also include school students in discussions to create a broader outlook since early age.
- No experienced enough to answer this question.
- Gender neutral CVs & signing papers
- Depression is a massive problem for PhD students and this should be addressed by allowing it to be discussed without the fear of discrimination and assistance in the form of counseling and support. I have no comment on gender equality because I don't think it is as big of a problem as mental health which I feel we should tackle first
- Eliminate 'bro culture' in favour of an environment that accepts human and cultural diversity
- Again, hard to answer because I haven't started yet. I would suggest the same as above- ensuring women are in senior positions to mentor the PhD students.
- Working environments can be great whatever the gender makeup as long as everyone is open minded enough to see things from another perspective and confront their own biases. Diversity training and awareness can help with this, which will have a knock on effect of making the environment more appealing to women and therefore helping create better equality and diversity.
- Having more postgraduate foreign students, especially from non-European countries. they should be openminded, hard working..
- We can cooperate more(in particular with people of other genders) and do research project with other phd students in general. More often I think that during the Phd the PhD students use to work only with their supervisors but it can be very useful to work with people who are at our level

MALE (21/31)

- when hiring somebody (or inviting a speaker) just look at the competences, not at her/his gender.

- Organise social events for students and staff
- Ensure that everyone treats every member of the workplace equally.
- I can not think of anything.
- Include more diversity in conferences and similar events so that all minorities feel comfortable to speak and enjoy.
- as above, make them aware of their cultural biases so they can work on that
- I really dont know.
- A competition enviroment
- We can make the bathrooms unisex.
- Improve the school system on that. By the time they reach university it is too late.
- flat hierarchies to encourage interactions with senior researchers
- Make an effort to boost intergender collaborations. Of course the improvement of gender/racial misbalance helps enormously. Create role models for all types of people(this means hiring tenure track people that are not solely white male).
- stimulate the mixing and exchange of ideas and expediencies
- increase recognition that women can and should participate in STEM subjects. Tackle the perception that female speakers are less competent and thus should be treated more harshly in seminars etc
- Inclusive talking, organize activities like this, act correctly with.everybody, etc
- Encourage young female students to follow a STEM career
- More chances to all
- Quotas. Women representation in phd's should be the same as in bachelor/master studies. Also, this kind of workshop should be done once every month, in every workplace, but in a more inclusive way (considering for example intersex people, too) and including group sessions for everyone (but mainly women) to say how they feel about their workplace and their career in terms of sexism. I think there are not specific further suggestions.
- Offer more scholarships to women.
- My present workplace is diverse enough, thanks to the excellent work done by the national research agency.

13. **Question**: *What, in your view, is excellence in science and research?*
Answers:
FEMALE (9/12)

- Something original and productive

- Teaching and nice work group to research with
- Creativity and understanding
- Carrying out scientific work that is not aimed at improving the publication list, but at actually advancing human understanding of Nature
- Good research, fair and open methods, diversity and inclusion, cooperation.
- New and innovative discoveries that benefit society.
- A thorough investigation, honesty in communicating results, humbleness and an open mind when it comes to discussion.
- the first law of thermodynamics was discovered independently at the same time by three scientists
- In my opinion excellence means working in an exciting and cooperating workplace on attractive and up to date scientific problems

MALE (25/31):

- producing new ideas that can give us explanations for yet unexplained topics
- An easy way to express your ideas and lead people
- Publications, working models for both practical and theoretical considerations and being recognized for your work.
- The ability to go through the current barriers in human knowledge.
- Create excellent environment and possibilities for individual development and developing of society as whole
- Producing honest and relevant research.
- High quality scientific production
- ability to get new ideas and communicate them
- Pure scientific success plus values as equality and freedom
- Hard work
- The good cookies from the coffee break.
- Papers and citations
- Discover things?
- Outstanding contribution to the human endeavor of expanding our knowledge.
- Answered in questionnaire part 1
- sharing knowledge and ideas
- High quality and impactful research and teaching
- Getting goid results using good methods

- Broaden our awareness
- Contributing to the progress of society, with scientific but also social achievements.
- The impact of your work in your field of research, compared to the state of the art. The number of citations can be a good index, but not perfect.
- Reproducible precise ground breaking results
- Relevant ideas for the research field.
- Making a significant contribution that will have tangible benefits.
- Produce a lot of good works/research

14. **Question**: *In your view, what are the indicators of excellence in science and research?*
Answers:
FEMALE (8/11)

- Healthy and cooperative work environment
- High teaching capacities
- Novel and creative original ideas published in journals
- If we're still talking about it in the long term, it was probably excellent.
- All of the above.
- The number of people reached by the research (whether they realize it or not).
- Good-quality publications, and collaborators who have fun doing research!
- Productiveness
- We can use the gender representation and the list of publications and codes but we must to think to new indicators

MALE (25/31)

- quality and quantity of papers
- Eloquence, leadership, creativity
- Citations, being invited as a speaker, recognition for being prominent in the field
- Deep understanding of the physical aspects of the mathematical formalism.
- Number of good papers, useful patents, equaility in society
- Citations on papers
- Originality, honesty and impact of research

- quality of scientific papers (difficult to judge)
- Always publications...
- Hard work
- To know how to do an integral.
- Papers and citations
- Not know
- Curiosity and creativity combined with productivity
- Answered in questionnaire part 1
- partecipate to many conference as a speakers and suggest and promote many other
- Publications in quality journals, "renown" etc
- People reception.of science production
- It is not quantatively measurable
- Good papers, equality, collaboration, good lectures
- As stated before, the number of citations can be a good index, but not perfect. You should always talk with the authors of papers in order to understand the different kind of contributions.
- Social dynamics, innovation and creativity, performance of academics
- Citations.
- Number of citations and number of publications in high impact factor peer-reviewed journals (not considering collaboration papers with 50+ authors)
- publications

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