Outline / introduction

The aim of this study is to identify gender-related inequalities during question time after oral sessions. To identify these potential inequalities in participation during the congress, the number of questions asked during Q&A sessions as well as gender of both the presenter and question-asker will be recorded (Hinsley et al., 2017; Lupon et al., 2021). A detailed outline of what data we are collecting is described below.

Moreover, to ensure our study has practical implications, we want to investigate if the behaviour of the session host can help overcome gender-equality barriers. Previous studies have found that men are more likely to ask questions at scientific events (Hinsley et al., 2017), which is the consequence of a combination of many complex factors. These factors include both inherent differences between genders as well as the differences in research landscapes that people face. Scientific contribution such as question-asking is a product of scientific reputation, social reputation, discrimination and stereotyping, self-promotion and the positive feedback within this framework (Hinsley et al., 2017). If women are more encouraged to ask a question when a woman asks the first question, session hosts could play a role in battling inequality during scientific participation.

Treatments

Therefore, we will have two treatments: talks in which the session host has been instructed to give the first question to either a **woman (treatment 1)** or a **man (treatment 2)** when this choice has to be made (i.e. multiple hands are raised and of different assumed genders). In the control condition, no instructions are given to the session host. The session host is a complete control and is not aware about the study at all, and therefore all talks are in the control group. Treatment hosts are aware of the study and have been instructed to assign the first question to a woman or man, in a randomised way. These instructions have been assigned on a talk-by-talk basis, meaning the instruction for one host for the first talk could be 'Assign the first question to a woman' and the instruction for the second talk within that session 'Assign the first question to a man'. Observers will not know if the session they are in is a treatment or control, nor the specific instructions for each talk within a treatment session.

Schedule

Each day is divided in two time slots: the morning slot starting at 10:00 and the afternoon slot starting at 15:00. Each session contains up to 7 talks. There are general sessions and symposia: general sessions are hosted by internal volunteers or by external volunteers and cover a specific theme. Symposia are hosted by symposium conveners who applied to host a symposium about a specific topic, and these sessions will contain some talks from speakers that the conveners invited.

Symposia will start with a short general introduction given by the symposia conveners. These introductions are **not** part of the study, so you do not have to record any data during them (but can start counting the audience).

You will find your personal schedule for data collection for in your booklet and in the Dropbox folder. The booklet can be picked up on Friday afternoon from 16:00 in Rebecca's

office (VHF 205), on Saturday or Sunday from the congress info desk, or on Monday before 8:30 from the info desk. It will contain: your personal schedule, session information for each session you'll sample, this protocol, a summary of the protocol, and sampling sheets.

Protocol

There are three types of lecture halls: 3 large ones (max ±300 people), 3 medium ones (max ± 150 people), and 3 small ones (max ± 70 people). The large ones will **always** be sampled by two observers each. For about a third of the sessions, the talk will be double sampled to test for inter-observer reliability.

Try to arrive **5-10 minutes early** to the session if possible, e.g. to sit down in the best location.

Please be seated at the **back corner** of the lecture hall when taking notes. The small lecture halls have a little platform at the back, from which you have a good overview of the audience. Please do not sit in the middle or front of the lecture hall, as we do not want to risk suspicion from the attendees.

The following information will be recorded during each sampled session:

A – Session information – this information is noted down for each session
- Gender(s), career stage(s) and age class(es) of the session host(s) and whether gender was confirmed per session host.

    o If the session host does not mention their pronouns or career stage, leave it blank and we can look it up after the congress.

- This information can be written down before the start of the first talk

- Symposia can be convened by multiple session hosts. Please take detailed notes on how they host the symposium if this is the case, e.g. do they alternate, or do they have a primary host, etc.

B – Talk information – this information is noted down for each talk for each session

- Audience size: the **total** number of people in the audience and the **number of men** in the audience.
    o NB: **all** people sampling will **all** count the total audience and number of men only
- Talk number (e.g. first talk, second talk).
    o If e.g. talk 2 is cancelled, please continue the number like we had anticipated the session would go, so original talk 3 would remain talk 3 even though it's technically only the second talk in the session.
    o The introduction to a symposium does **not** count as the first talk, we are not sampling this. You can count the audience during the symposium introduction though.

- Speaker name, gender, career stage and age class of the speaker and whether gender was confirmed.

- o If the speaker does not mention their pronouns or career stage, leave it blank and we can look it up after the congress.
- The time the Q&A started and ended

C – Questions – this information is noted down for each question for each talk for each session

- The numbers of all raised hands and the number of **raised hands by men** only.
  - o If you are sampling in a large lecture room, you will only be asked to note down one of the two. This will be clearly indicated in your booklet. Please make sure you know which one you need to sample before the end of the talk. Which one of the two you will sample remains the same throughout that specific session, but might change over days.
  - o The number of hands raised **includes** the person who gets to ask their question
- The gender and age class of the person asking the question and whether gender was confirmed (see above for what 'confirmed' means).
- If there are words of positive appraisal given by the question asker to the presenter (e.g. "thank you for your interesting talk"). This column is less important than counting the number of hands raised, so if you have to divide your attention then focus on the hands raised and genders. This question **does not include** feedback from the presenter to the question asker (e.g. "thank you for your interesting question").
- The type of question. This column is less important than counting the number of hands raised, so if you have to divide your attention then focus on the hands raised and genders. If a person asks multiple questions, or first a clarification before asking a question, you can note down multiple types. This is also the case when someone responds directly to another question that was asked, either before or after the presenter has answered.
  - A. Clarification
  - B. Request for more information
  - C. Suggestion for methodology, stats
  - D. A question about the interpretation and future work, implications of the results
  - E. Criticism/Counter-argument
  - F. Comments with reference to questioners' own research
  - G. Response to another question

Abbreviations you can use to make data collection easier:
- P = presenter
- H = session host (symposium convener or general session host/chair)
- O = observer (meaning another person in the audience who is also part of the data collection team)
- Q = question
- A = answer
- J = jumper
- ? = not sure

Some tricky situations
Be aware that the following situations can occur, below you'll find examples of how you should fill out the form accordingly.

1) Someone jumps to ask a question without raising their hand in response to another question without raising their hand

	# hands raised <u>total</u>	# hands raised by <u>men</u>	Gender questioner	Gender questioner confirmed?	Age class questioner <30 30-50 >50	Positive words from questioner	Type (A-G)[3]	Notes
Q1	0	0	F ?	No	>50	No	G, C	J

2) Session host asks a question (either with hands raised in the audience or not)

	# hands raised <u>total</u>	# hands raised by <u>men</u>	Gender questioner	Gender questioner confirmed?	Age class questioner <30 30-50 >50	Positive words from questioner	Type (A-G)[3]	Notes
Q1	0	0	M	Yes	30-50	Yes	A	H asked

3) The presenter themselves chooses who asks the question
   - If at some point the session hosts takes over again, note this down too.

	# hands raised <u>total</u>	# hands raised by <u>men</u>	Gender questioner	Gender questioner confirmed?	Age class questioner <30 30-50 >50	Positive words from questioner	Type (A-G)[3]	Notes
Q1	3	2	M	Yes	30-50	Yes	A	P allocated Q
Q2	2	0	F	No	< 30	No	B, F	From here, H allocated Qs

4) A question is asked by someone who is also part of the observant team

	# hands raised <u>total</u>	# hands raised by <u>men</u>	Gender questioner	Gender questioner confirmed?	Age class questioner <30 30-50 >50	Positive words from questioner	Type (A-G)[3]	Notes
Q1	2	1	F	No	<30	Yes	D	O asked

If anything unexpected happens that might not fit these situations, please write it down as accurately as possible in the notes column!

*Instructions inferring gender
For all recordings of gender, please use the below guidelines to infer gender:

The primary way of inferring a person's gender for all of the purposes described above is by the pronouns printed on their nametag, which attendees can opt for during congress registration. If the nametag cannot be observed due to distance, one can confirm this at a later

stage if possible, for example by walking around the lecture hall between talks to get a closer look at the nametag. If the name tag does not contain the pronoun or this cannot be observed, one can infer gender from appearance* (e.g. hair length, clothing, voice pitch, body size, name if stated when asking the question). Moreover, you can reach out to the technical assistants who can help confirm gender based on name-tags when this is out of our reach. They are aware of the study and know you can ask for help. If you do want their help, please come up to them before the start of the session. Importantly, make sure you keep the conversation subtle and make sure you cannot be overheard by the audience or presenter(s).

Details on pronouns:
- She/her = female, circle 'F'
- He/him = male, circle 'M'
- She/them, he/them, they/them = circle 'X'

Instructions inferring age and career stage
For all recordings of participant age and/or career stage, please use the below guidelines to infer age/career stage:

The primary way of inferring a person's career stage is through their title and/or academic position, which can be mentioned at the start or end of a talk, or when a person introduces themselves. If this is not mentioned, you can leave this section blank and we can look it up from their personal websites after the congress. There's no strict categories for this, so you can just write down their title if they mention it, or if they mention their whole position note that down. E.g. if they use their Dr. title only, just note down "Dr.", but if they mention that they are an associate lecturer specifically, copy this entire title.

Additionally, we will note down their age category: under 30, between 30-50, and above 50 years old. Age can be inferred from a person's appearance (facial features, hair colour, voice, clothing). Be careful to not bias your age estimation by a person's career stage, as these are not always directly linked to each other. Please also take additional notes if you are not sure about the age, e.g. because of cultural differences.

Instructions for counting the audience
We thought the easiest way to count and the easiest way to not mess up your count, is by first **counting the total number of people in the audience (without taking your eyes off the audience), and then count all the number of men in the audience**. The general distribution of genders across the audience is biased towards women, so it will be less counting when counting men only. **All** observers will record the total number of people in audience as well as the total number of men at every talk.

Instructions for counting number of hands raised for each question
The number of raised hands for each question between the genders will be a valuable source of information, but it is also the trickiest to sample as the time frame to sample this will be short. Especially in the large rooms, it might be difficult to count this.

Therefore, in the large rooms, we will split up counting duties between the two observants. One person will count all people raising their hands, counting both genders. The other person will count only the number of men raising their hands. You will not have to discuss this with each other, we will assign which one of the two you will sample. So please read on your data collection sheet what you will be counting for that session before the end of the first talk.

For medium and small rooms, you have to count **both** yourself. So again, first count the total number of people raising their hands, and then the number of men raising their hands only.

Other general instructions

Note you cannot ask any questions yourself during the session you are sampling to minimise bias. You can ask questions when you're not collecting data, of course (but this should be noted down by the observer sampling that session, if that session is included in our sampling effort).

Please circle your answer on the data collection form (e.g. in the questions asking for gender or age category) or strike out the wrong answers.

Furthermore, if you are not sure about something, again take notes! E.g. if you're not 100% sure about someone's gender as you can't confirm it, just note down "Not sure" and if possible, additional notes.

If someone is asking you what you are doing, tell them you are counting the number of people in the audience for the Behaviour organization. If they are persistent, you can tell them to find Öncü, Tuba or Rebecca and we will deal with it.

When you cannot make it to a session due to any reason, that is fine and please let one of us know. After you have sampled your last talk, please hand in your data collection sheets to Öncü, Tuba or Rebecca.

Again, thanks so much for your contribution!

References

Hinsley, A., Sutherland, W. J., & Johnston, A. (2017). Men ask more questions than women at a scientific conference. *PLOS ONE*, *12*(10), e0185534. https://doi.org/10.1371/journal.pone.0185534

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