Preliminary Report | Conference Study Project

An Evaluation of the Impact of the Round-Table Format on the Networking Experience of Conference Delegates

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1. Executive Summary: Gender equality by design?[1]

Conference events play a central role for every scientist's successful career development. Up to date though, science conferences still constitute a mostly male-dominated terrain and might therefore, for a multitude of reasons, be putting female scientists at disadvantage (Nature, 2016). Thus, advancing gender equality in science is fundamental in order to grant equal opportunities to everybody and enable every discipline to reach its full potential.

With this pilot study project NaturalScience.*Careers* chose to explore new ways of supporting gender equality. We set our focus on advancing equality measures by creating a structural design intervention at a science conference (Bohnet, 2016). In cooperation with a conference organising team from Marburg, Germany, we re-designed the standard set-up of a conference event by introducing an interactive, participatory format — the round-table discussion format.[2] With the goal of measuring the format's impact on the overall networking experience of participants, we compiled an empirical dataset for analysis. This happened through guideline-supported interviews, a questionnaire survey and participatory observation. First results indicate that especially younger scientists are responsive to new conference formats, such as the round-table discussion groups. For the overall networking experience the findings deviated and first results suggest that in our study set-up no significant improvements could be recorded. The networking experience in the round-tables though was reported to be similar to other formats. We suspect that this could be improved with a better preparation, communication and set-up of the round-tables. We are happy to share all our insights into how best to conduct such formats to conference organisers.[3]

With this project **NaturalScience.*Careers* is looking to encourage organisations, research clusters and especially scholars from across the field to consider conference events as a potential field for research** on gender, communication, career development and the importance of networks. We ask our readers to consider how science conferences can provide a better fit for everybody attending and invest in finding

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[1] This is the title of a recommendable publication from Iris Bohnet (2016) on the topic.

[2] A common round-table set up is that 6-10 participants get to interact for 20-30 minutes. One of the participants chairs the round-table, deciding on a theme and presenting results from his*her research. After a typically brief input — the round-table is not meant to be another form of lecturing presentation format — the table is open for questions and discussion. The size of the audience allows round-tables to be an "ideal format for networking and in-depth discussion on a particular topic" (American Evaluation Association, 2014). Beyond, the workshop format enables participants "discussion on issues of shared concern and [gives space] to generate ideas for action" (Scottish Health Council, 2014, S. 87). Further, "participants in roundtable sessions generally find them energizing. They get to interact with several people, they usually get to contribute more, and they get to move around to fresh settings" (Hesse, 2015, n. p.). Overall, the round-table discussion format mixes things up, in comparison to the standard presentation formats, and allows for an interpersonal way of interacting with fellow round-table participants.

[3] For this we have compiled an extensive resource part, see section 2.5.

out what needs to change so that female scientists' attendance at conferences may improve significantly.

Over the past year our team has compiled a network of forward-thinking conference organising teams. **We would be happy to provide these contacts and our generated dataset** from over 100 evaluated questionnaires and 5 interviews to anybody interested.

1.1. Theory and background information

A cornerstone for a successful academic career for every scientist is skilful networking within the science community. One does not only need "excellent" academic qualifications but also a web of formal and informal contacts to handle every stage of an academic career development, from being a doctoral candidate to becoming a principal investigator and qualifying as a professor. For scientists, women and men alike, networking is an additional challenge little talked about officially, although everyone is consciously practicing networking strategies from early career stages onwards (Maurer, 2016). Attainable networks are a form of social capital, an "aggregate of the actual or potential resources which are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu in Šadl, 2009, p. 1241). These networks are distinct sets of actors that are interconnected through a web of relationships of different kinds (Wasserman&Faust, 1994 in Kegen, 2016, S. 42). These relationships require investment, care and expansion in order to be directly or indirectly usable for information, influence and control.[4]

Access to networks and networking opportunities in academia are not equally distributed between men and women. This poses a challenge for gender equality within the science community. Studies show that women in academia are often excluded from academic networks which puts them at disadvantage (Toren, 1991; Vazquez-Cupeiro&Elston 2006; Šadl, 2009). Concerning conferences, pivotal networking events for every scientist, studies demonstrate that female scientists are less frequently invited to conferences compared to male colleagues (Martin, 2015; Settles&O'Connor, 2014), they hold fewer talks (Nature, 2016) and are less likely to ask less questions at the events in comparison to men (Hinsley et al., 2017). These findings prompted us to view the gender-specific conference experiences as an effective point of leverage for gender equality.

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[4] Academic networking can be subdivided by content-dependent characteristics (see Krackhardt&Hanson, 1993): (1) formal exchange of information (communication), (2) informal recommendations regarding academic career (advice), (3) informal, trust-based consulting concerning topics (trust).
In a modified way, this threefold division informed our study's conceptualisation of networking (sharing, discussion, collaboration).

1.2. Central study question and study layout

The central questions this study project set out to engaged with are:

- How can conferences become events that suit all participants, i.e., especially female scientists, better?

- How can conferences be re-designed to counter-balance structural discrimination patterns?

- How would a rearranged conference structure look like, one that could enable an improved networking experience without barriers for female participants?

In cooperation with a conference organising team from the Transregio Collaborative Research Center on Spatiotemporal dynamics of bacterial cells (TRR 174), a DFG-funded research cluster comprised of 16 groups from the Marburg and Munich areas, NaturalScience.*Careers* decided to test whether the interactive, participatory round-table discussion format provides an enhanced framework for a better networking experience of conference delegates. Within this we chose to add a discussion format to the standard conference structure, which typically consists of oral and poster presentations. The study's aim was to record the round-table's potential impact. This led us to our central research question: **Does the round-table format have an effect on the overall networking experience of the participants at the conference?**[5]

1.3. Overview

In the following three sections the results from the empirical data acquisition are outlined: First, the participatory observation (2.1.), second, the questionnaire survey (2.2.) and, third, the interview survey (2.3.). This is followed by a section discussing the result and reflecting upon the overall study project (2.4.). Concluding, a resource part provides information on introducing the round-table format and designing gender equality friendly conferences gathered by the study team over the course of the project (2.5.).

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[5] We distance our project from approaches equipping or "fixing" women. Instead, this intervention's focus was placed on action and support that encourages structural changes to the academic frameworks. In this case, the structure of conference events. So far there are a number of measures supporting equality, which conference organising teams are regularly putting to use with different results. These include speaker gender quotas, gender balance of organising teams or blinded application processes. Our approach was instead to introduce a format which would lead to a more open communication pattern, thus counterbalancing structural problems in a more subtle manner.

2. Evaluation of the impact of the round-table format on the networking experience of conference delegates

2.1. Conference structure and participatory observation

2.1.1. Conference structure

The Spatiotemporal Organization of Bacterial Cells conference in Marburg took place March 14-16, 2018.[6] Around 160 people attended the conference in total of which 54% were male and 46% were female participants.[7]

The event was structure into five sessions of which four consisted of 20 to 30 minute long oral presentations, followed by brief question and answer sessions. The fifth session, 1.5 hours long and taking place after the lunch break of the second conference day, was reserved for the new format, the round tables (RTs.) Additionally, there was a standard poster presentation session which took place in a two hour slot at the end of the first conference day.

There was one ample hall in which all of the talks took place. No side events were held during the talks. This accounts for most of the registered participants to continuously be present during the presentations which is important to notice when assessing the gender balance of the question and answer sessions concluding every presentation, as it allows us to assume that the overall gender balance of the conference applies to the sessions as well.

2.1.2. Summary of participatory observation

Attending the entire conference, we were able to annotate the gender distribution in regard to verbal participation. Due to the fact that the conference did not host any parallel sessions, with the exception of the RTs, we surveyed the gender distribution in the question and answer sessions following the plenary talks.

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[6] We would like to thank the entire organisational team of the conference for supporting this ongoing cooperation. A special thank you to Prof. Dr. Martin Thanbichler and Prof. Dr. Kirsten Jung. Also we would like to thank Dr. Muriel van Teeseling and Devid Mrusek for their exceptional efforts in supporting this project. It is conference organisation teams like yours that provide new benchmarks for more inclusive and diverse science conferences.

[7] The figure of participants derives from the published abstract book and, due to last-minute sign-ups or cancelations, might have varied slightly. We derive the designation to male/female gender from the first names in the abstract book and would like to acknowledge that this does not indicate that person to be identifying him*herself with the binary gender dichotomy.

In the four speaking panel sessions a total 26 presentations were held by 18 (69%) male and 8 (31%) female scientists. We counted a total of 77 questions being asked after the speakers finished their presentations — 60 asked by men (78%), 17 by women (22%). This participation distribution highly contrasts the attendance gender distribution of 54% male and 46% female scientist present. Whereas the distribution of male and female scientists at the event was almost even, less than every fourth question was asked by a woman. For future conference observation, it would be interesting to survey by whom the questions are posed, i.e., whether different academic status groups' (professors, post-docs, doctoral candidates) participation varies.

The poster presentations included 66 posters in total. Here the gender balance was exactly even (33 men/33 women).

2.2. Analysis of the questionnaire survey

In the following the results from the questionnaire survey are outlined.

2.2.1. Introduction of the sample material and questionnaire

We collected the questionnaire data during the final day of the conference in Marburg, March 16th, 2018. The participation was voluntary and anonymised. Also no additional incentives for partaking were given. The questionnaires got placed on the seats of the main conference hall, which all 160 conference delegates met in at the beginning of the final conference day.

The questionnaires got collected by the conference organising team and the team from NaturalScience.*Careers.* After revision this left us with 103 valid questionnaires for evaluation.

Overview of the data sample from the questionnaires:[8]
- **Gender** | 51 male, 49 female, 3 no answer given
- **Average age** | ~ 31 years (Standard deviation = 7,82; min = 20; max = 58)
- **Highest academic degree obtained** | ~75% Master's degree (47 people) or doctorate (32 people); 7 people hold a Bachelor's bachelor and 17 a professorship/tenure position

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[8] For additional information on additional information collected through the questionnaire, the preliminary report compiled for the organisational team provides an overview, see addendum.

2.2.1.1. Introduction to the round-table sample material

For the inspection of the RT format we excluded respondents that did not participate in the RT. This left a random sample of 65 people. Missing values were extracted instead of being compensated by including the mean of the valid samples. Overall, the sample of participations that attended RTs resembles the overall sample and no remarkable differences regarding the distribution of gender (30 m; 33 f; 2 n.a.) and average age (~30 years; SD = 7,03; min = 23; max = 58) exist. The distribution of the highest academic degree obtained shows: 84% Master's degree (35 people) or doctorate (20 people); 4 persons Bachelor's degree and 6 professorships/tenure position.[9]

2.2.1.2. Description of the questionnaire[10]

The questionnaire utilised for gaining the dataset had a twofold purpose. It was not only used for the data collection of the study but also as a feedback questionnaire for the Marburg conference organising team.[11]

The questionnaire was compiled of 26 items in total. The first 9 items are questions concerning the satisfaction of the participants with different aspects of the conference. In this feedback section we asked about the satisfaction with the overall conference, content, choice of speakers, poster-session, RTs, scheduling, registration, venue, catering. Answers were given on an ordinal scale (very satisfied, satisfied, neutral, dissatisfied, very dissatisfied, I don't know). Extending the feedback part of the questionnaire, the conference organising team was curious about the success of their marketing efforts and wanted to know how participants found out about the event (website, mail, colleague, twitter, printed poster or other). The next questionnaire section, item 11, asked what conference participants' major reason to attend the conference was (scientific content, networking, scientific development, specific speakers, collaboration, recruiting, other) and, item 12, whether it was worthwhile attending the conference for the reason stated (strongly agree, agree, neutral, disagree, strongly disagree). Moving beyond the feedback part of the questionnaire, the following three items interrogated the networking experiences of the conference guests in general, asking: "The conference had a supportive environment for sharing my research results and interests with other participants."; "The conference had a supportive environment for discussion." and "Through the conference I was able to establish productive relationships for future research." Answers were given on a 5-point scale (1 = strongly agree; 2 = agree; 3 = neutral; 4 = disagree to 5 = strongly disagree). With item 16 we separated the sample in two groups, people who took part in a RT and people who did not ("I participated in one or more round-table sessions." Answers: Yes; no). Now we asked the RT-participants three more questions regarding their networking-experience focusing on the RT-sessions themselves. We asked: "The round-table sessions created a supportive environment for

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[9] Presumably most of the participating principal investigators were RT hosts, thus, not part of the audience.

[10] See addendum for the complete questionnaire.

[11] This twofold purpose is discussed in a later section, see 2.4.2.1.

sharing my research results and interests with other participants."; "The round-table sessions were a supportive environment for discussion."; "Through the round-table sessions I was able to establish productive relationships for future research."). The answers were again given again on a scale with five points from 1 = strongly agree to 5 = strongly disagree. Question 20 asked: "When you are contributing to a conference, what is your preferred way to do so?" (long presentation, short presentation, poster presentation, other). This was followed by an item which explicitly asks for the most helpful part of the conference for the participants' networking (answer possibilities: oral presentation, poster presentations, round-table discussions, social events, coffee breaks and evening activities, other). The participants were also asked whether there was any topic they missed at the conference, also providing the possibility to write a comment. Attached participants also had the opportunity to write down any other comment they would like to remark. In the final part of the questionnaire we collected demographic data control variables. We integrated four demographic items in total, these included gender (male, female, other, I prefer not to disclose), highest academic degree obtained (Bachelor's degree, Master's degree, doctorate, professorship/tenure position), age and country of employment.

2.2.2. Operationalisation

Testing whether the conference format of RTs had a significant impact on the networking experience of the participants, we focused on the variables listed in the following.

We collected data on the networking experience of all conference participants in order to be able to compare this with the networking experience of conference participants that also participated at the RTs.

For this, the following three items in the questionnaire served as a basis:

- *The conference had a supportive environment for sharing my research results and interests with other participants.*
- *The conference had a supportive environment for discussion.*
- *Through the conference I was able to establish productive relationships for future research.*

The dependent (criteria) variable was created by averaging the answers of the three questions for each participant. In the following, this dependent variable is called (overall conference) *networking experience*. Before advancing to correlation test, the interrelatedness of the measured items was tested with Cronbach Alpha tests. The three items used for measuring the overall conference networking experience scored $\alpha = .705$, which is an acceptable result.

For the first independent variable the participation at one or more RT sessions was taken as a measure. The participation was collected with the item

- *I participated in one or more round-table sessions.*

The participants could either confirm their participation by choosing the answer "Yes" or negate with "No."

The second independent, control variable collected was gender. We collected the respective information in the demographic part of our questionnaire. In the following we will only look at two of four possible answers, "male" and "female." We decided to disregard the categories "other" and "I do not want to disclose my gender" because of the very small group sizes — one respectively, a total of two persons — which do not allow to conduct the testing procedures we used for our analysis.

Taking this into consideration, 100 valid questionnaires were leftover for the following analysis.

2.2.3. Method and analysis

The analysis tested the following two hypothesis:

> 1st hypothesis:
> *The RT discussion format has an effect on the networking experience of the participant at the conference.*

> 2nd hypothesis: *The RT discussion format mostly has an effect on the networking experience of women compared to men.*

For the statistical examination we analysed the present data set in terms of group differences and correlations. The evaluation happened with non-parametrical analysis tools, due to the fact that the dependent variable (overall conference networking experience) does not fulfil the criteria of Gaussian distribution (Shapiro-Wilk-Test $p < .05$). Hence, the data does not allow parametrical testing. The following analysis thus derives from Mann-Whitney-U tests.

2.2.3.1. Descriptive analysis of variables

Before testing the hypotheses, a descriptive analysis of the control- and experimental variables was made. While there was no significant difference between the average age of the subjects in both groups ($t(91) = -1.647$; *ns*; $d = ?$; see table 1), a marginal significant group difference of the highest academic degrees could be found ($U = 910.5$; $z = -1.961$; $p = .05$; see table 2). A closer look at this result, comparing the relative frequencies,

reveals that there is a relative higher number of participants with a Master's degree in the group of RT-participants in comparison to the not RT-non-participants group and a relative higher number of participants holding a professorship/tenure position in the group of RT-non-participants compared to the group of RT-participants.

In terms of gender distribution the sample is very balanced (51m and 49f; see table 1). Comparing both groups, the number of female and male participants in each group was not significantly different. This was tested with a Chi^2-test (RT-participants: Chi^2 = .143; *ns* and for RT-non-participants: Chi^2 = .676; *ns*).

	RT (N = 63)	Non-RT (N = 37)	All (N = 100)
Male	30	21	51
Female	33	16	49
Age	30.12 (7.08)	32.81 (8.26)	31.04 (7.57)

Table 1: Gender distribution and age of participants in both groups, standard deviation in brackets.

	RT (N = 63)	Non-RT (N = 37)	All (N = 100)
Bachelor	3 (.048)	3 (.081)	6 (.06)
Master	35 (.555)	12 (.324)	47 (.47)
Doctorate	19 (.302)	12 (.324)	31 (.31)
Professorship	6 (.095)	10 (.271)	16 (.16)

Table 2: Absolute and relative distribution of highest academic degree in both groups, percentages in brackets.

Overall, he two groups, RT-participants and RT-non-participants, do not differ substantially in age and gender. But when it comes to the highest academic degrees of the subjects, there is a small difference.

As last step up-front the testing of the hypotheses, the means and standard deviations of the dependent variable *overall conference networking experience* were analysed (see table 3). The answers were given on a scale from one to five whereby one was the answer option for the best and five for the worst networking experience. The data in the table leads directly to the testing of the first hypothesis, which predicts a difference in the overall conference networking experience between people who participated in one or more RT-discussion versus people that did not participate in any RT.

	RT (N = 63)	Non-RT (N = 37)	All (N =100)
Overall experience	1.95 (.63)	1.94 (.59)	1.95 (.61)
Overall sharing	1.84 (.77)	1.76 (.76)	1.81 (.76)
Overall discussion	1.67 (.67)	1.76 (.68)	1.70 (.67)
Overall collaboration	2.35 (.92)	2.33 (.79)	2.34 (.87)
RT-experience	2.31 (.64)		
RT sharing	2.40 (.81)		
RT discussion	1.71 (.68)		
RT collaboration	2.77 (.91)		

Table 3: Means and standard deviations (in brackets) for overall conference networking experience and RT networking experience (and their components).

2.2.3.2. Testing of hypothesis

Testing the first hypothesis (*The RT discussion format has an effect on the networking experience of the participant at the conference*) no significant group difference ($U = 1173.5$; $z = -.205$; *ns*; $r = -.02$) between RT participants and non-participants could be found. Whether conference participants did or did not attended a RT appears not to have made a significant difference on the participant's networking experience at the conference. Concluding, the first hypothesis is disproved.

In order to test the second hypothesis (*The RT discussion format mostly has an effect on the networking experience of women compared to men.*) an analysis on whether there was a general difference in the networking experience between men and women was necessary. In this analysis we included the datasets of 51 men and 49 women. Results show that overall there was no significant difference in central tendencies for men and women regarding their general networking experience during the conference ($U = 1144.0$; $z = -.737$; *ns; r = -.073*).

The more detailed analysis of the second hypothesis underlines that there are no significant group differences in the networking experience:

- There is no difference between women that participated at RTs in comparison to women that did not participate ($U = 226$; $z = -.823$; *ns*; $r = -.12$).

- There is no difference between men that participated at RTs in comparison to men that did not participate ($U = 295,5$; $z = -.379$; *ns; r = -.053*).

- There is no difference between women that participated at RTs in comparison to men that participated (U = 489,5; z = -.077; *ns; r* = -.01).
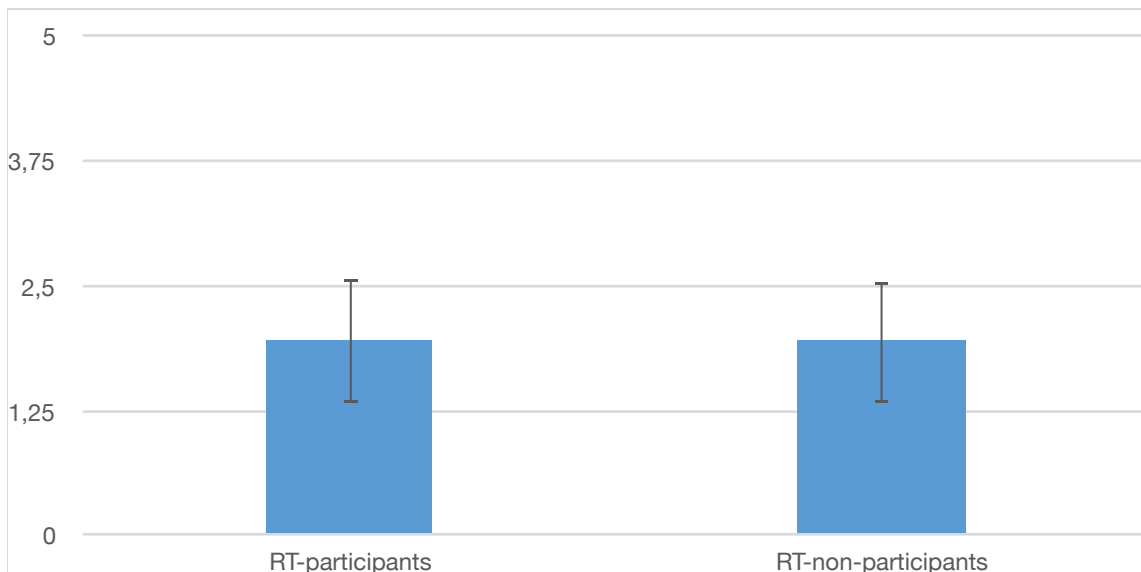
Table 4: 1st hypothesis, overall conference networking experience
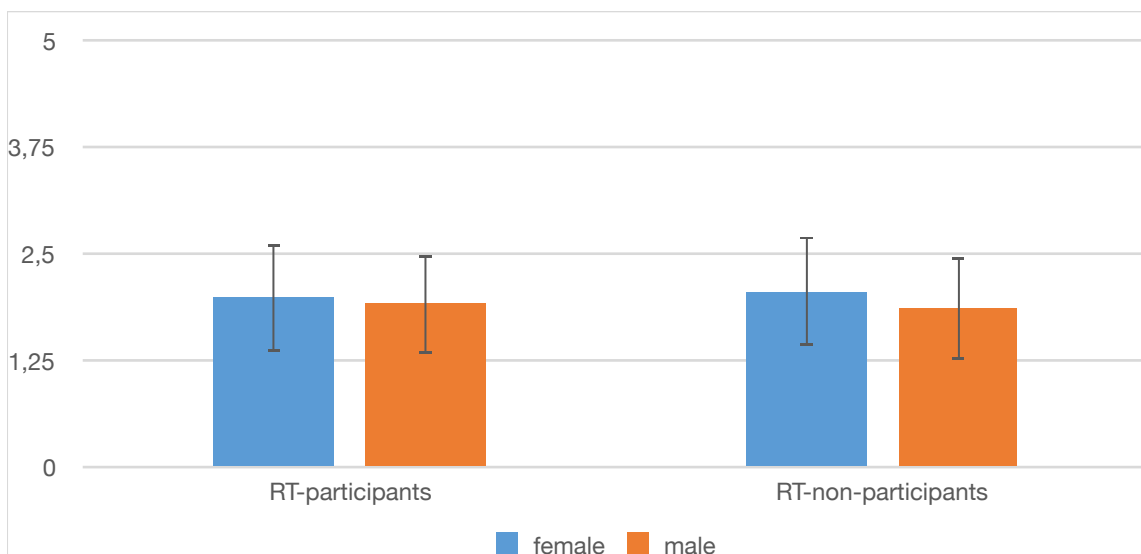
Table 5: 2nd hypothesis, overall conference networking experience divided by gender

Concluding, the second hypothesis also can be thought of as disproved.

2.2.3.3. Explorative calculation

After having focused on the hypotheses, we were also interested in the evaluation of the RT themselves and the more general feedback to this format the dataset provides.

Table 3 (see p. 13) provides a comparison of the participants' networking experience based on the RT-discussions and the overall conference networking experiences. This

inspection reveals that the RT-format got poorer ratings than the overall conference (M = 2.31; SD = .64 vs. M = 1.95; SD = .61). When comparing the three facets of networking measured — sharing, discussion and collaboration — the results remain similar. The ratings of the RTs are worse than the ratings of the overall conference. In detail, the RT-format compared to the overall conference experiences came off badly in both sharing (M = 2.40; SD = .81 vs. M = 1.81; SD = .76) and collaboration (M = 2.77; SD = .91 vs. M = 2.34; SD = .87). Only the item discussion got approximately similar ratings RTs and the overall conference (M = 1.71; SD = .68 vs. M = 1.70; SD = .67).

2.3. Analysis of the interview survey

In the flowing the results from the interview survey are outlined.

2.3.1. Introduction of the material

2.3.1.1. Determination of the source material

The interviews were conducted March, 15th and 16th, 2018 by Philipp Gramlich and recorded with a voice-recording phone application. Interviewer and interviewee had a separate room which allowed a private setting. Interviewees were recruited mainly in two ways. First, the research project was introduced during the welcoming ceremony. Attending scientists, men and women, were encouraged to partake in the questionnaire and interview survey. Second, the study team, consisting of Peter Kronenberg, Caroline Heydenbluth and Philipp Gramlich, was present during the three-day-long conference. The team's information desk provided additional information on the project and advertised participation. Additionally, the conference organising team, headed by Prof. Dr. Martin Thanbichler and Prof. Dr. Kirsten Jung, supported the study project with their encouraging attitude towards attending scientist to participate.

All participants interviewed attended the entire conference and also attended a minimum of one RT session. As a reimbursement for the 15 to 20 minute-long interview, a 20€ bookstore gift card or a brief professional CV check from NaturalScience.*Careers* was offered. The opportunity for participants to sign-up for phone or Skype-call interviews after the conference was advertised but not made use of.

After Philipp Gramlich conducted and recorded the interviews at the conference in Marburg, Peter Kronenberg transcribed the audio files, providing the final source material for analysis.

2.3.1.2. Central question of analysis

The question posed by the interview survey reflects the hypothesis posed by the questionnaire survey. The focal point of the interviews was to better understand whether participants perceived the RT format to have had an impact on their networking experience. And, if so, how this impact showed. In short, the question posed was: *Was the RT perceived to be a helpful format for networking by female scientists? And if so, how?*

Originally the question was sub-divided by gender to survey how men and women could have perceived the format differently. Although the interview survey was open to everyone all volunteers but one were female scientists. The one male scientist did not fit the overall sample group and was therefore excluded.

Over the course of the project an overall interest in recording a general resonance on the RT format rose. Therefore, the central question was broadened to register more general feedback on the conference format itself.

2.3.1.3. Procedure model of content analysis

The evaluation of the interviews was guided by Philipp Mayring's guidelines on qualitative content analysis (2010, 2016). Mayring's method builds upon the construction of content-based categories for analysis.[12] The goal of a summarising content analysis is a sensitive limitation of the material without any major distortions of the content's essence which requires careful contextualisation of the interview material. Through the category-led multi-step process of reduction, the clarity and comprehensibility of the material is carved out, still reflecting the original form of the material (Mayring, 2010, p. 65). Utilising Mayring's approach for the analysis, the analytical steps briefly summarised in the following were conducted.

- After the interview recordings got transliterated the interview texts were brought into a condensed format by leaving away decorative passages that did not interrelate with the research question.

- In the second step promising passages were condensed again by paraphrasing their content. This reduced the material noticeably and increased comprehensibility. First ideas for categories got recorded.

- The paraphrased passages were reduced to their core aspects and similar or referential aspects were identified and summarised. Afterwards, we reworked the categories and introduced new ones for themes that do not fit into previous established ones.

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[12] The inductive procedure does not require analytical categories prior to inspecting the interview material.

- A theme matrix was compiled to gain a better understanding and overview of the categories.

From these analysis steps the following categories emerged: Overall resonance to the RT format, overall context, sign-up process, preparation, size, timing, culture of interaction, assistance and support, collaboration, familiarity with the topic, question and ander situation, role of host, anonymity, directions of interaction and motivation for attendance.

2.3.2. Overview qualitative content analysis

The following passages provide a summarised overview of the qualitative content analysis and refrains from assessing each category separately. First, there is a summary on the overall resonance regarding the RT format, including notable insights from the specific category-led analysis. Second, two interviews were chosen as examples to elaborate in-detail on the networking experiences participants have had.

2.3.2.1. Overall resonance regarding the RT format and category-specific insights from the analysis

Overall, all interviewees reported being generally pleased with the RT format. As the format was designed to do — the goal being brining a small number of scientists in a participatory, dialogical face-to-face setting together — was met with approval. Two of the five interviewees expressed that the RTs were outstanding and a highlight of the overall conference. One stated:

> Also ich muss sagen diese table round session, oder wie es auch hieß, das war so bisher das Highlight hiervon… das war nämlich das Interessanteste.
>
> I got to say these table round sessions […] so far that has been the highlight hereof… it was namely the most interesting [thing]. (154f, personal translation[13])

The general potential, not just for the Marburg conference, was pointed out frequently. Whereas some scientists knew the RT moderator or people partaking in the RT session, others, not knowing the people at their table, singled out the positive features of having the chance to get to know different scientists from neighbouring research clusters. Further, the average table group sizes of 10 to 12 participants were valued.

The feedback on the overall experiences of the RT sessions and resonance point to an important factor when discussing role and impact of the format. Although the RT sessions were designed as *one* format and although the general framework of the format remained

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[13] Interview one to four got conducted in German, interview five in English. All translations are personal translations and will not be labeled repeatedly in the following.

constant, the interviews report diverse and quite unlike sessions. For instance, interviewee four first attended the *Single-Molecule Fluorescence Microscopy* RT, which she described as a difficult session, mainly due to her lack of expertise in the field.

> Für mich persönlich [hat das] zu weit oben angesetzt so da hätte es so ein bisschen mehr mehr Basisinformationen für den Anfang nochmal gebraucht. Dass man da einen besseren Einstieg hat und das ging denk ich mal auch vielen anderen so. (341ff)

> Personally, it took of too far up [i.e., too ambitious]. I could've used a little more foundational knowledge for the start. So that one can have a better entry point and I think that also counted for many others.

She felt left out of the discussion, due to limited background knowledge. The same interviewee described the second RT she attended — *Mapping Protein-Protein-Interactions via Hydrogen-Deuterium-Exchange-MS* — as a whole different setting:

> Der Host [hat] dann erstmal eine kleine Einführung gegeben hat und direkt so eine kleine Power Point, dass man die Methode einmal vor Augen hat und Anwendung und alles. (367f)

> The host first of all gave a little introduction with a little power point so that everyone could see the method and application and all.

As stated, the host took special care, designing an introduction to bring all participants on an equal footing before starting the RT discussion. Interview four is one of several examples on how the RT sessions were individually shaped, most notably by the hosts of the sessions. Their individual understanding and, subsequently, execution of the format are an important factor for the way in which the 30-minute sessions looked like.

Through the elaborate registration and application process for the RTs at the conference, our analysis suggest that an process of (self-)selection based upon interest and **motivation to attend a RT session** was initiated. Many of the interviewees reflected a baseline motivation and overall willingness and curiosity in the RT format.[14] A passage from interview five provides a insight into this prevailing undertone:

> It was quite different because well everyone who was there had a sort of contribution (…) they had a particular aim for being there. Not just like in an oral presentation where you're there because you want to learn something but you generally, like you're asking questions about someone's results but in a RT discussion you're asking questions about how we can go forward now … and that was quite good I think with regards to the RT discussions. (466ff)

Her interpretation is ample as it accredits the RT format to bear potential on actively assisting science in moving forward. For her, beyond the educational feature other

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[14] The second interviewee provides an elaborate insight into her motivation on participating at a RT. For her the format, similar to poster presentations, asks for a kind of interaction which one only visits when the participants are really interested in the topic and on being actively engaged in discussing it. Reportedly, the possibilities of opting out were too easily tangible at the Marburg conference. Certainly other presentation formats are not sessions with mandatory attendance policies. Nonetheless, the degree of perceived required attendance certainly differs from established conference formats.

formats also hold — "learn something" —, the RT is seen as a platform from which participants can push science innovation forward.

2.3.2.2. New faces, new contacts, new networks?

How good of a platform for networking did the RT sessions provide for the scientists attending? We were interested in elaborating on this question by better understanding how conversations at the tables developed and what kind of exchange emerged. Beyond, we wondered how elaborate a culture of support and assistance the format could facilitate and, if so, did it help scientists to establish new contacts for future collaboration? In order to illustrate the participants' experiences with the RT format two interviewees' stories are highlighted in detail in the following section.

Interview two was given by a female doctoral candidate that attended a method-based and a career-related RT at the conference. She is a young member of the scientific community and her doctoral thesis' topic was not part of the conference's core subject areas. This let her characterise herself as occupying the role of an outsider. She found the new conference format to be an engaging format that was too short though. For her the time slots could have been longer than the planned 30 minutes. She enjoyed attending the RT on *How to move on from being a PhD-student to becoming a PostDoc?* more than the method-based RT.

> [Den PhD to post-doc RT] das fand ich *sehr* interessant. Da hat man sehr viel mitnehmen können. Da ging's halt da wurden viele Tipps gegeben wie man mit den Professoren umgehen soll wie man also wie man die anschreiben kann wie man sich ne Stelle sucht, wie man Fördergelder sucht, wie man die Sachen auch am ehesten bekommt und was einen zu erwarten hat (…)

> [The PhD to post-doc RT] I found *very* interesting. One could really pick up a lot. (…) there was a lot of advice given on how to deal with professors, how to address them, how to find a position, how to search for grants, how to most likely get those things and what to expect (…) (124ff)

Attending the RT on *Single-molecule fluorescence microscopy* she did not feel like the session provided a stage she could fully make use of. She stated that in terms of expanding her knowledge and level of insight to certain questions she did not have any success. She attributed this to the fact that her scientific specialisation did not meet the theme of the RT.

> (…) die die's vorgestellt haben geredet und da viel Bezug auf denen ihre Arbeit genommen also nicht immer unbedingt konnte man mit den eigenen Sachen da weiter kommen wo man Fragen hatte, weil die sich dann in dem Bereich dann genau nicht so auskannten (…)

> (…) those that presented talked a lot and referred a lot to their own work so one could not always necessarily proceed with the personal things concerning which one had questions, due to them [the RT hosts] not being familiar with that field (…) (135ff)

Nonetheless, she stated that overall the format itself provided a significantly increased possibility to address detail-oriented questions. Especially in comparison to standard oral

presentation formats, the RT provided a good fit for her. Her description of a standard lecture, in comparison to poster-presentations and the RTs, points to these aspects.

> [Bei] Vorträgen zumindest ist es ja doch ziemlich der eine redet die ganze Zeit und am Ende, wenn man Glück hat, werde noch so drei vier Fragen gestellt und dann ist aber auch stellt man ja meistens (…) nur so ganz spezielle Fragen und nicht immer unbedingt das was einen selber dabei interessiert weil dass dann das Thema sprengen würde weil man dann weiß oh da muss jetzt ne Weile drüber geredet werden und dann lässt man halt so Fragen bleiben bei bei nem Talk aber deswegen fand ich das gerade, vor allem wenn man dann in einer kleinen Gruppe zusammen sitzt und dann hat jeder nochmal was anderes was er mit einbringt das ist halt da einfacher als bei der Postersession wo viele Leute noch mit drumrum sind wo man auch von den anderen Postern immer noch was mitkriegt.

> Well, at lectures it's really usually one person talking the entire time and at the end, if you're lucky, three, four questions are posed (…) and then usually these are very specific questions and not necessarily what oneself is interested in, because that could blow up the theme, because you know that this would take up quite some time to discuss and then one refrains from that question (…) that's why I found [the RT] pretty good, especially that you sit with a small group and everybody brings something different to the table (…) it's also easier than the poster session, there you always have other people around and you always overhear the other poster presenters (…) (170ff)

The interviewee's report differentiates the RT format from the two other standard formats of science conferences, the lecture and the poster presentation. She perceived the RTs to have provided a better stage for asking questions that she would have otherwise, in a more public setting, may not have addressed. She also singled out that "everybody brings somethings different to the table" which speaks to the dialogical accessibility of the format.

How did the interviewee perceive the format in terms of networking opportunities? As the excerpts insight the format was reported to have been providing a proper stage for exchange and discussion for the doctoral candidate participant. When addressing whether she was able to utilise the format for expanding her network of contacts though, she declined. Her report on the sessions singles out a strong focus on the content of the RT sessions themselves. Establishing contact and collaborations, solidifying professional relationships and activities alike, was not perceived as a facet the format enabled.

> (…) [ich würde jetzt nicht sagen] dass zwischenmenschlich mit den Leuten die ich nebeneinander saß oder so, da würde ich jetzt nicht sagen, dass ich denen da durch irgendwie näher bin. (…) Also mit den Leuten mit denen ich am RT gesessen hab da muss ich ehrlich sagen, da weiß ich schon gar nicht mehr so richtig mit wem ich noch da dran saß (…) durch die RT Session selber [hat sich] jetzt eigentlich nicht irgendwie sonderlich groß was verfestigt und wie gesagt, dadurch dass ja generell auf der Konferenz die Leute doch sehr in ihren Gruppen bleiben würd ich jetzt sagen auch nicht besonders.

> (…) [I would not say] that interpersonally with the people I sat next to, I wouldn't say that I'm closer to them because of that. (…) With the people with whom I sat at the RT, I got to admit that I don't quite remember with whom I sat there (…) due to the RT nothing [no contacts] solidified and, as mentioned, due to that people at conference in generell stay in their groups nothing special happened. (214ff)

Her focus on the content of the discussions appears to have been outperforming the possibility of meeting fellow RT-participants on an interpersonal level. She attributes this

to a perceived conference dynamic, which is that people generally stay in their already familiar groups of people. For her, the small-size setting of the RT did not change this.

For interviewee two the RT provided a favourable culture for conversation, exchange and dialog. She noted several times that the RT enabled her to engage in the discussion more easily and frequently. Nevertheless, the RT was not perceived to help in terms of forming new collaborations or extending her web of contacts. From her perspective the RT did not break up general dynamics of group affiliations and membership. What remains interesting is that she did not attribute the theme-based exchanges to be a part of the process of networking and social capital formation.

A contrasting insight into the experience of two RT-session can be drawn from interview four. The interviewee is again a doctoral candidate that attended two method-based RTs. A particularly interesting observation stated by interviewee four concerns her perception of anonymity. The participant described the RT-format to have been a situation which allowed openness and straight forward sharing of experiences. She attributed this to a distinct sense of anonymity she experienced.

> Also grade wenn man vielleicht auch nur mit unbekannten Leute in der Gruppe ist, also dadurch, dass es dann doch auch oft dann die Doktoranden sind, so hatte ich jetzt zumindest das Gefühl, dass es eher die Doktoranden waren und wenn man da eben keine Betreuer oder so was dabei sind dass man dann vielleicht auch eher sagt so, ich komm damit überhaupt nicht klar ohne, dass der dann gleich weiß was man da fabriziert oder nicht zustande bringt.

> Especially when you're perhaps in a group with people you don't know, who oftentimes also happen to be doctoral candidates, that was my feeling that there [at the RT] were mainly doctoral candidates and if there are no supervisors or alike present that then you're perhaps rather saying, well I really don't manage this alright, without him*her [the supervisor] immediately knowing what you're getting up to or not accomplishing. (403ff)

The absence of academic authority figures, in this case the thesis supervisors, made a notable difference for her process of opening up and sharing. She experienced a dynamic of solidarity to other participants also being in the phase of obtaining their doctorate.

Interviewee four had two unlike RT experiences, which again points towards the dissimilarities of the format others interviewees have stated as well. In retrospective she perceived the one RT she attend as mainly a giving a way of internal details that she could not quite connect to.

> (…) da ging's eher drum dass die so ein bisschen aus dem Nähkästchen geplaudert haben, es kamen dann zwar auch Informationen dabei rüber (…) aber das hat im Prinzip, zumindest für mich persönlich, zu weit oben angesetzt (…) da hätte es so ein bisschen mehr mehr Basisinformationen für den Anfang nochmal gebraucht.

> (…) it was more about giving away a little bit of internal details, there were information passed on (…) but that took off, for me at least, too far up [i.e., too ambitious] (…) I could've used a little more foundational knowledge for the start. (337ff)

In the other session attend she was able to make more elaborate use of the small groups that reportedly allowed a lot of interaction and detailed inputs, helping with personal research projects. The following interview excerpt illustrates what kind of immediate feedback loops the RT session provided for her.

> (…) Und jetzt grade dadurch, dass wir jetzt so wenig waren konnte auch jeder Sagen, ok, ich würde das jetzt für die und die Geschichten haben wollen und da konnte er dann auch direkt weiterhelfen und sagen ja, dass wär möglich, nein, dass wär nicht möglich. Und da hat er auch allen auch direkt gesagt, melde dich nochmal bei mir und ich werd mich nochmal mit der Firma in Verbindung setzten, das ist interessant, das könnte man machen. Also das hat viel gebracht.

> (…) and especially because we were few everybody could be like, okay, I would like to utilise this for this or that project (…) and he [the RT host] could help directly and be like, yes, that could be possible, or, no, that would not be possible. And he told everybody directly to get in touch with them and he was like I will get in touch with the company [, because] that's interesting, that could be done. So that yielded much. (379ff)

Here, the interaction at the RT is advanced from dialog and discussion towards farther reaching connections, aiming at mediated, collaborative support. The connection developed between participant and host surpasses a level of perfunctory verbal exchange. With this interview four provides an account of a RT-session in which the format facilitated a dynamic of future prospective assistance and support, reaching beyond the session and conference itself.

Both doctoral candidate interviewees had an overall positive resonance to the RT-format. It was pointed out repeatedly that the format provided a valuable addition to the standard conference structure of science conference events. Concerning networking, the two interviews display contrasting experiences. Although interviewee two picked up a lot and enjoyed the fact that everybody brought something to the table, her RT-experience remained very situated and little future-oriented one. This contrasts the other interviewee whose interaction were generally more prospective and project-oriented.

In summary, all five interviews compiled a body of unequally distributed experiences concerning networking opportunities (not) facilitated through the RT sessions. Generally, the potentials of the facilitated and increasingly interactive as well as participatory discussion rounds were noted and, overall, enjoyed popularity. Participants could engage in discussions more easily, questions could be asked to which, for a majority of cases, satisfying answers were given. Less ample assurance was given to the format's potential on facilitating assistance and support, or, even more, on facilitating contacts for potential collaborations. For this, the format's frameworks and conditions were not generally understood as providing a special networking situation.

2.4. Discussion and reflection on study

In the following the results from the empirical data acquisition are discussed and reflected upon.

2.4.1. Discussion

Did the RT format have an effect on the overall networking experience of the participants at the conference? And did the conference in Marburg become an event that suited female scientists better, i.e., did the RT discussion format mostly have an effect on the networking experience of women compared to men? These were two questions we posed at the beginning of our study and from which our hypothesis for the quantitative questionnaire analysis derived.

In summary, the questionnaire analysis shows that the designed intervention of a different conference set-up did not have significant impact on the conference networking experiences reported. The first hypothesis — *The RT discussion format has an effect on the networking experience of the participant at the conference.* — was disproved. Also the supposition on a gender-specific effect of the format was not confirmed. The second hypothesis — *The RT discussion format mostly has an effect on the networking experience of women compared to men.* — was disproved as well.

The interview survey yielded a variety of results with grand deviations in reports concerning networking. Overall, the RT format was valued for its facilitation of discussion and interaction. In terms of enabling special networking situations for participants, the reports dispersed and, as a whole, did not confirm the RT to provide special networking situations. The broadly defined line of questioning shed light on positive features of the RT participants registered, including motivation to attend or a general approval of a "new" conference format.

There are multiple perspectives for discussion the mixed-methods analysis offers. The following points provide an brief overview of relevant aspects.

2.4.1.1. The RT — one format?
The analysis compiles a number of factors that caused the largest deviations of the individual RT sessions and consequently shaped its attendees' experiences. The identifiably most important factors include:

- **Presentation/moderation style and preconceived notion of the format from the RT host.** Some RT hosts favoured a very structured, lecture-like set-up. As the qualitative analysis highlighted often even media-supported introductions enabled newcomers to better partake. There are other examples of hosts which set the stage for their RT by simply asking the attendees what they would like to know or

whether there was something in peculiar they are interested in. The hosts' idea on what a RT actually is or what and RT, in their opinion, should look like is a major factor shaping the format.

- **Group size and group composition**. Interviewees pointed out that the group sizes of the RTs were important, as it provided the baseline for the culture of interaction. With many people at a table, interviewees reported that it got harder to engage in the discussion and vice versa. Also, the composition was important due to different dynamics participants noticed with, e.g., authority figures and esteemed colleagues from the same research cluster being present or absent. Additionally, the degree of familiarity to other participants played an important role. One interviewee pointed out how relaxing it was and what an impact it had on her to only be surrounded by other doctoral candidate, her supervisor not being present.

- **Timing and length of the RTs**. As some sessions were very popular, the hosts did not stay in the designated time tables. This caused a delay to the start of other sessions. Also the opinions on the length of the RTs varied, some thought the 30-minute sessions were too short. As there were no designated time keepers at the tables timing issues caused the RTs to deviate.

- **Themes of the RTs**. The wide range of thematic priorities offered diversified the format. This variety of RT sessions, due to their reportedly different dynamics, challenges the evaluation of the format. Throughout the qualitative evaluation process, three content-based sub-categories emerged (career-related, topic-based, method-oriented). Table 6 provides an overview of the tables offered, categorised by sub-category.

RT categories	RT themes offered
Career	PostDoc opportunities in the US
	From PostDoc to Junior PI and beyond
	How to move on from being a PhD-student to becoming a PostDoc?
Topic/theme	Statistical mechanics of bacterial chromosomes
	Current evidence for cardiolipin-domains in bacterial membranes
	Mechano-chemical pattern formation
Method	Mapping protein-protein-interactions via hydrogen-deuterium-exchange-MS
	Flurescene-based measurements of protein diffusion
	Single-molecule fluorescence microscopy
	Quantifying protein-protein and protein-ligand interactions via microscale thermophoresis

Table 6: Subdivision of round-tables offered at the Marburg conference.

This diversity of the sessions' content needs to be considered in order to assure comparability throughout the evaluation process.

2.4.1.2. Singling out networking

In the design of the questionnaire we circumscribed networking in three aspects (sharing, discussion, collaboration; see 1.1.) but did not ask for the participants' RT networking experience explicitly, i.e., we did not refer to the phrase "networking" directly. The grounds for this conceptualisation came, amongst others, from Zdenka Šadl's (2009) essay "'We Women Are No Good at It': Networking in Academia" in which she describes that networking "should not be perceived as a benign instrumental practice but as a process that shapes the very functioning of academic institutions" (p. 1248). The processes of networking though have for many fallen into disregards and hold a distinct ambivalence which shaped our decision for bracketing the term itself (Hendrix et al., 2016). With the intent on receiving more authentic results of the networking experience participants experienced it remains to be further evaluated whether directly addressing networking would have yielded different results.

2.4.1.3. Level- and content dependent networking strategies

Elisabeth Maurer's article on "Networking und Gender im universitären Kontext" reveals level- and content dependent networking strategies at play throughout the different phases of an academic career. In the early career phase of a PhD Maurer describes the networks to be rooted in what she calls "multiplexity." With this she refers to overlapping and quite diverse kinds of networks doctoral candidates are immerse into. Progressed doctoral candidates learn to differentiate and prioritise between different networks. Maurer describes that especially the detachment of networks for provision of information and networks for mentoring and consultancy become more important. This is due to the gaining influence of trust-based mentoring contacts in the advanced academic phases of being a post-doc or striving for habilitation. These phases are characterised by fostering academic friendships. Maurer's observation on "multiplexity" offers an interesting perspective on the research results at hand. More than half of the participants of the sample size hold a Master's (46%) or a Bachelor's degree (7%). This allows us to categorise about half of our sample size as being in an early academic career phase. According to Maurer, academics in that phase are typically not as accomplished at differentiating between different kind of academic networks. Hence, the reportedly low opportunity for networking the RTs reportedly facilitated could also be due to the participants' skewed focus, away from networking and more towards the acquisition of discipline-specific knowledge.

2.4.1.4. Gender-specific networking behaviour

The overall motivation for this study projected included a gender-specific motivation. With this we targeted gaining at better understanding of the gendered structures of conferences and networking in academia in general. As women continue to be excluded

from academic networks (Vazquez-Cupeiro&Elston, 2006) it remains crucial to foster a better understanding on individual and gender-specific networking behaviours. The results at hand do not show a meaningful deviation in networking behaviour between men and women. The presumption posed with the second hypothesis, that female scientist could potentially make better use of networking experiences facilitated through the RTs, was disproved. Men and women made equal use of the format and in regards to networking equal results got reported.

2.4.2. Reflexion

2.4.2.1. Quantitative analysis[15]

Questionnaires

- **Separation of feedback and study questionnaire**: The questionnaire utilised to collect the quantitative data set had a twofold purpose. It served the study project's data acquisition and additionally collected feedback on the overall conference for the organising team. This decision was a compromise accepted by the study team but methodologically remains controversial. The evaluation of the overall feedback on the conference and the study project happened separately.

- **Several answers** given: The questionnaire itself did not indicate participants to only give one answer. This conceptual error let some participants mark multiple answers.

- In the final part of the questionnaire we asked for the "**highest academic degree**" obtained and provided four possible answers: Bachelor's degree, Master's degree, doctorate or professorship/tenure position. This line of questioning left space for ambiguity on the current academic occupation and stage of career development. For instance, are participants that marked having earned a Master's degree included as doctoral candidates in the analysis? Or do all candidates indicating to have obtained a doctorate's degree necessarily hold post-docs positions? Here the questionnaire could have been more precise.

- Question two features two **similar and hard to differentiate answer options** for eight items. The ordinal scale questioning the participants' satisfaction concerning speakers, presentations, venue etc. offered "I don't know" and "neutral" as an answer option. It remains unclear how and, if so, how much these similar answer options distorted the results.

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[15] The utilised questionnaire is attached in the appendix.

- The sample collected provides the possibility for additional quantitative analysis paths we did not fully make use of. Due to the multitude of items, potentially significant correlations between distinct items could have been missed.

- Reflecting upon the set up of the study we concluded that it would have been interesting to question groups of RT-participants directly after their RT-session. Herewith a sample of 10-12 questionnaires all of which referring to the same RT could have been collected. This would have enabled better comparability, due to the variations of the RTs itself.

2.4.2.2. Qualitative analysis

- **Interview format**: The interview format chosen was a guideline-supported interview. Throughout the qualitative analysis it became apparent that a semi-structured interview set up would have suited our study goal better. This is especially due to complications in reconstructing in which RT-sessions the interviewees participated.

- **Constitution of the sample**: Although we did not solely look for female interviewees only one male conference participant volunteer to be interviewed. Unfortunately, due to his academic position, he had to be excluded from the qualitative analysis sample. Further, no RT-hosts volunteered to be interviewed. Another perspective that could have diversified our analysis.

- **Framing of the project**: The introduction, the framing and the overall incentives of this study project need to be reflected. As a private company, NaturalSciencie.*Careers* did not have any financial motivation for engaging in this project. Nonetheless, it is out of the ordinary for small firms to be conducing foundational research. By making our incentives fully transparent, we hope to have answered any questions and concerns from participants and organising team members.

2.4.2.3. Overall

- **The RT — one format?** As discussed before (see 2.4.1.1), the uniqueness of each RT was remarkable. This surprised us and enhanced the degree of difficulty of analysis. Because the RTs were not given numbers for identification and because some of them took place twice, the interviews and the questionnaires did not provide a chance in clearly allocate participants to the session they actually attended.

- **The set-up**. Overall, the conference received positive feedback from the participants. What disconcerted many was the scheduling of the poster presentations. There was one poster session at the end of the conference opening day which was two hours in length. Due to the overall room scheduling all posters had to be taken down after the poster session at the end of the first conference day. Feedback indicates that this was received negatively by most participants. By the organising team's account, the 1.5-hour-slot in which the RT took place would have otherwise been another session of poster presentations. Such scheduling conflicts influence the overall conference experience of all participants and, in the case, arguably influenced the overall ratings of the RT and the poster sessions.

2.4.3. Prospective study questions

There are numerous additional questions intersecting with the analysis this report provides. Concluding, the following points compile incentives for future research questions.

- **Gaining a better understanding of the processes of the RT format**. Especially the qualitative analysis revealed many insights concerning the conversational dynamics at the RTs. Nevertheless, there are still many questions left unanswered. We would like to encourage further research which targets a detailed comprehension of the RT format with special attention directed towards the importance of the academic status of the hosts/participants.

- **Facilitate variations of the format**. Our analysis proposed a contend-driven subdivision into three kind of RT formats. We would be interested in finding out how a subdivision from the organising team beforehand could influence the experiences of participants at the RTs.

- **Dividing participants according to their career level** and status group would be another interesting variation of the format. Having people from equal status groups meet at a RT could facilitate valuable networking opportunities. We suggest RTs where only doctoral candidates get to to talk or only principal investigators exchange their experiences.

- Expanding the format by **introducing a RT moderator** in addition to the RT host. From the empirical data compiled it appears as if engaging in both activities, hosting and moderating, at once, overstrained the capacities of some.

- **Comparing RT and poster session**. A networking-oriented comparison of the two formats could yield information on what format provides a better platform for expanding individual networks in the community.

- We would like to encourage research on the **self-assessment of women and their networking capacities**. Are women more self-critical in comparison to men in terms of their networking success with the RT format?

2.5. Resource

The following information was compiled throughout the course of the study project. We hope it provides conference organising teams with the means to successfully conduct RT discussion formats.

2.5.1. Planning a conference with RTs

- **Venue**: Does the conference venue provide enough and proper space for hosting RT sessions? The format needs sufficient space, ideally a medium-size room for one to two RTs, tables that fit 10-12 people and sufficient chairs.

- **Announcing and advertising the RT format**: Together with first calls for abstract for conference presentation slots the RT format should be introduced as well. In our experience it is important to provide enough information on the format's goal and structure while not overloading the potential participant and/or host with too much details. These can be better communicated at a later point. Make sure that it becomes apparent that hosting a RT does not require as much preparation time as preparing a speaking or poster presentation; quite the opposite, the RT seems most fruitful when conducted as discussion in contrast to presentation. Conference organising teams should actively encourage participants to host a RT session. This also ensures you to be able to pro-actively adjust the gender balance of RT-hosts and choose interesting themes, potentially adjusting the topics in cases of overlaps.

- **Sub-categorising the RT**: As our analysis of the Marburg conference has illustrated (see 2.4.1.1.) the RT themes may be subdivided into specific clusters. In our case that was topic, method or career-based RTs. As an organising team you can consider making these (or other) categories visible. Herewith potential RT-hosts can decide for which field their RT-theme provides a good fit.

Before the conference
- **Sign-up for the tables**: Due to the limited amount of participants each table allows, we recommend to ask conference participants to sign-up for the session they would like to attend. For this, a web-based interface provides a good fit. The Marburg

conference team utilised Google Forms which worked well for them. Just do not forget to limit the amount of people for each table to 10-12 people per session.[16]

- **Check-in with table hosts**: After opening the sign-up for the RTs you will get an impression on which session are popular and which ones are not as high in demand. We recommend to get in touch with the hosts and inform him*her about the dynamics of the sign-up process. This is also a good time to brief the hosts again, reminding them on what the participatory and discussion-based format usually looks like.

At the conference
- **Advertisement for open slots**: At the conference itself advertise free spots at RTs that have not filled up yet. We also recommend having the list of who signed up for what RT at hand.

- Another interesting option you may want to consider is to **reserve a few RTs for themes that might come up during the conference itself**. Make sure to communicate this option to all conference participants and consider having somebody from the organising team volunteering to chair the session.

- **Managing the RT-session**: In case you have several rounds of RTs happening make sure to have a time-keeper so the RTs stay in the designed time slots. We also recommend providing little signs for each table, indicating the RT's topic. This helps participants to orient themselves and find their RT in time.

After the conference
- Do not forget to **ask for feedback** from all participants. This may help to improve the quality of the RTs at your next event.

- Make it as easy as possible for participants to exchange contact details and stay in touch with each other after the conference has ended. Make sure to stay within the respective data protection regulations of the country.

2.5.2. General recommendations for organising teams

The following points provide some overall food for thought for conference organisers that are interested in creating conference events that support gender equality and diversity, independent from introducing the RT discussion format. This list is *work in progress* and do not claim completeness. Still, we consider all points small steps integral for a more inclusive and family-friendly conference culture.

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[16] From our experience, 10-12 people per table is an appropriate number of participants. Depending on the given circumstances this number may deviate.

- Considering the **timing of the conference** — conferences that collide with school holidays may pose a challenge for parents that wish to attend.

- Offering (and advertising!) **free child care** is an important way to enable parents to visit the conference.

- Watch the representation of women on the organising team. Studies indicated that **gender-balanced conference organising teams** initiate better gender-balanced events (see Casadevall&Handelsman, 2014).

- **Make gender equality public** — consider making a public statement which presents your goals. Collect data and feedback equality measure and present that data. This increases awareness of gender equality issues in the respective community and may motivate to counter inequalities step by step.

- **Adress unconscious biases** that might affect your team's selection of expert speakers for the conference.

3. Concluding remarks

We would like to thank the entire organisational team of the conference in Marburg for supporting this ongoing cooperation. A special thank you to Prof. Dr. Martin Thanbichler and Prof. Dr. Kirsten Jung. Also we would like to thank Dr. Muriel van Teeseling and Devid Mrusek for their exceptional efforts in supporting this project. It is conference organisation teams like yours that provide new benchmarks for more inclusive and diverse science conferences.

In case of questions or comments, please do not hesitate to contact project manager Peter Kronenberg (p.kronenberg@naturalscience.careers).

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5. Appendix

This appendix consists of the questionnaire used at the Marburg conference and the SPSS output.

Feedback Questionnaire

We hope you enjoyed the conference. Thank you for taking time to fill out this questionnaire. We appreciate your collaboration. All of the answers will be treated confidentially.

1. All in all, how satisfied are you with the conference?

Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied
O	O	O	O	O

2. How satisfied are you with the conference in regards to the following issues?

	Very satisfied	Satisfied	Neutral	Dissatisfied	Very dissatisfied	I don't know
Conference content	O	O	O	O	O	O
Choice of speakers	O	O	O	O	O	O
Poster presentations	O	O	O	O	O	O
Round-table discussions	O	O	O	O	O	O
Schedule	O	O	O	O	O	O
Registration on Eventbrite and check-in	O	O	O	O	O	O
Venue	O	O	O	O	O	O
Catering	O	O	O	O	O	O

3. How did you find out about the conference?

- O Website (www.trr174.org)
- O Mailed invitation
- O Colleague
- O Twitter
- O Printed poster
- O Other

4. What was the main reason for you to attend the conference? (One answer only please.)

- O Scientific content
- O Networking
- O Scientific development
- O Specific speakers
- O Collaboration
- O Recruiting
- O Other: ……………………………

5. **For the reason stated in question 4, was it worthwhile attending the conference?**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

6. **The conference had a supportive environment for sharing my research results and interests with other participants.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

7. **The conference had a supportive environment for discussion.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

8. **Through the conference I was able to establish productive relationships for future research.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

9. **I participated in one or more round-table sessions.**

   O   Yes

   O   No

10. **The round-table sessions created a supportive environment for sharing my research results and interests with other participants.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

11. **The round-table sessions were a supportive environment for discussion.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

12. **Through the round-table sessions I was able to establish productive relationships for future research.**

Strongly agree	Agree	Neutral	Disagree	Strongly disagree
O	O	O	O	O

13. When you are contributing to a conference, what is your preferred way to do so?

O   Long presentation/lecture

O   Short presentation/lecture

O   Poster presentation

O   Other: ………………………………………………………………………………………

14. Which part of the conference was most helpful to you for your networking?

O   Oral presentation

O   Poster presentations

O   Round-table discussions

O   Social events

O   Coffee breaks and evening activities

O   Other: ………………………………………………………………………………………

15. Was there a topic you missed at the conferences?

O   No

O   Yes, ……………………………………………………………………………………

16. Got any further comments? ……………………………………………………………………..

17. Personal Information

I identify my gender as: O Male

O Female

O ………………………..

O I prefer not to disclose.

Highest academic degree: O Bachelor degree

O Master degree

O Doctorate

O Professorship/tenure position

Age: ……

Country of employment: ……………………..

SPSS OUTPUT
Frequency tables

Question 1
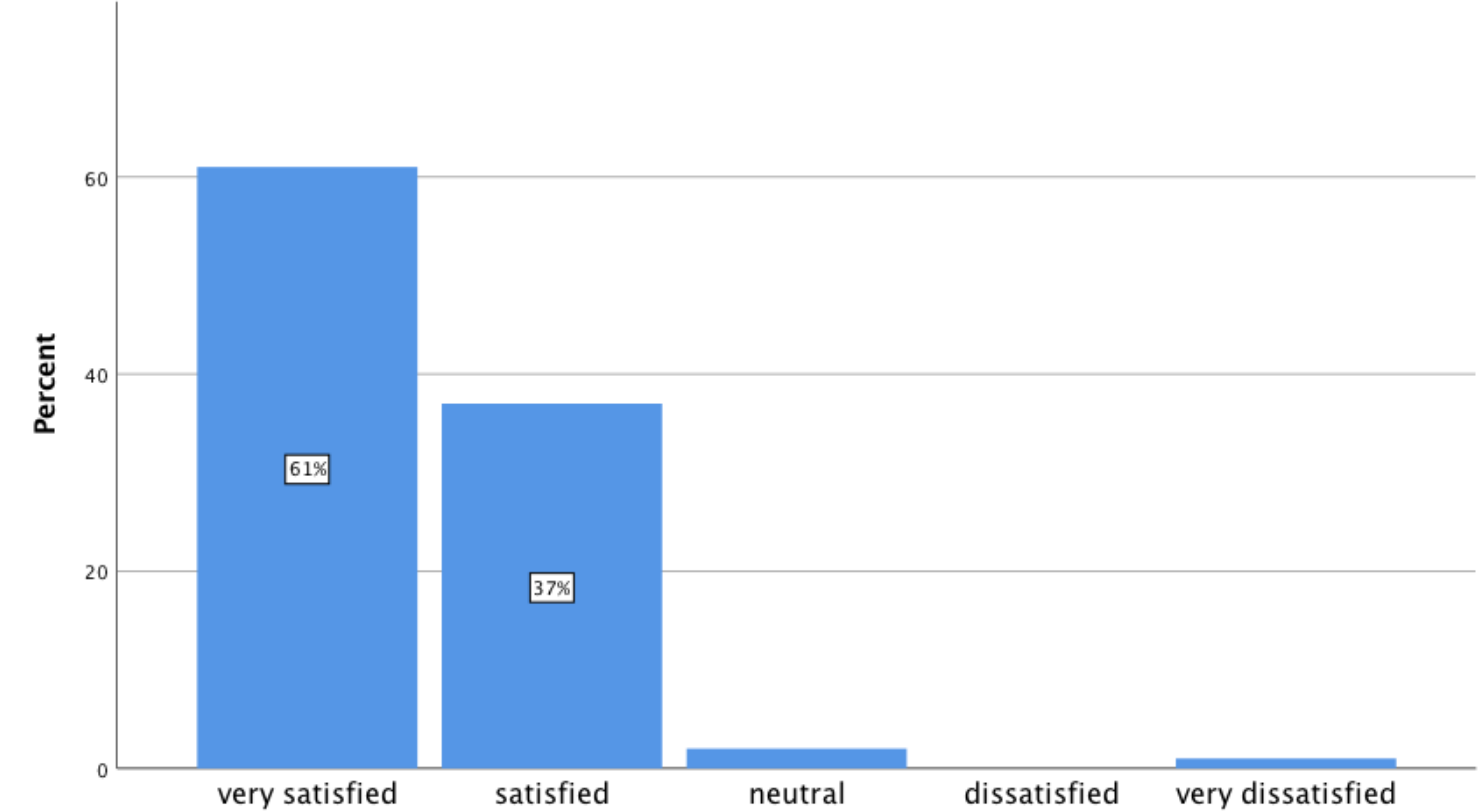## All in all, how satisfied are you with the conference?

Statistics

sat_overall

N	Valid	101
	Missing	2

Overall satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	61	59,2	60,4	60,4
	satisfied	37	35,9	36,6	97,0
	neutral	2	1,9	2,0	99,0
	very dissatisfied	1	1,0	1,0	100,0
	Total	101	98,1	100,0	
Missing	System	2	1,9		
Total		103	100,0		

Overall Satisfaction

Overall satisfation by gender
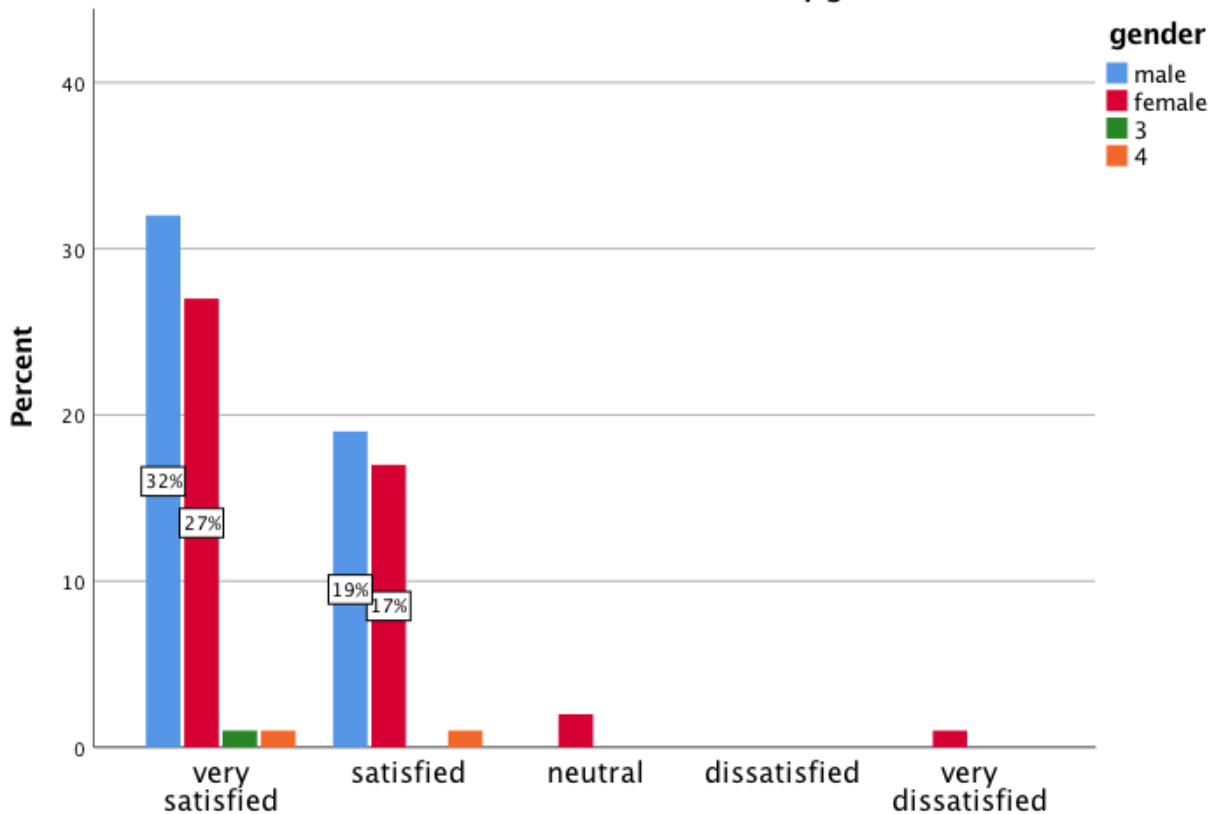
Question 2
How satiesfied with the conference are you in regard to the following issues?

Statistics

		sat_content	sat_speakers	sat_poster	sat_round_tables	sat_schedule	sat_registration	sat_venue
N	Valid	103	103	100	65	102	101	98
	Missing	0	0	3	38	1	2	5

Statistics

		sat_catering
N	Valid	100
	Missing	3

Frequency Tables

Conference content

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	54	52,4	52,4	52,4
	satisfied	43	41,7	41,7	94,2
	neutral	5	4,9	4,9	99,0
	dissatisfied	1	1,0	1,0	100,0
	Total	103	100,0	100,0	

Satisfaction conference content
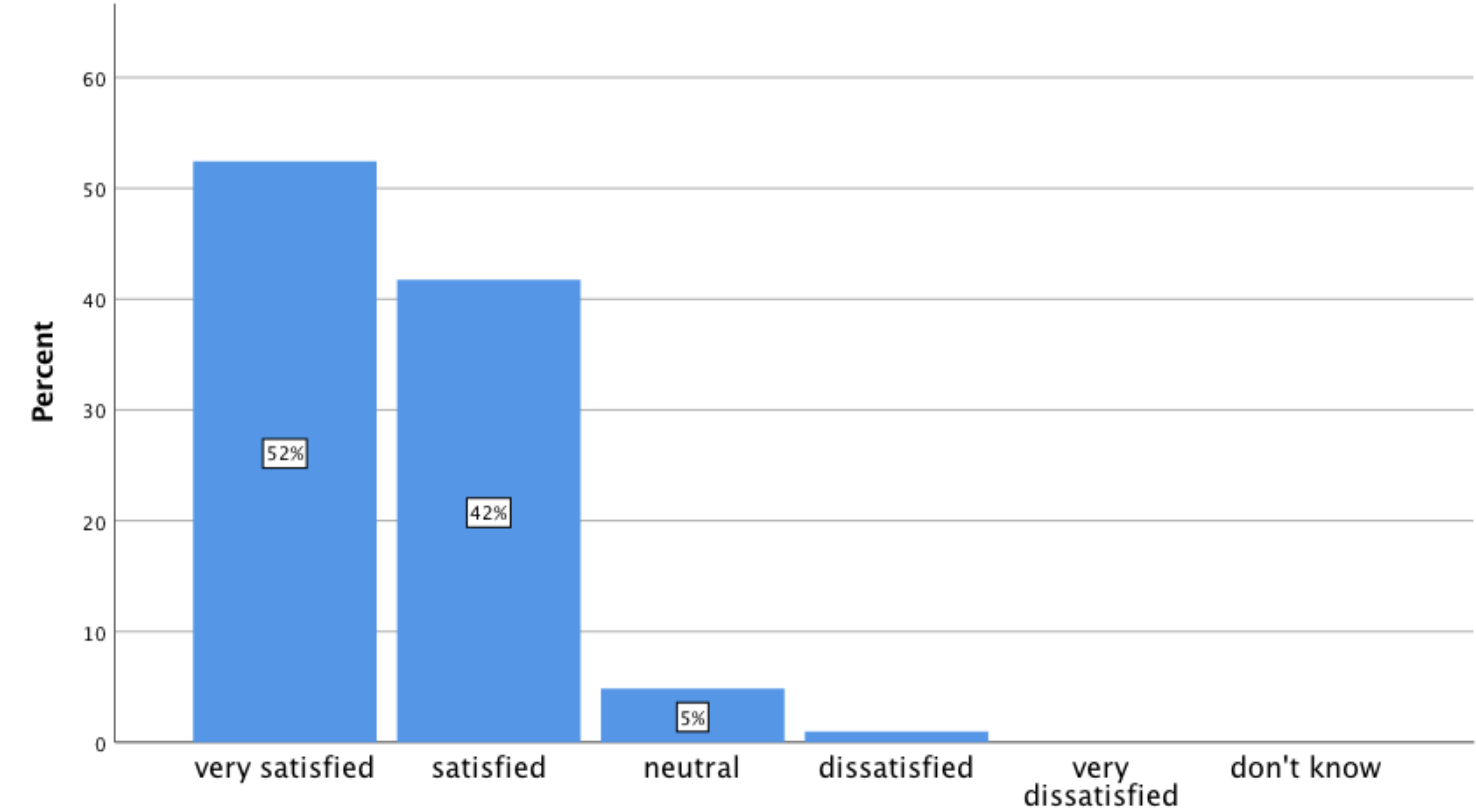
Choice of speakers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	56	54,4	54,4	54,4
	satisfied	45	43,7	43,7	98,1
	neutral	2	1,9	1,9	100,0
	Total	103	100,0	100,0	

Satisfaction choice of speakers
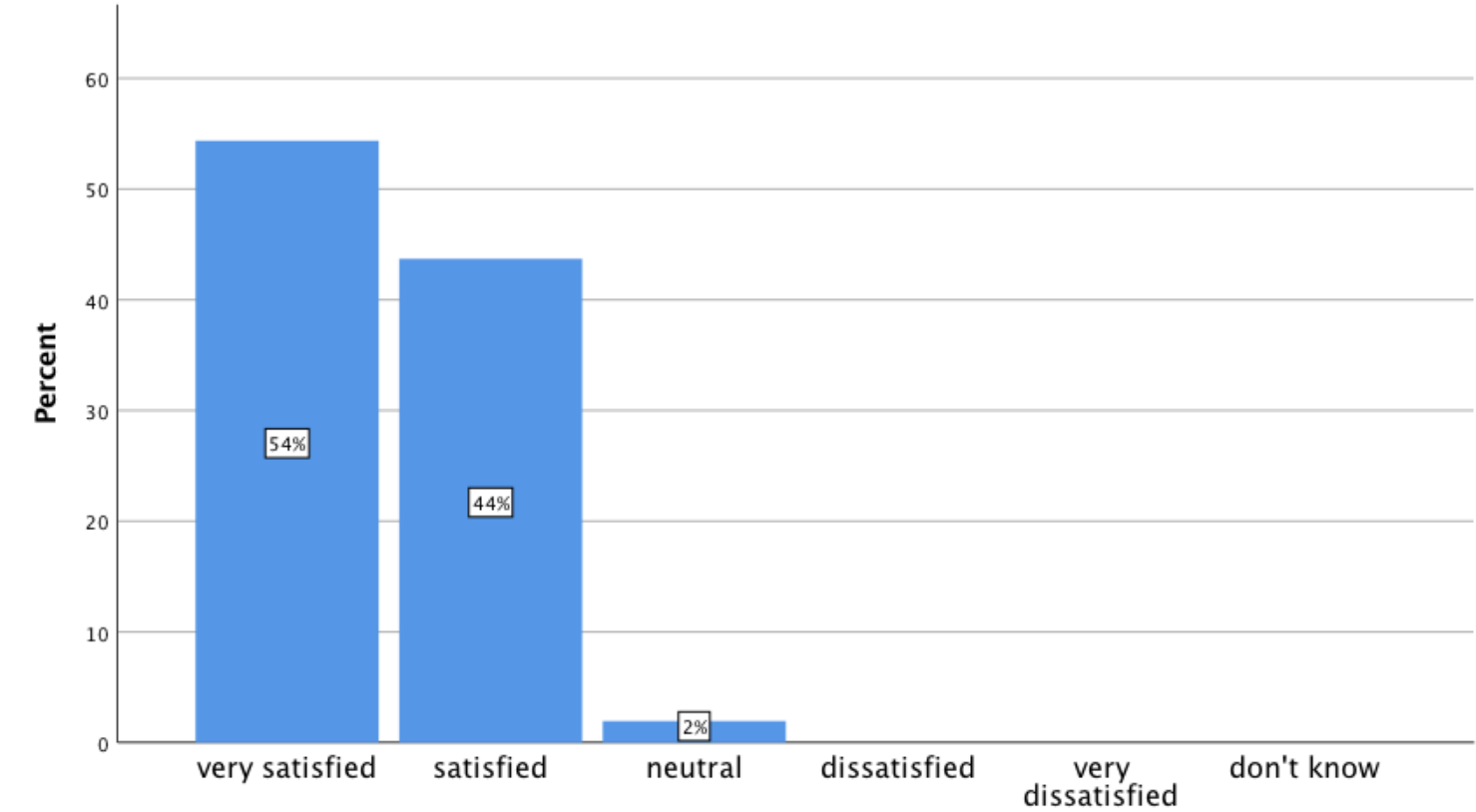
Poster presentations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	21	20,4	21,0	21,0
	satisfied	40	38,8	40,0	61,0
	neutral	21	20,4	21,0	82,0
	dissatisfied	16	15,5	16,0	98,0
	very dissatisfied	2	1,9	2,0	100,0
	Total	100	97,1	100,0	
Missing	System	3	2,9		
Total		103	100,0		

Satisfaction poster presentations
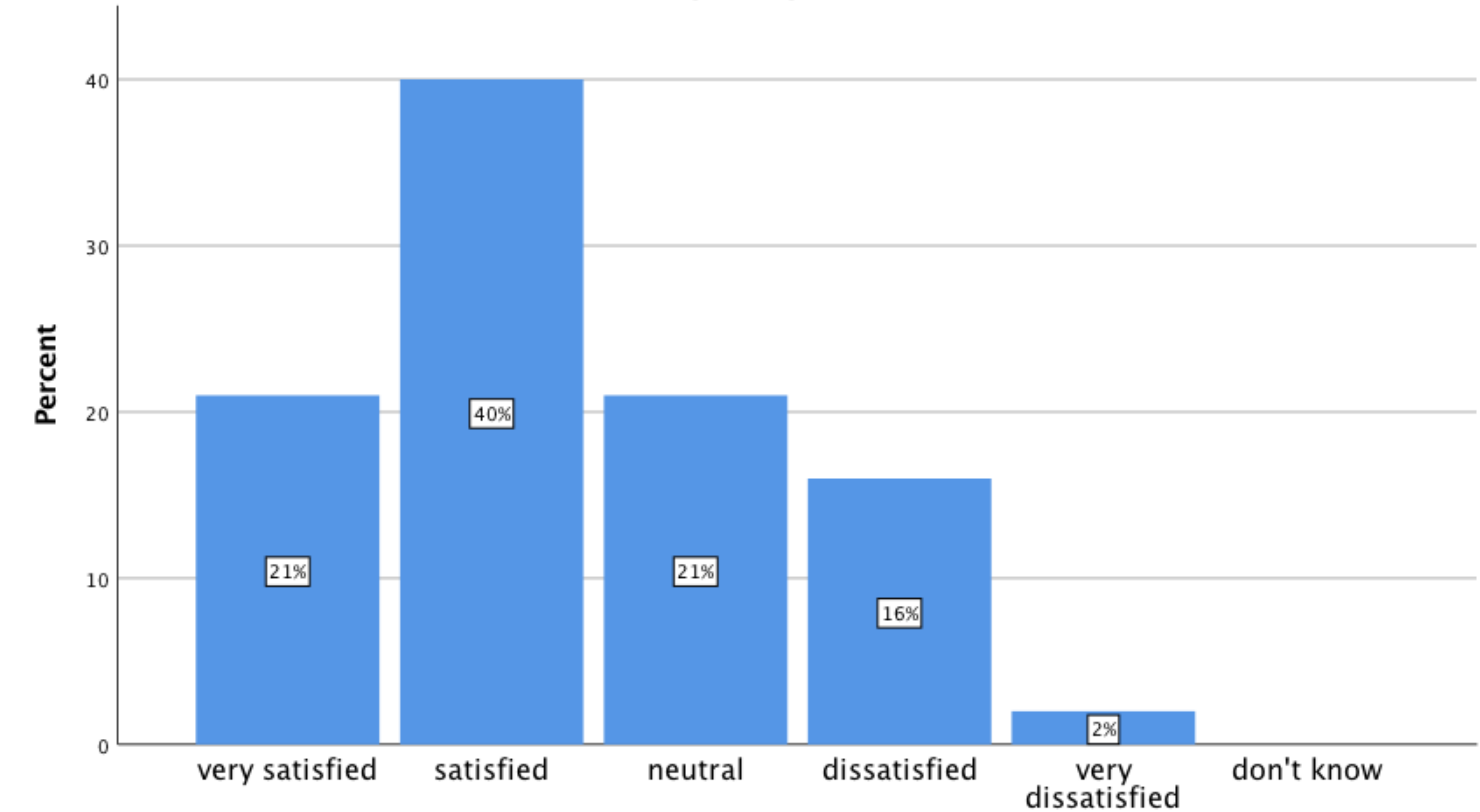
Round-table discussions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	19	18,4	29,2	29,2
	satisfied	30	29,1	46,2	75,4
	neutral	14	13,6	21,5	96,9
	dissatisfied	1	1,0	1,5	98,5
	very dissatisfied	1	1,0	1,5	100,0
	Total	65	63,1	100,0	
Missing	System	38	36,9		
Total		103	100,0		

Satisfaction round-table discussions
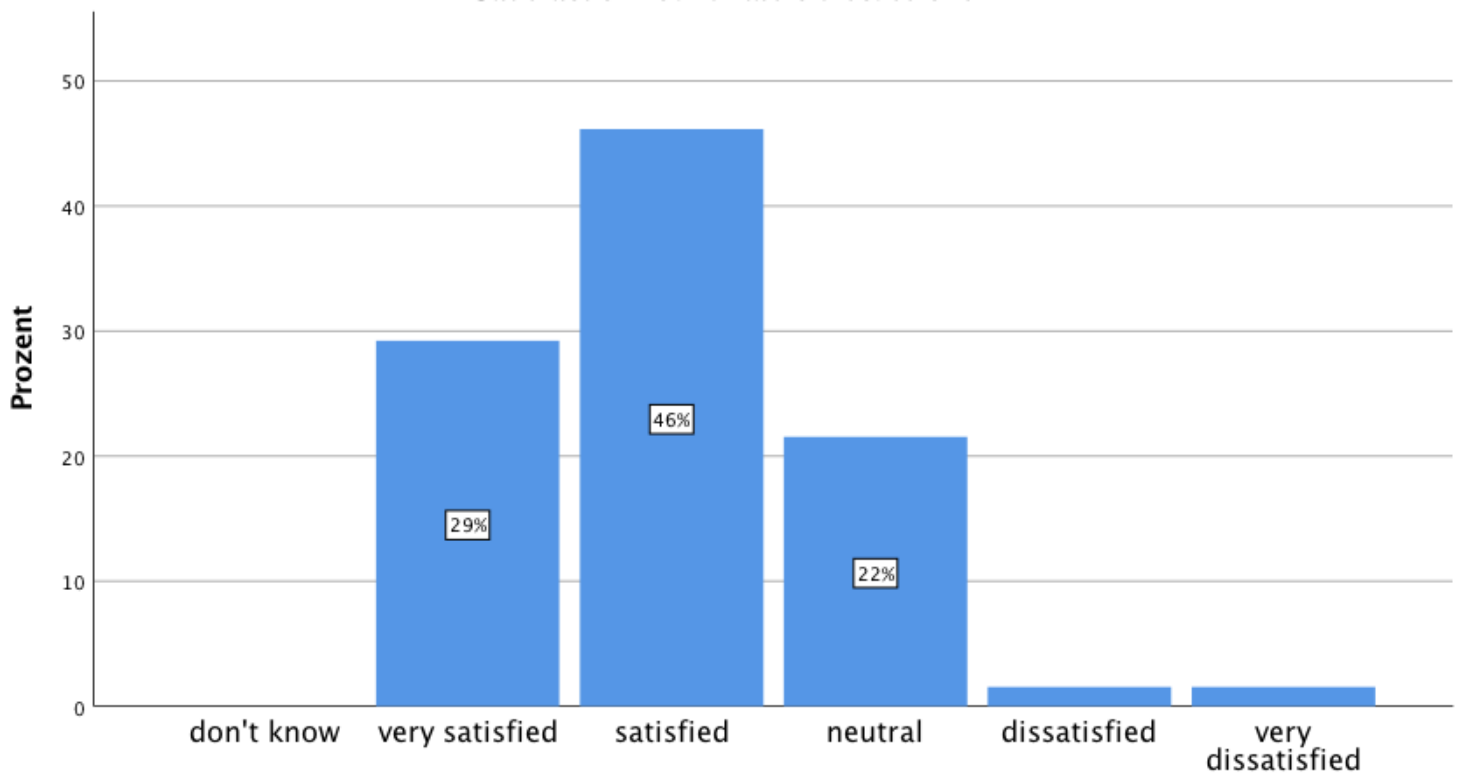
Fehlerbalken: 95% CI

Schedule

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	48	46,6	47,1	47,1
	satisfied	45	43,7	44,1	91,2
	neutral	8	7,8	7,8	99,0
	dissatisfied	1	1,0	1,0	100,0
	Total	102	99,0	100,0	
Missing	System	1	1,0		
Total		103	100,0		

Satisfaction schedule
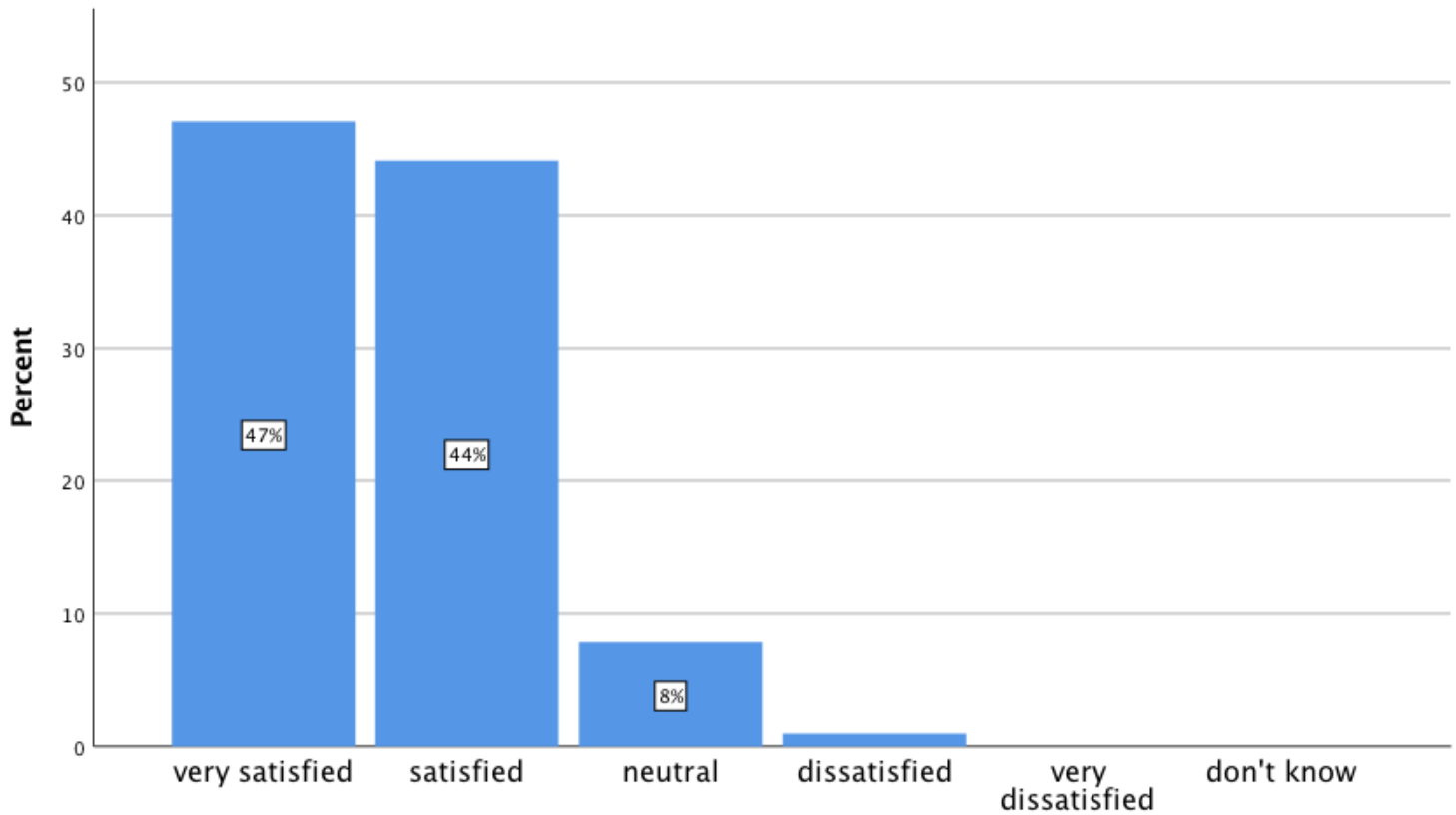
Registration on eventbrite and check in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	68	66,0	67,3	67,3
	satisfied	31	30,1	30,7	98,0
	neutral	2	1,9	2,0	100,0
	Total	101	98,1	100,0	
Missing	System	2	1,9		
Total		103	100,0		

Satisfaction registration on eventbrite and check-in

Fehlerbalken: 95% CI
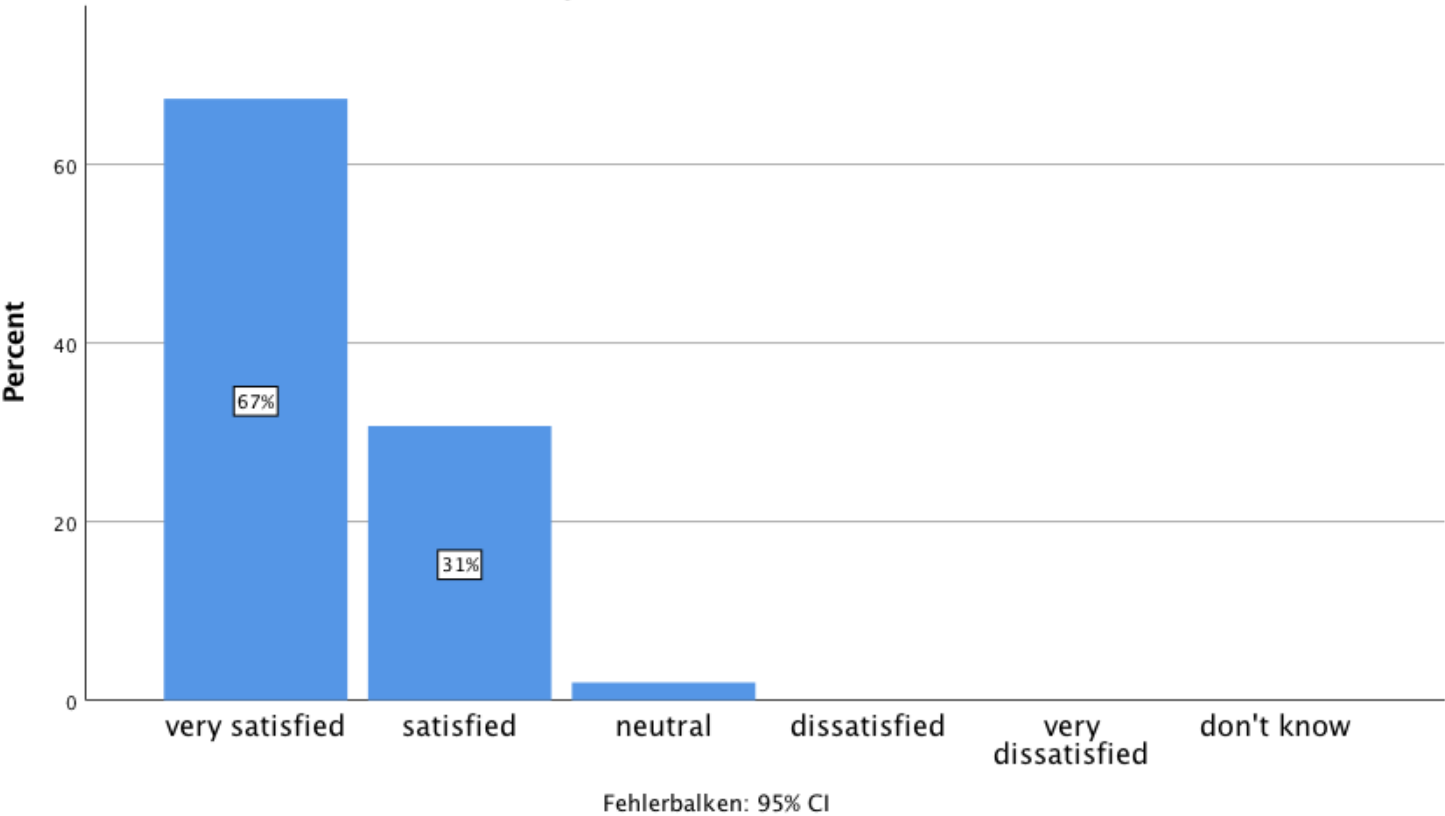
Venue

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	52	50,5	53,1	53,1
	satisfied	40	38,8	40,8	93,9
	neutral	6	5,8	6,1	100,0
	Total	98	95,1	100,0	
Missing	System	5	4,9		
Total		103	100,0		

Satisfaction venue
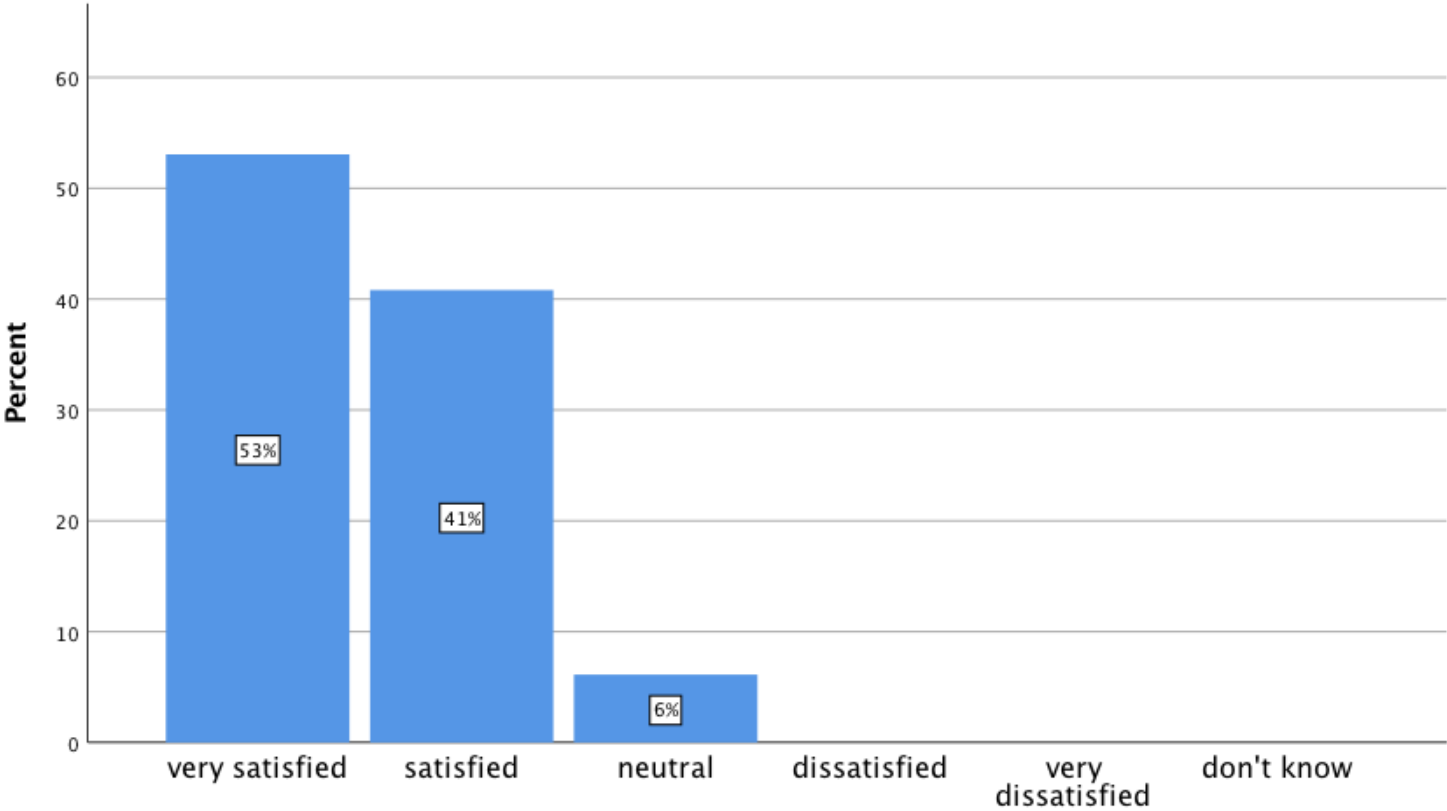
Catering

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very satisfied	46	44,7	46,0	46,0
	satisfied	40	38,8	40,0	86,0
	neutral	13	12,6	13,0	99,0
	very dissatisfied	1	1,0	1,0	100,0
	Total	100	97,1	100,0	
Missing	System	3	2,9		
Total		103	100,0		

Satisfaction catering
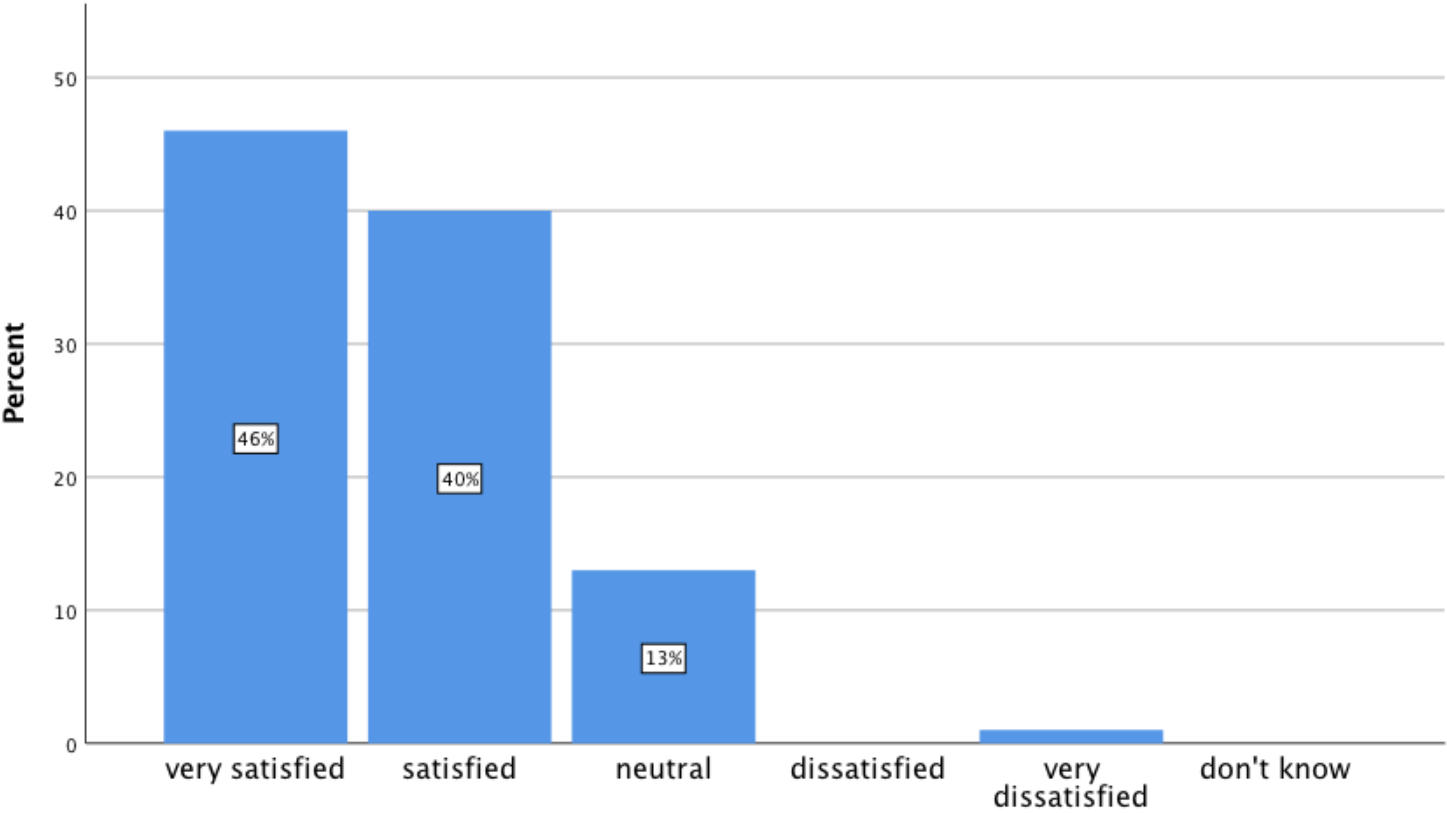
Question 3
How did you find out about the conference?

Statistics

found_conference_how

N	Valid	103
	Missing	0

How did you find out about the conference?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	website	4	3,9	3,9	3,9
	mailed invitation	21	20,4	20,4	24,3
	colleague	53	51,5	51,5	75,7
	twitter	8	7,8	7,8	83,5
	printed poster	11	10,7	10,7	94,2
	other	6	5,8	5,8	100,0
	Total	103	100,0	100,0	
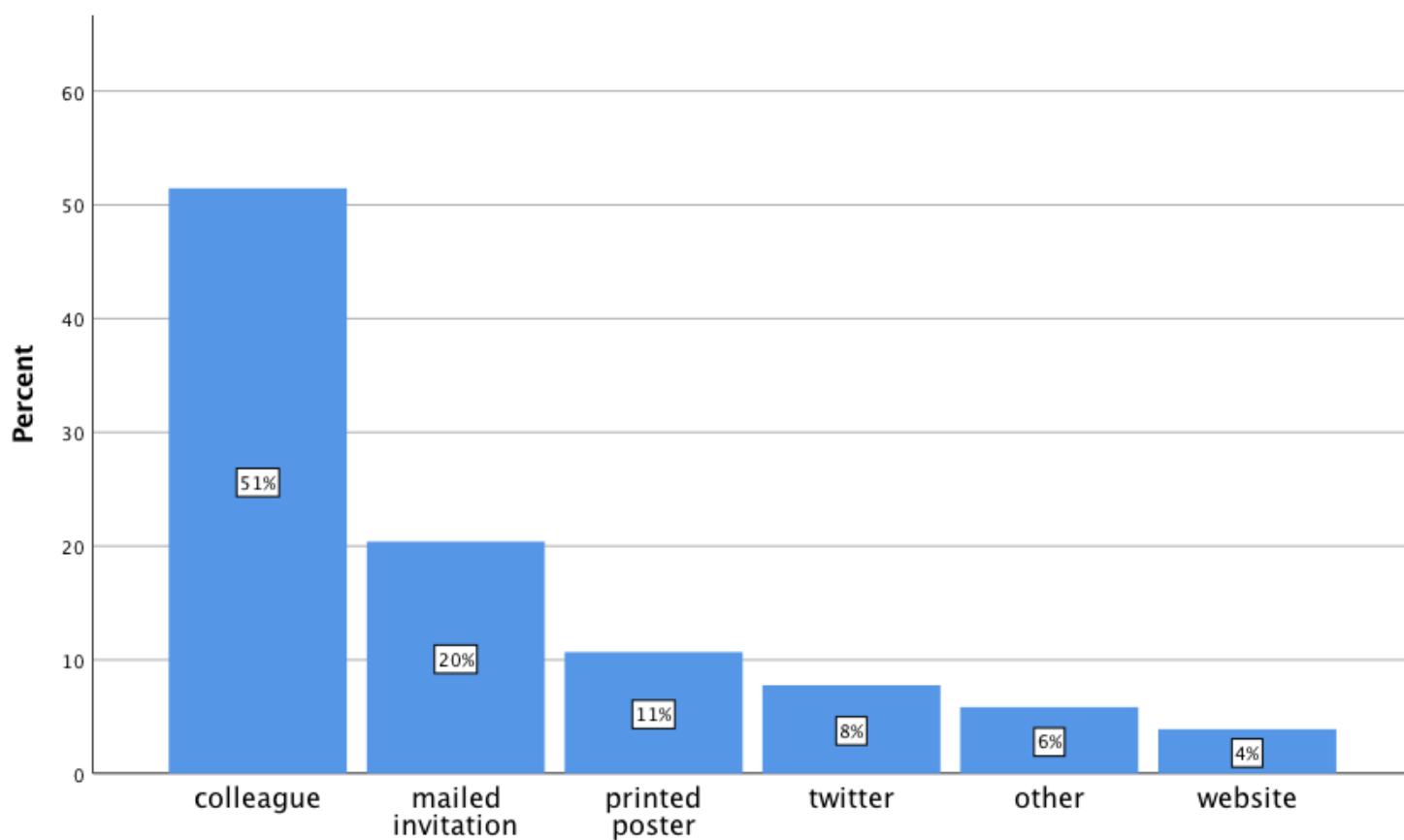
Question 4
What was the main reason for you to attend the conference?

Statistics

reason_attend

N	Valid	91
	Missing	12

What was the main reason for you to attend the conference?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	scientific content	57	55,3	62,6	62,6
	networking	11	10,7	12,1	74,7
	scientific development	15	14,6	16,5	91,2
	specific speakers	5	4,9	5,5	96,7
	collaboration	3	2,9	3,3	100,0
	Total	91	88,3	100,0	
Missing	System	12	11,7		
Total		103	100,0		
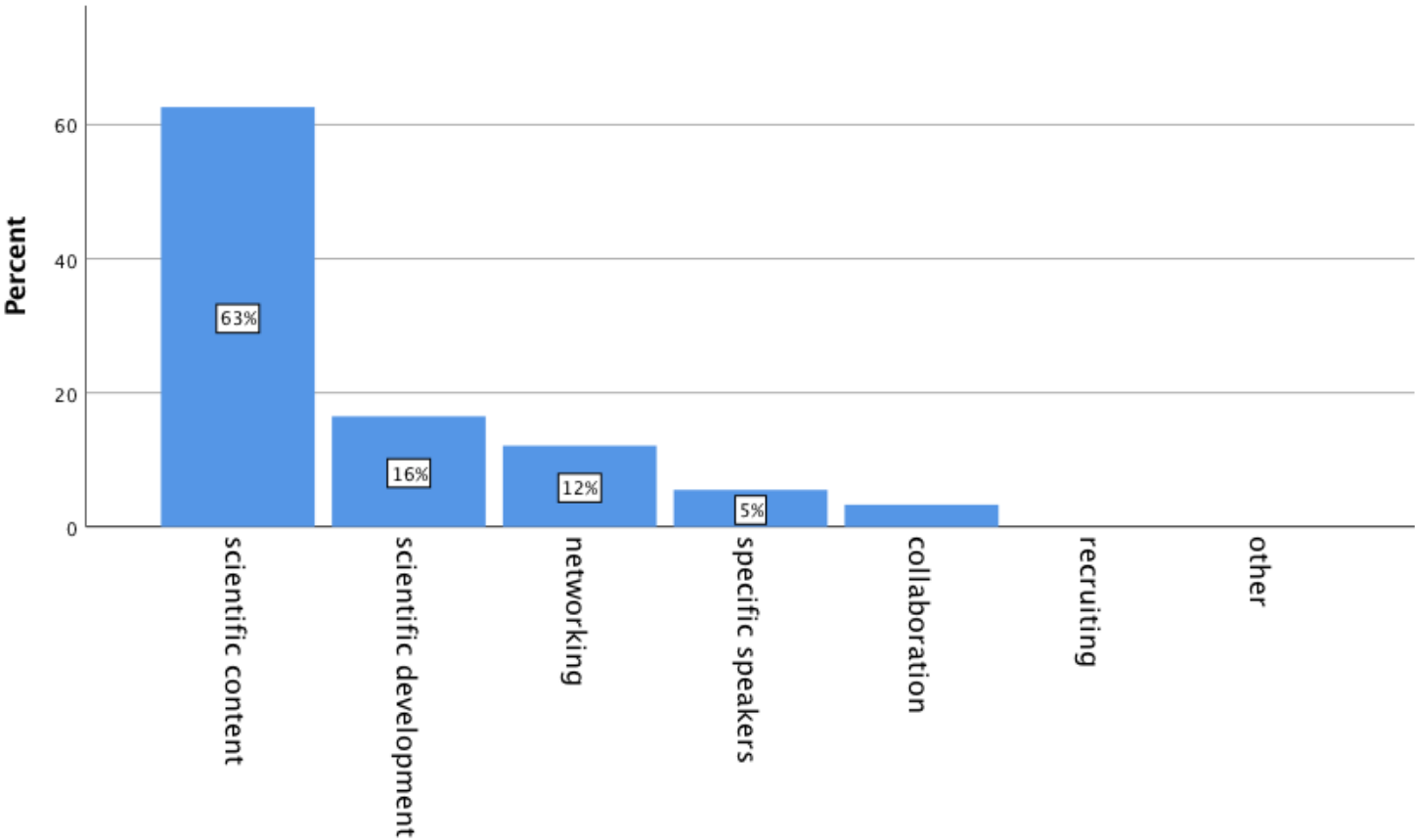
Question 5
For the reason stated in question 4, was it worthwhile attending the conference?

Statistics

attending_worthwhile

N	Valid	102
	Missing	1

For the reason stated in question 4, was it worthwhile attending the conference?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	50	48,5	49,0	49,0
	agree	47	45,6	46,1	95,1
	neutral	4	3,9	3,9	99,0
	disagree	1	1,0	1,0	100,0
	Total	102	99,0	100,0	
Missing	System	1	1,0		
Total		103	100,0		

Questions 6-8

Frequencies

Statistics

		conference_sharing	conference_discussion	conference_networking
N	Valid	103	103	102
	Missing	0	0	1

The conference had a supportive environment for sharing my research results and interests with other participants.

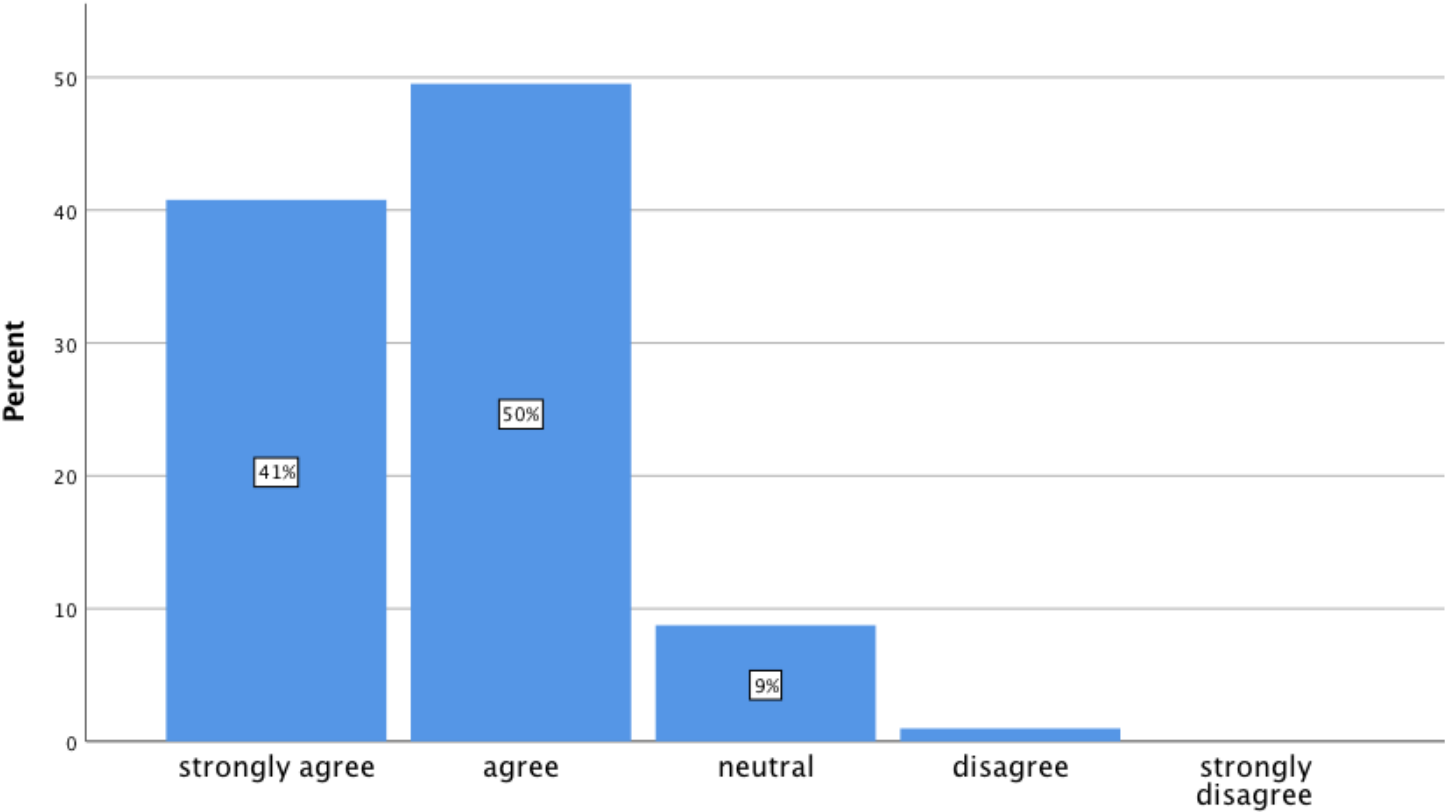|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	39	37,9	37,9	37,9
	agree	47	45,6	45,6	83,5
	neutral	15	14,6	14,6	98,1
	disagree	2	1,9	1,9	100,0
	Total	103	100,0	100,0	

The conference had a supportive environment for sharing my research results and interests with other participants.
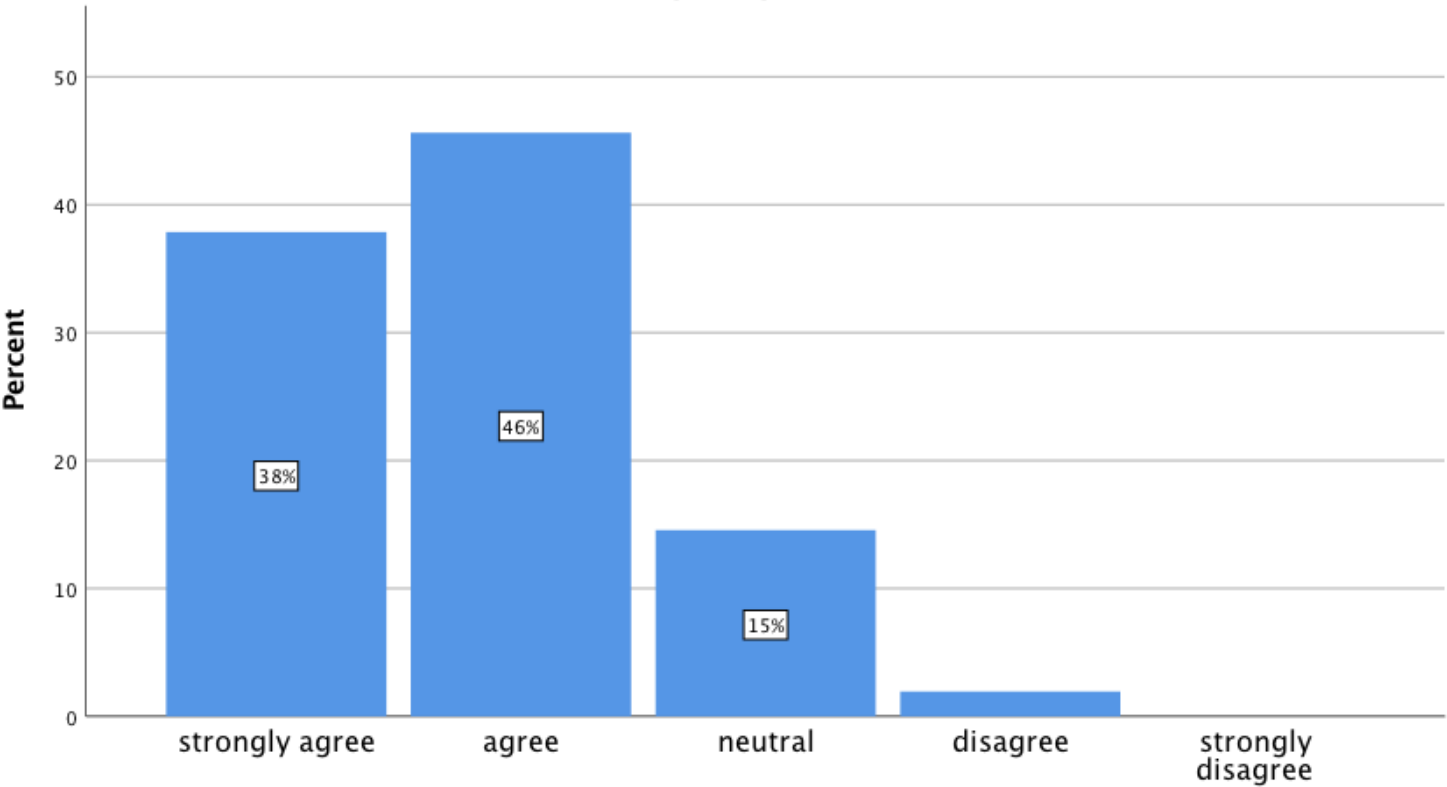
The conference had a supportive environment for discussion.

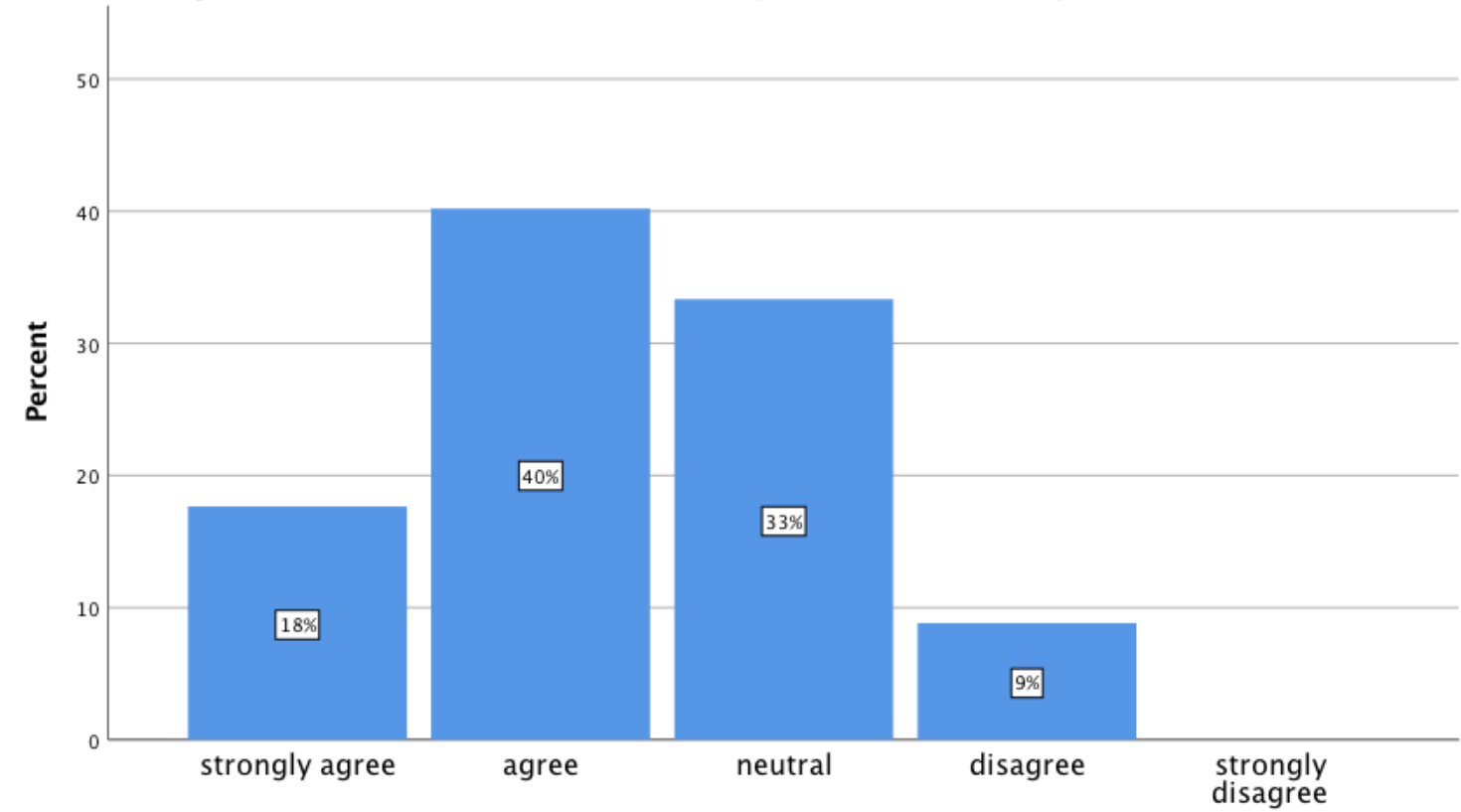|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	42	40,8	40,8	40,8
	agree	51	49,5	49,5	90,3
	neutral	9	8,7	8,7	99,0
	disagree	1	1,0	1,0	100,0
	Total	103	100,0	100,0	

The conference had a supportive environment for discussion.

Through the conference I was able to establish productive relationships for future research.

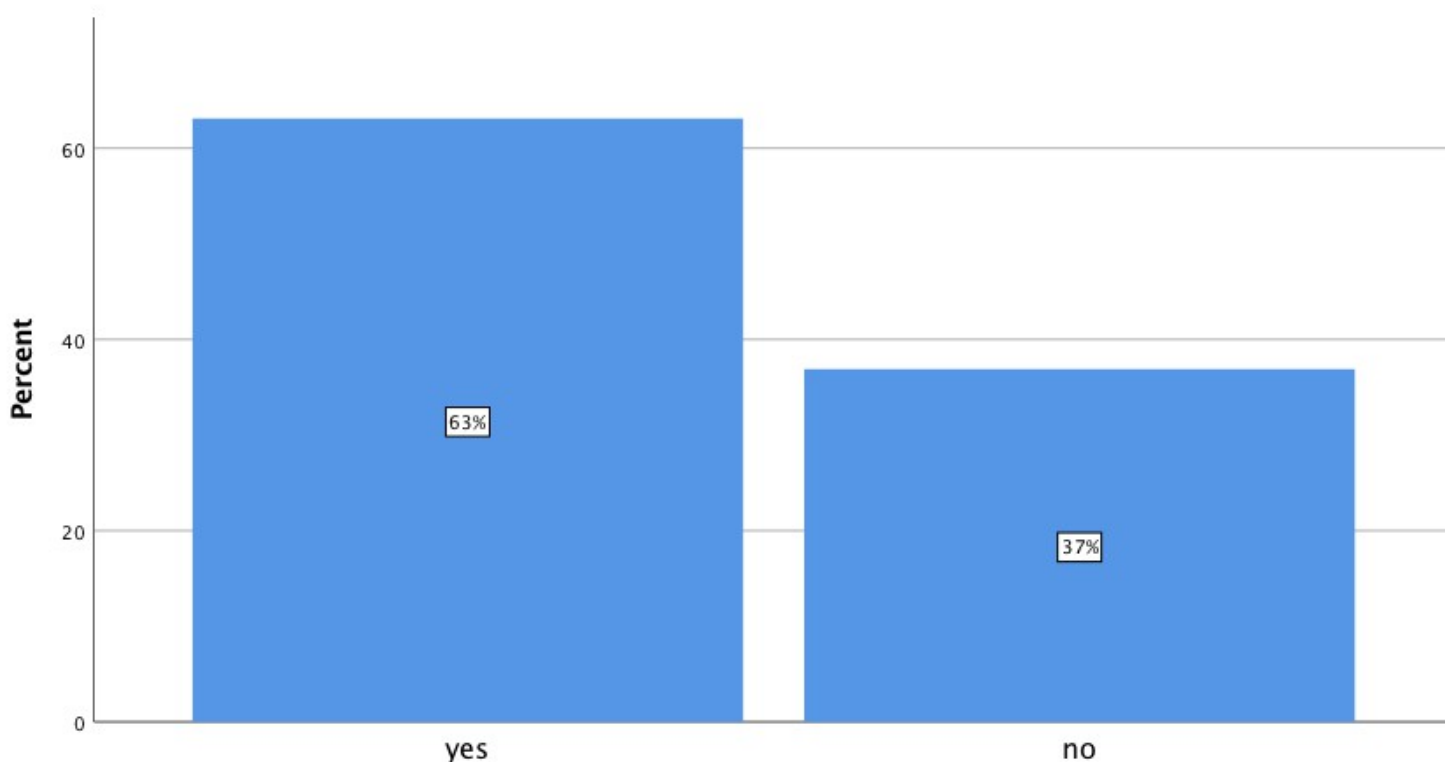|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	18	17,5	17,6	17,6
	agree	41	39,8	40,2	57,8
	neutral	34	33,0	33,3	91,2
	disagree	9	8,7	8,8	100,0
	Total	102	99,0	100,0	
Missing	System	1	1,0		
Total		103	100,0		

Through the conference I was able to establish productive relationships for future research.

Question 9

**I participated in one or more round-table sessions.**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	65	63,1	63,1	63,1
	no	38	36,9	36,9	100,0
	Total	103	100,0	100,0	

Question 10
The round-table sessions created a supportive environment for sharing my research \results and interests with other participants.

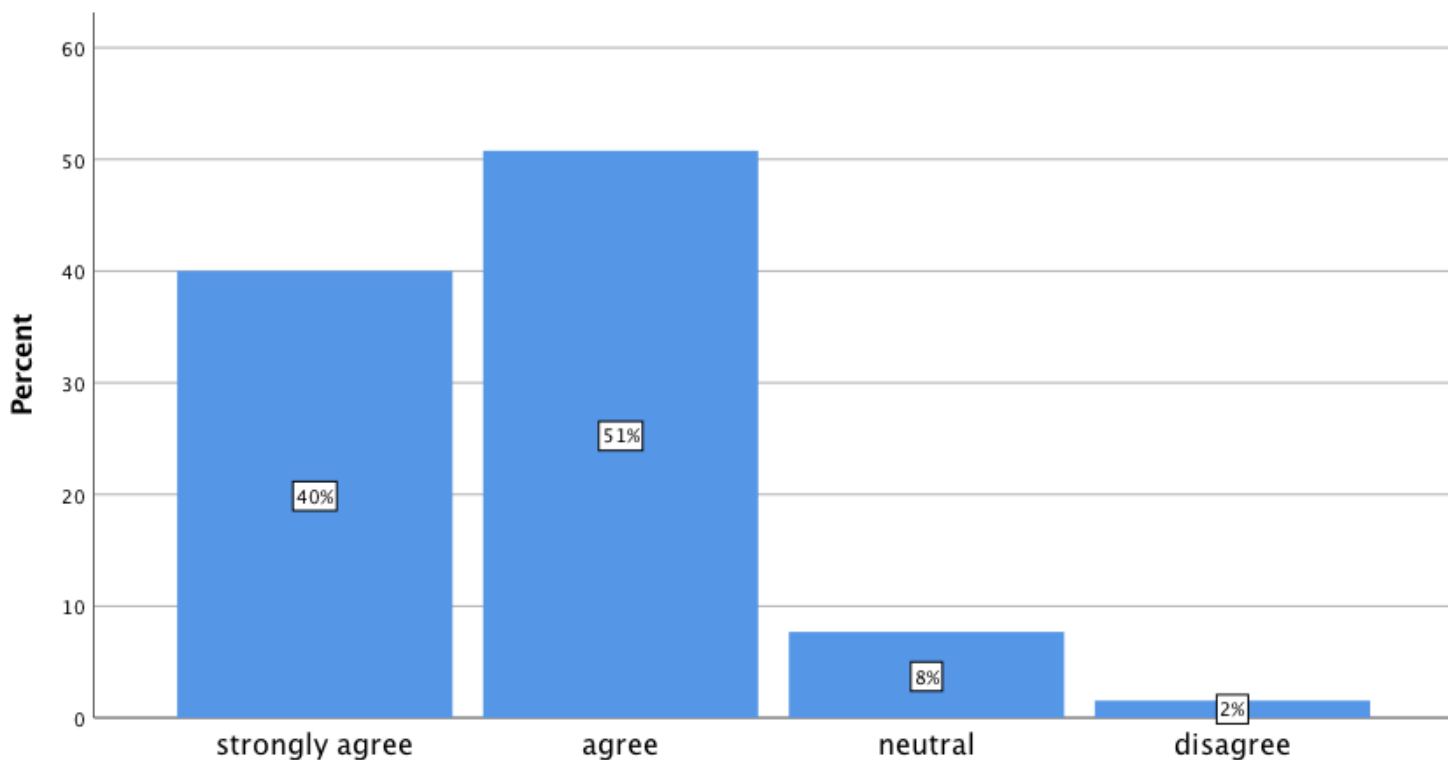|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	10	9,7	15,4	15,4
	agree	21	20,4	32,3	47,7
	neutral	31	30,1	47,7	95,4
	disagree	3	2,9	4,6	100,0
	Total	65	63,1	100,0	
Missing	System	38	36,9		
Total		103	100,0		
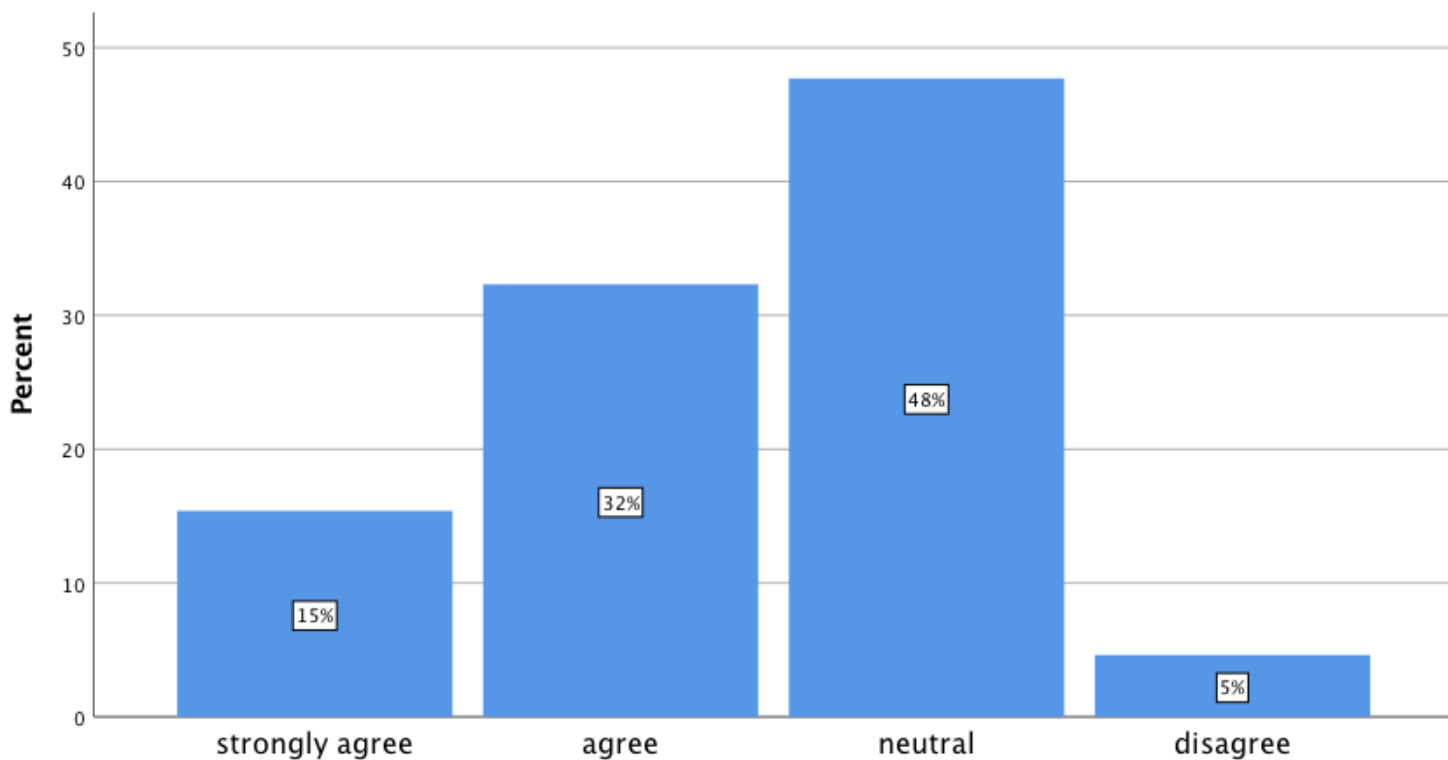
Question 11
The round-table sessions were a supportive environment for discussion.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	26	25,2	40,0	40,0
	agree	33	32,0	50,8	90,8
	neutral	5	4,9	7,7	98,5
	disagree	1	1,0	1,5	100,0
	Total	65	63,1	100,0	
Missing	System	38	36,9		
Total		103	100,0		

Question 12
Through the round-table sessions I was able to establish productive relationships for future research.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	7	6,8	10,9	10,9
	agree	12	11,7	18,8	29,7
	neutral	33	32,0	51,6	81,3
	disagree	11	10,7	17,2	98,4
	strongly disagree	1	1,0	1,6	100,0
	Total	64	62,1	100,0	
Missing	System	39	37,9		
Total		103	100,0		
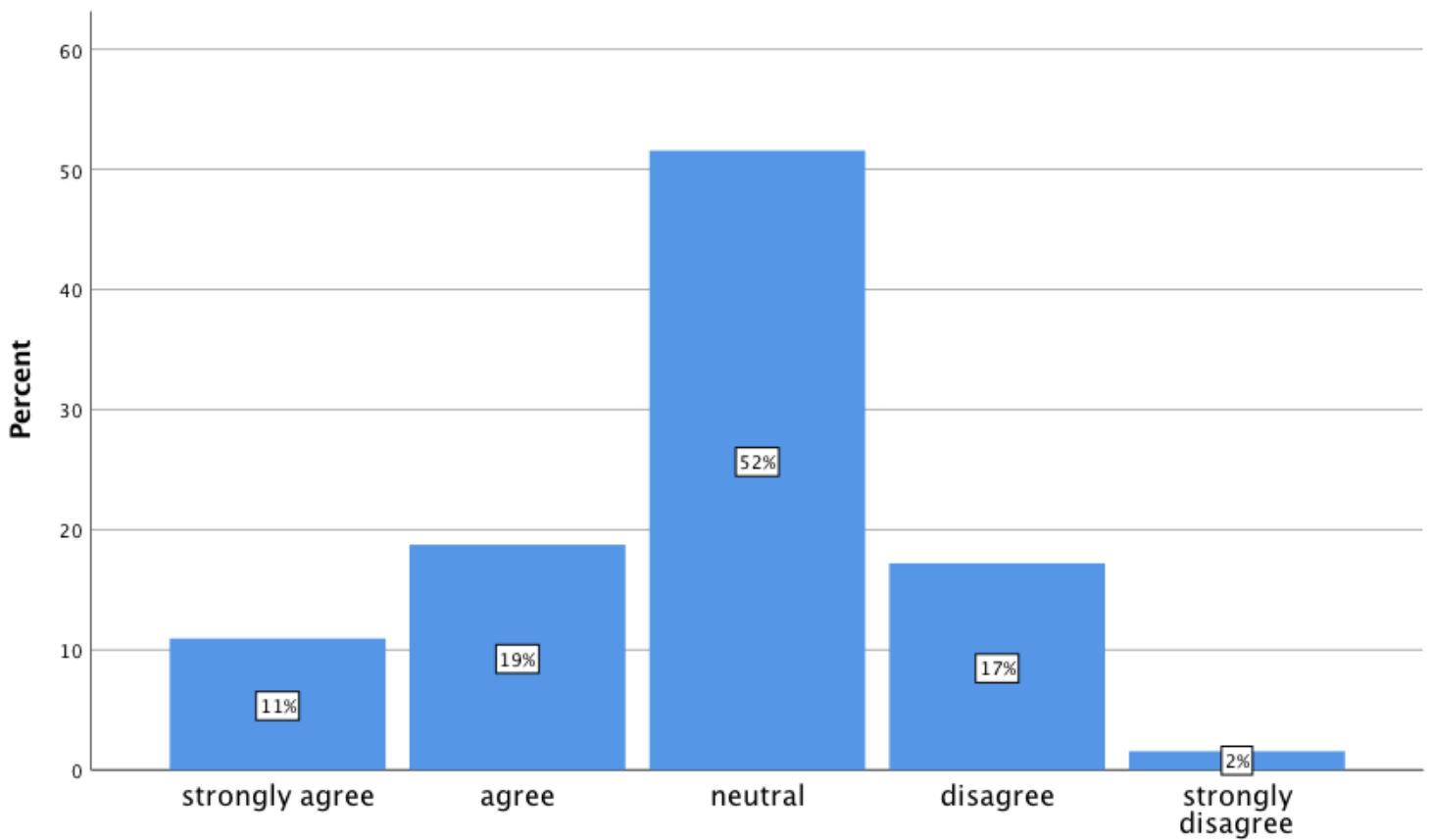
Question 13
When you are contributing to a conference, what is your preferred way to do so?

Statistics

preferred_conference_contribution

N	Valid	99
	Missing	4

preferred_conference_contribution

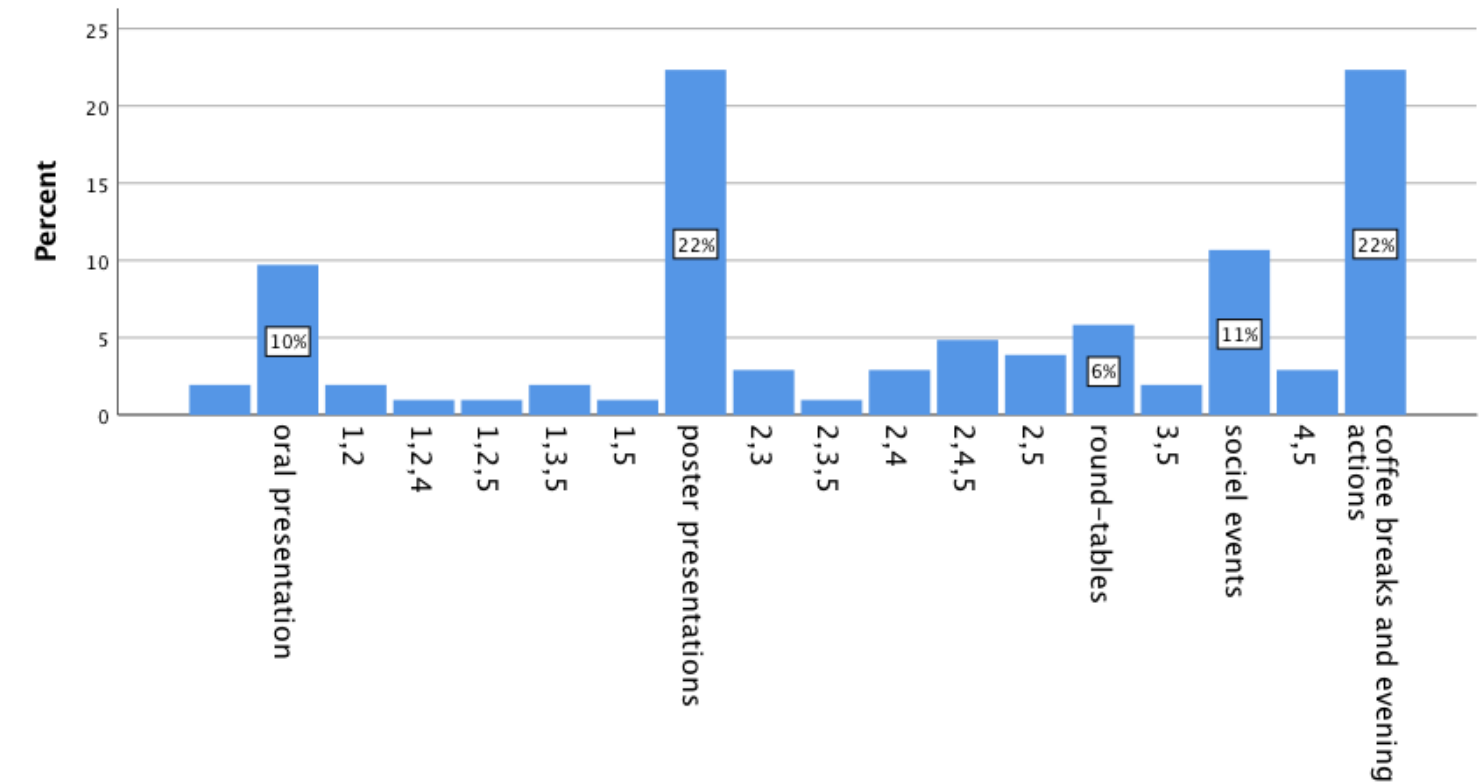|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	long presentation	9	8,7	9,1	9,1
	short presentation	54	52,4	54,5	63,6
	poster presentation	36	35,0	36,4	100,0
	Total	99	96,1	100,0	
Missing	System	4	3,9		
Total		103	100,0		
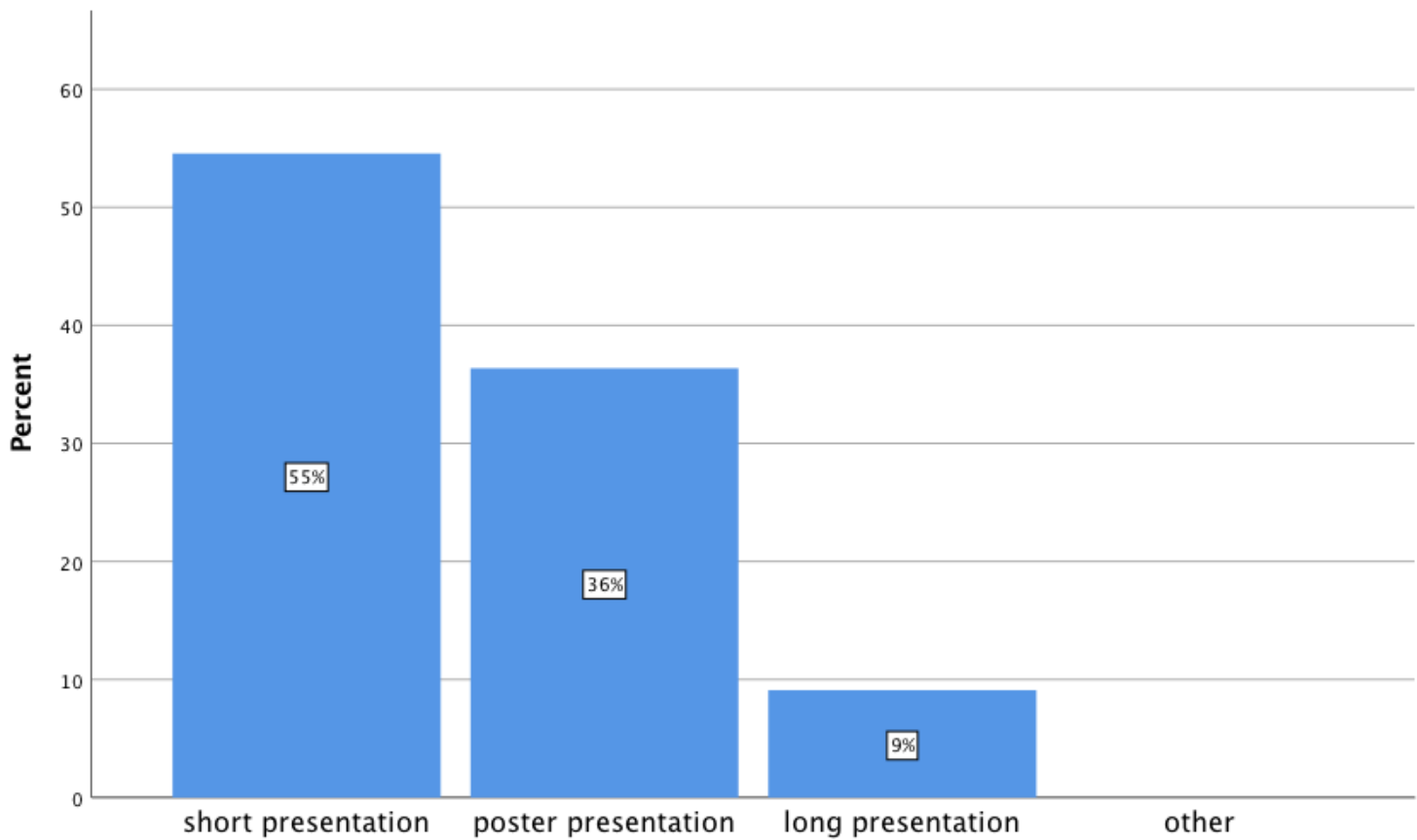
Question 14
Which part of the conference was most helpful to you for your networking?

*** Comment: Due to multiple answers the useful anylsis of this question was hindered. ***

Statistics
most_helpful

N	Valid	103
	Missing	0

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid		Frequency	Percent	Valid Percent	Cumulative Percent
		2	1,9	1,9	1,9
	oral presentation	10	9,7	9,7	11,7
	1,2	2	1,9	1,9	13,6
	1,2,4	1	1,0	1,0	14,6
	1,2,5	1	1,0	1,0	15,5
	1,3,5	2	1,9	1,9	17,5
	1,5	1	1,0	1,0	18,4
	poster presentations	23	22,3	22,3	40,8
	2,3	3	2,9	2,9	43,7
	2,3,5	1	1,0	1,0	44,7
	2,4	3	2,9	2,9	47,6
	2,4,5	5	4,9	4,9	52,4
	2,5	4	3,9	3,9	56,3
	round-tables	6	5,8	5,8	62,1
	3,5	2	1,9	1,9	64,1
	sociel events	11	10,7	10,7	74,8
	4,5	3	2,9	2,9	77,7
	coffee breaks and evening actions	23	22,3	22,3	100,0
	Total	103	100,0	100,0	

Question 15
Was there a topic you missed at the conference?

Statistics

topic_missed

N	Valid	95
	Missing	8

Was there a topic you missed at the conference?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no	83	80,6	87,4	87,4
	yes	12	11,7	12,6	100,0
	Total	95	92,2	100,0	
Missing	System	8	7,8		
Total		103	100,0		

```
COMMENTS ON TOPICS PARTICIPANTS MISSED

- P6 remodelling coordination
- biophysics
- lipidomics
- spatial organization of chromosomal arms
- single molecule microscopy round table (over subscribed)
- dynamics of membrane complexes could have been covered more intensely
- too much focus on cell devision
- motility machineries
- host cell - microbe interactions
- growth in host cells
- I would have liked more theory/computational biology talks
- storage compounds of bacteria
```

Question 16
Further comments on the conference

```
COMMENTS
```

(+20 COMMENTS ADDRESS THE LENGTH AND COORDINATION OF THE POSTER
SESSION)

would pay more for additional meals (e.g. dinner)
poster presentation 1 day and pulling them down on the same day didn't
the opportunity to go through all the content
too short poster session
the poster session was really short!
limited free Wifi access
more time for poster presentations
if you do round-table discussions, it would be helpful if they were
longer
poster session too short
it was really a shame that the poster session was so short and the
posters did not stay up, I missed seeing a lot of them and only
presented mine to a few people
1 hour for poster sessions too short
poster sessions should be increased in time
clear indication to know if lunch or dinner is provided
one poster session was too short
more time for poster sessions
poster session too short and impossible to leave the poster
good thing was that the meeting did not start on sunday but on
wednesday
light was often too bright to see flourescent microscopy in
presentations
poster session too short
common evening event would be nice
was a pitty that the poster session was so short!
one day for posters was too short
poster sessions could be longer
poster session extremely short - should allow posters to be up whole
conference and give more time for this
poster session too short
poster session was too short
poster session could have been longer
round table about career should have gender equity in pannel
give more time for poster session or let them hanging longer
it was a shame that the posters were only up the first evening
the poster session was too short
poster session too short
poster session too short
would have liked to see more women given opportunity to present talks