University of Amsterdam
Institute of Physics

Report
From Intention to Impact

An analysis of the Equity and Inclusion survey at the UvA Institute of Physics (IoP)

echo

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1. Introduction

This report is an analysis of the results of the Equity and Inclusion Survey at the Institute of Physics (IoP) of the University of Amsterdam. Developed and executed by IoP manager Joost van Mameren and PhD/PD council members Evita Verheijden and Jaco de Swart the survey was conducted to disclose the experiences and perspectives of the institute's employees on aspects of equity, inclusion, diversity and belonging, as well as their encounters with racism, sexism and other mechanisms of exclusion in the institute and the broader physics community. Respondents were also invited to share ideas and perspectives for improvement and prevention. The initiators of the survey provided a good foundation to question and reflect on aspects that define the sense of inclusion, exclusion, safety, unsafety and experiences of belonging within the IoP. The IoP collected, edited and anonymised the data and ECHO, Expertisecentrum Diversiteitsbeleid analysed the survey data. The analysis is based on and therefore limited to the information provided by the IoP. The institute management and the PhD/PD council have extensively consulted with the UvA Chief Diversity Officer team, the Faculty Diversity Officer at the Faculty of Science, and the newly installed IoP Diversity & Inclusion Council while designing this survey.

The survey is meant as a first step to effectuate the aims of the IoP leadership "to make the institute more equitable, inclusive and diverse". The IoP intends to provide "an increasingly safe and transparent culture, in which discrimination of any kind is not tolerated and where any potential cases can be safely discussed, addressed and properly acted upon."

The IoP management is realistic in its expectation of what it takes to make the institute more equitable, inclusive, and diverse. The survey questions elaborate on a range of experiences relevant to this process. The IoP specifies its intentions by elaborating on the (inter)connection between inclusion and 'social safety,' the organisation as a brave and accountable space, and not accepting mechanisms of exclusion like racism and sexism to improve gender and cultural diversity. The initiators are courageous and (for some, probably) bold in what colleagues have been requested to respond on. With the intentional and specific questions, the developers create a level playing field by inviting colleagues to reflect from a broader frame of reference. With this, they are also specific in how they intend to lead the conversation on equity, inclusion, and diversity and set the stage for a brave space and the start of developing a shared vocabulary on equity, inclusion, and diversity within the context of the IoP. Colleagues are invited to answer questions which will be experienced as more or less sensitive, private, painful or rejective.

The initiators are sensitive to the reality of existing power dynamics and majority and minority perspectives within the institute and are careful not to reproduce existing power dynamics. The next step is to effectuate a brave space to reflect and communicate "in getting comfortable with the uncomfortable" (Baboeram and Karaaslan, 2020). The outcomes and

analysis of the survey are a start to making informed choices for the direction and content of a plan and programme of activities, which will contribute to achieving the intended aims hence, to progress “From Intention to Impact”.

2. Diversity, inclusion and social safety at UVA and the IoP

UvA

Institution-wide policy and practice focusing on diversity, inclusion and social safety at UvA is relatively young. After the Maagdenhuis protest of students and staff in 2015, an institutional infrastructure has been developed by the current Executive Board. In 2016, The University of Amsterdam Diversity Commission presented its report, entitled “Let’s do diversity”, to the Executive Board (Wekker et al., 2016). Since then, a Chief Diversity Officer (CDO) was installed. Together with the Diversity Office team, they have shaped the university’s institutional policy framework and initiatives to improve diversity and inclusion for students and staff at UvA. Over the past four years, a network of Faculty Diversity Officers was established, and a Diversity Memorandum was drafted. In 2019, a Social Safety Taskforce was initiated to advise and work on increasing the social safety of staff and students at UvA. In 2021 the task force presented its report with findings. In 2021, a new CDO for the UvA took over. The new CDO is also the Diversity Officer of the Department of Science and, therefore, familiar with the specific context of the IoP.

Faculty

On a faculty level, institutes like the IoP focused on diversity even before 2015. In the Self-Evaluation of the Amsterdam University Physics 2010-2016, concerns of inequity of the gender balance were voiced, and cultural diversity was mentioned as part of the diversity in staff nationalities.

IoP

Within the context of this survey and the aims and intentions of the IoP leadership, the IoP is a promising practice and a good example of addressing inclusion with an intentional focus, mindset and determination to make progress. More importantly, the IoP promises to hold itself accountable in the course of global social movements like #MeToo and Black Lives Matter which already resulted in #ShutDownAcademia and #ShutdownSTEM in June 2020. This kind of leadership and vision is necessary to lead an institution-wide development towards improved equity, inclusion and diversity at the IoP. Aiming at inclusion starts with understanding why, how, what and where exclusion happens within the organisation. The results of the survey provide an opportunity to act intentionally and can be exploited not for blaming but with the purposes of learning, improving and accountability.

3. Methodology

To capture the views and experiences of staff at the IoP, a survey consisting of both quantitative and qualitative elements was used. This combination of quantitative and qualitative elements was chosen so that general patterns could be extracted from the collected data while simultaneously allowing for the personal input of respondents. All IoP staff members were invited to participate in the online survey. Out of the institute's 250 employees, 105 (42%) persons filled in the survey, of whom 28 persons partially completed the survey. Within this sample, there was a broad representation of the different academic positions and research institutes of the IoP (see also section 4: Survey).

The survey was divided into two sections. The first part focused on the representation of respondents in academic positions. The second part focused on the experiences and opinions of respondents concerning different aspects of inclusion within the context of the institute. The survey touched upon the following themes:

a. Demographic information about the respondents
b. Perspectives on equity, inclusion, and diversity at the IoP
c. Influence of equity, inclusion and diversity on career choice
d. (Experiences of) racism at the IoP
e. (Experiences of) sexism at the IoP
f. (Experiences of) other types of discrimination at the IoP
g. (Experiences of) intersectionality at the IoP
h. Policy suggestions and final remarks

The definition of important concepts such as diversity, racial discrimination, sexism and intersectionality was provided in the survey. All collected data were anonymised and analysed using Qualtrics software. Only one of the confidential advisors had access to the complete responses. While the statistical analysis was provided by Joost van Mameren, Evita Verheijden and Jaco de Swart, the substantive analysis was carried out by ECHO.

Due to the nature of this research, it is possible that the survey attracted respondents that already had a vested interest in these topics. Given the nature and sensitivity of the survey questions, confidentiality was secured by exclusively providing full access to one of the confidential advisors of the Faculty of Science. Furthermore, all employees of the IoP could rely on different types of support in case participating in the survey would cause problems or be confronting. Employees of the IoP were encouraged to talk with colleagues, supervisors, council members, the secretariat and the institutes' management.

Terminology

The survey uses terminology that will be further elaborated on in the different parts of chapter 4, where the findings of the survey questions are presented. A few introductory remarks should be made on racism, sexism and discrimination to explain why the distinction matters between racism and sexism on the one hand and discrimination on the other hand.

Discrimination (Discriminatie, n.d.) is the unequal treatment, disadvantage or exclusion of people based on specific identity characteristics that are not relevant to the context. For example, distinctions can be made on (ethnic) origin, gender identity, skin colour, sexual orientation, age, religion or disability. **Racism** and **sexism** are institutionalised mechanisms based on the idea that the image of white and male superiority, and coloured and female inferiority is embedded in a social system of power structures and institutions. The idea of only individual racism (that someone is racist) is rejected because racism is institutionalised, thus present throughout society, and therefore cannot be dismantled by organisational efforts only. Solutions are often aimed at acknowledging, recognising, and dismantling those power structures within institutions (Racisme, n.d.) to change the social norm relevant for, in this case, the IoP, the wider physics community and the UvA. It is important to understand the idea of “race”, which is a social construct and is also treated as such in frameworks associated with diversity and inclusion. Race is not a biological construct but socially determined and a characteristic to position people as “the other: inferior.” This characteristic can be linked to skin colour and other aspects of identity such as religion, ethnicity or culture. Sexism, heterosexism, ableism, etc. are similar institutional mechanisms of exclusion and injustice.

Creating an increasingly safe and transparent culture for the IoP, in which discrimination of any kind is not tolerated, requires a multi-dimensional approach: on the level of staff, the IoP and the university in general as part of society. On a staff level, it means raising awareness of prejudice and stereotyping, which are causes of discrimination (Felten et al., 2018). For the IoP and the university in general, it means raising awareness of existing mechanisms that create, maintain or reproduce (power) structures that cause unequal opportunities and inequity in expectations of performance.

In this analysis, “racism, sexism and discrimination” will therefore be referred to as “racism, sexism and other mechanisms of exclusion”.

4. Survey

4.1 Introduction

The IoP has a population of about 250 persons from different age groups, gender identities, nationalities, ethnicities or migrant backgrounds, permanent/temporary positions and academic/other staff. Of the 250 persons, 105 responded, of whom 77 persons fully completed the survey and 28 persons partially completed the survey.

The data showed non-response to some questions. Several respondents preferred not to disclose or answer specific questions. This was the case with questions that may be perceived as sensitive, controversial or triggering other reasons for not answering. We saw this with questions referring to racial identity, ethnic identity, less with questions on sexual orientation and more when respondents were asked to share about witnessing or experiencing racism and sexism. It is important to note that questions regarding self-identification in terms of race and ethnicity are uncommon in the Dutch context and more common in the US context. The survey allowed respondents to share how they identify via different identity dimensions. For example, the survey asked how respondents racially identify. Respondents chose to identify as white or a person of colour (PoC). This is a common way in the United States of classifying communities of colour who are often minoritised, underrepresented and underserved. Being underserved would probably not be seen as relevant in the Dutch context, with a government providing means for the welfare of its citizens. Underserved can be explained as an outcome of institutional racism, where minoritised, racialised communities are seen as inferior compared to the superiority of a dominant group. Minoritised communities are not only characterised by race or ethnicity but also by their gender identity, LGBTQIA+, class, ability etc.

Colour-blind versus colour-brave

In the US, universities, government organisations and organisations like the National Science Foundation collect data to reveal the underrepresentation of racial diversity in the educator workforce and the science community (US Department of Education, 2016). Race is therefore used to show how racialised some communities of colour are. Race and gender in these contexts are collected to show evidence of underrepresentation and experiences of unsafety, exclusion and belonging. The study “Let’s do Diversity” at the UvA also showed “that many people are confident in speaking about gender and internationalisation but are uncomfortable in speaking about race and ethnicity” (Wekker et al., 2016). This provides more context as to why the largest share of non-answers to the survey was observed on race and ethnicity questions with respondents choosing the preference not to disclose. This is, however, not the only explanation. Raising awareness of racism, sexism, and other forms of discrimination requires a specific focus on being colour brave instead of colour blind, which focuses on acknowledging differences in ethnic and gender identities and different power positions in public and organisational spaces.

A **colour-blind framework** is based on the idea that difference should not matter and that everyone should be treated equally based on equal rights ("I don't see any colour, because to me everyone is equal"). A colour-blind framework often leads to generic measures, where one approach is offered for everyone. That approach is tailored to a (white) standard. Although the intention is good, a colour-blind framework often ignores differences in starting positions. The result is that people who do not belong to the established norm, despite their talents, cannot participate or contribute optimally. A colour-blind perspective can be an easy excuse not to talk about structural mechanisms of exclusion, like racism, sexism etc. A **colour-brave framework** is based on the idea that there is already a difference in starting position in society and that this should lead to a focus on providing equal opportunities ("I do see colour and recognise the challenges of structural exclusion, but also the added value people bring and treat everyone equally"). In this vision, not everyone is equal, but everyone should be treated equitably. A colour-brave framework also means literally admitting colour, daring to acknowledge the norm group as "white" and the disadvantaged group by this norm as people of colour (Kleurenbewust en kleurenblind kader, n.d.).

From a perspective of inclusion, the IoP is intentional and (specifically for the Dutch context) innovative in being explicit with regards to introducing dimensions of race and ethnicity in this survey and therefore initiating a conversation on the experiences with racism, sexism and other mechanisms of exclusion by staff members in the IoP organisation. The IoP acknowledges identities that deviate from the dominant norm by doing this. At the same time, these intentional choices come with a responsibility and expectations to further elaborate and act on experiences of unsafety and exclusion.

4.2 Questions

For the analysis of the survey results, focus will firstly be on the information provided on the demographics of respondents, secondly on their experiences with and reflections on equity, inclusion and diversity within the IoP, and thirdly on their experiences with and perspectives on racism, sexism and discrimination (in and outside of the IoP) specifically. The themes within the survey are as follows:

A. Individual characteristics of respondents related to diversity
   - Representation of respondents on academic positions and scientific departments of the IoP
   - Representation of respondents in age groups, their identification racially, by ethnicity, gender, and sexual orientation

B. Individual experiences on equity, inclusion, and diversity within the context of the IoP
   - Perceived value of diversity for the institute

- Experiences of belonging in the institute
- Career choices within physics
- Witnessing or experiences of racism in- and outside of the IoP
- Witnessing or experiences of sexism in- and outside of the IoP
- Witnessing or experiences of discrimination in- and outside of the IoP
- Intersectionality
- Policy suggestions and final remarks

Part A of the survey addresses information on the representation of respondents in academic positions and scientific departments within the IoP. Part A also addresses the representation of respondents in age groups, identification of race, ethnicity, gender and sexual orientation. The requested answers are on the one hand factual (for instance, age) and on the other hand, related to preferred identities in terms of race, ethnicity, gender and sexual orientation.

Part B addresses the experiences and opinions of respondents on different aspects of inclusion within the context of the institute such as belonging, the importance of diversity for the IoP, the perceived representation of diversity, experiences of discomfort due to the respondent's identity and belief, the impact of equity, inclusion and diversity to career choices and experiences with racism, sexism and discrimination. The status quo of these experiences is connected to the professional and organisational norms in combination with formal and informal power dynamics. These are the boundaries and conditions individuals must cope with, counter and negotiate. A study showed that changing cultural factors are more crucial in enabling women to reach senior levels in organisations than individual factors (McKinsey & Company, 2012). Hence, understanding the culture of an institute and existing (power) dynamics is important to make sure all academic staff can excel. The survey developers know that striving for inclusion also means sharing about exclusion and unsafety.

4.3 Individual (personal) characteristics of respondents related to diversity

Representation of respondents in academic positions and scientific departments of the IoP

- 28 of the 98 respondents belong to the ITFA, 27 to WZI, 11 to GRAPPA and 6 to IHEF/ Nikhef. 19 preferred not to disclose and for 7, it was not applicable. With 98 responses out of 105 respondents, this question had the best response rate.
- 5 of the 93 respondents are full professors and 15 of the 93 respondents are associate/ assistant professors.
- 78 of the 93 respondents are in academic positions and 6 of the 93 are in support or other positions.
- 58 of the 93 respondents are early-career researchers, i.e. PhD candidates and postdocs.

Combining these outcomes with the shared experiences of a sense of belonging, the following can be said:

- of the 35 PhD respondents, 12 definitely feel belonging and 14 mention diversity in the institute to be very important
- of the 23 postdoc respondents, 6 definitely feel belonging and 9 mention diversity in the institute to be very important.
- of the 15 assistant and associate professors, 4 definitely feel belonging and 11 mention diversity in the institute to be very important.
- of the 5 full professors, 4 definitely feel belonging and 4 mention diversity in the institute to be very important.

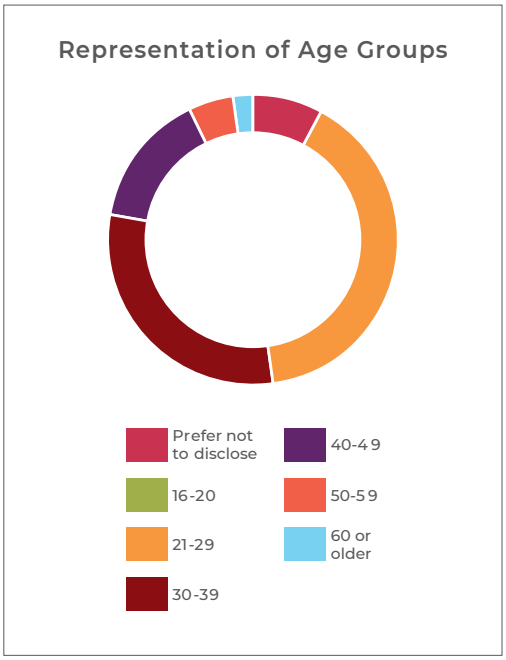
We only looked at the qualification “yes, definitely feeling a sense of belonging” and not at “yes, moderately”. On the question of the importance of diversity, we also only looked at the respondents who answered “very important” and not at “somewhat important”. In both instances, we wanted to capture the highest motivation linked to the respondents’ position within the institute. It is promising to see the strong motivation for diversity among the participating yet small percentage of full professors. These professors can be seen as allies for future developments. It is equally promising to see the high motivation for diversity among the assistant and associate professors, especially given that their professional careers are still unfolding. They can also be seen as a group of allies within the institute to shape inclusion policy and activities further. Interestingly, their feeling of belonging is much lower than the full professors and even lower than the group of PhD candidates. There can be many reasons why their sense of belonging is different, such as different types of contracts, tenure tracks and juggling with work-life balance, which can be challenging given the high workload of academics. The pressure of striving for excellence is not always seen as possible in combination with other work-life responsibilities. Given the existing gender stereotypes, female professors can be much more vulnerable and can experience less belonging.

PhD candidates and postdocs responding to the survey experience a similar good sense of belonging and a high motivation on the importance of diversity. They have a less stable position within the institute and academia: their future is more dependent on collaboration with their academic supervisors and always dependent on the level of research funding and grants. Their temporary contracts can put them in a challenging position and influence their feeling of belonging irrespective of their personal and social identity. Therefore, sense of belonging can be impacted by systemic and organisational challenges and interpersonal collaboration. PhD candidates and postdocs are not outspoken on the importance of diversity compared to assistant and associate professors.

Representation of respondents in age groups, identification racially, ethnicity, gender and sexual orientation

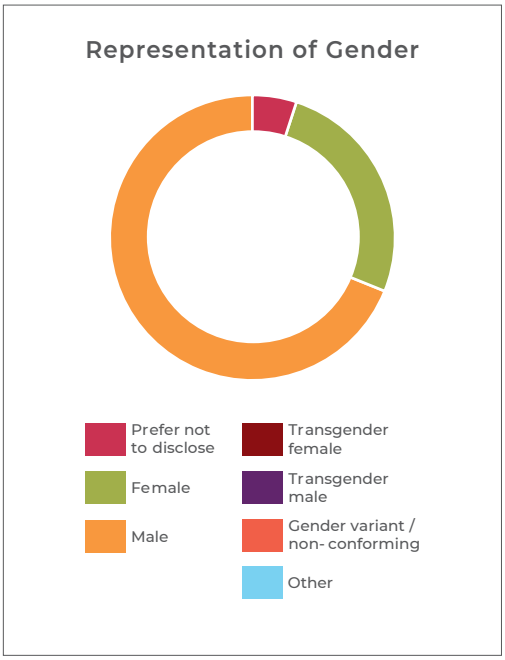
Regarding demographics, questions were asked about age, gender identity, sexual preference and how respondents identify racially and ethnically.

Chart 1



Source: IoP

Chart 2

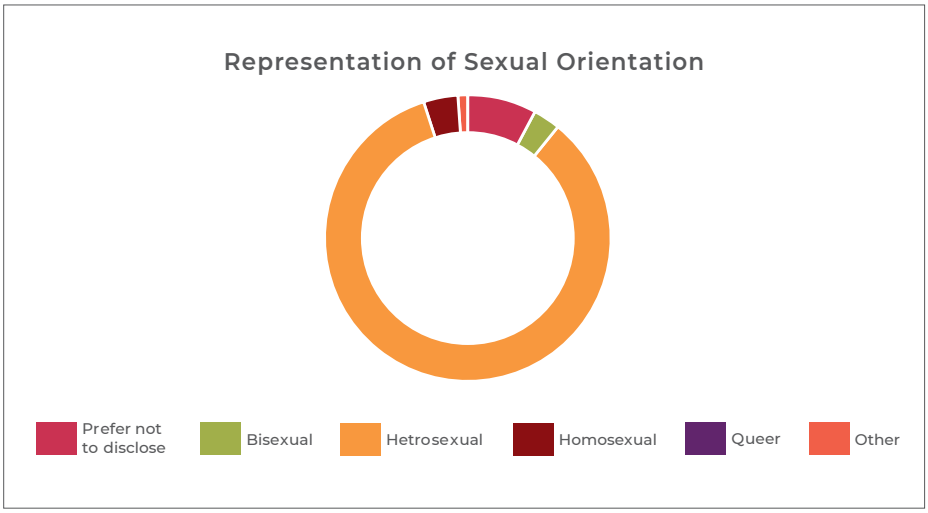


Source: IoP

The survey shows that:

- Most respondents are aged between 21 – 49 (chart 1).
- Of the respondents, two-thirds identify as male and a quarter as female. The survey also offered other categories such as transgender female, transgender male and gender variant/non-conforming; none of the respondents identified with these categories (chart 2).
- Most of the respondents identify as heterosexual; only a few persons identify as homosexual, bisexual or other and a few preferred not to disclose their sexual identity (chart 3).

Chart 3



Source: IoP

The response on these three dimensions of diversity was high: 93 resonses on age, 92 on gender and 93 on sexual orientation. This indicates that identifying these dimensions is perceived as less sensitive than race and ethnicity. Only a few persons preferred not to disclose their age, gender and sexual preference. The data on academic position and gender identity confirm the current status quo of diversity in the IoP. Organisational data of the IoP and STEM departments in general show a high share of males and a low but growing share of females among professors, PhD candidates and postdocs. Most of the PhD candidates and postdocs responding to the IoP survey are between 21 and 39 years. The group assistant and associate professors are well spread over the ages between 21 and 49.

Identifying racially and ethnically

The results of the survey showed the following:

- On both identity dimensions, less respondents answered compared to the previous questions: 81 responses on racial identity and 73 on ethnic identity. Of the 81 resonses 5 persons prefered not to disclose their racial identity or don't identify racially. Of the 73 responses on ethnic identity 8 persons choose not to disclose their ethnic identity and 3 persons don't identify ethnically.
- 11 of the 81 respondents identify as a person of colour, and 65 identify as white.
- 31 of the 73 respondents identify as part of an (other than Dutch) ethnic group in and outside of Europe, and 31 identify as Dutch.

As mentioned earlier, the opportunity for respondents to identify racially and ethnically is intentional and innovative and therefore needs a bit more reflection. The survey makes the deliberate distinction between identifying racially and ethnically. Respondents were able to identify as a person of colour (POC) or White and were able to specify this in the part focussed on ethnicity. By doing so, the IoP acknowledges the diversity in identity and

offers the opportunity for self-identification. In the US, “people of color” refers to a set of target audiences related to statistical classifications. This term is, as mentioned earlier, widely used by educational organisations, interest groups, government organisations, etc. In the US, “Of color” means that one belongs to the group that has been made “the other”. This can be compared with the (until 2016) statistical classification in the Netherlands, where “the other” was defined as *‘niet-westerse allochtoon’*: someone who is not ethnic Dutch and whose country of origin lies in one of the countries in Africa, Latin-America and Asia (excluding Indonesia and Japan) or Turkey. This definition positioned a societal group as “the other”. Generations of persons classified as *niet-westerse allochtoon* were born and raised in the Netherlands, have parents born outside of the Netherlands and identify as Dutch. Therefore, the positioning “of colour” is not necessarily linked to skin colour but to aspects of identity that are seen as “the other”. This can be based on skin colour and religion or country of origin. As a result, people who are fair-skinned but have an Islamic name are still considered “of colour”. The policy is often colour blind. People of colour are then referred to with terms such as “bi-cultural”, “people with a migration background”, or, as the Central Bureau of Statistics (CBS) did, “non-Western”. In addition, there are also individuals who, as part of communities, are considered persons of colour but do not identify themselves as “of colour”. So, using self-identification can be an important addition to existing ways of collecting data on ethnicity to portray individuals the way they want to be represented within organisations since policy and practice to enhance equity, inclusion and diversity are always means to an end. In an article on the impact of a decision of the CBS to change how persons with a migration background in the Netherlands are classified, the following question was posed, “when are persons with a migration background statistically and therefore socially regarded as Dutch with a Moroccan, Turkish, Surinamese, Caribbean, Moluccan etc. background?” (Baboeram 2021).

4.4 Equity, inclusion and diversity at the IoP, in general

Respondents were asked to reflect on equity, inclusion and diversity from different vantage points in order to gain a multilayered perspective on how equity, inclusion, diversity and intersectionality are being perceived within the institute, as well as how racism, sexism and other forms of discrimination are being experienced within and outside the IoP. This part of the survey started with general questions on diversity, belonging and feelings of discomfort based on race, gender, religion and sexual preference.

Diversity

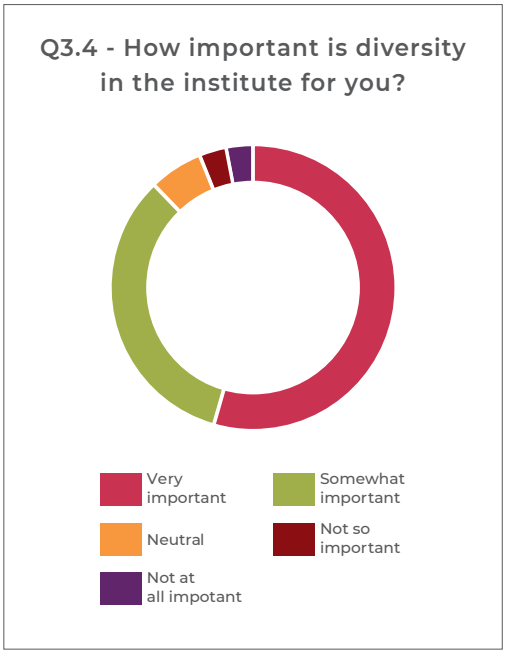
Respondents were asked how they value diversity for the institute and how they rate the institute’s diversity. Diversity is meant as the diversity of people based on the report Let’s do Diversity. This definition refers to the importance of being “concerned with the challenge of having a diverse academic environment, including people with different

cultural and socio-economic backgrounds, religions, (dis-)abilities, genders, skin colours, sexual preferences, ages and other characteristics that shape their position in society". Basically, aiming at a broad representation of the diversity of people in society and at the same time critically questioning the (at that time) "gendered and ethnic characteristics" of the leadership of the university. The IoP agrees with the statement that "diversity is paramount to generating academic excellence".

The survey shows that most respondents think diversity of people is somewhat or very important. Only a few respondents see a diverse representation of people as not so or not at all important. About half of the respondents rate the institute's diversity as somewhat or very good. About a quarter say it is neither good nor bad, and a quarter rate the institute's diversity of people as somewhat or very bad. Looking at the individual characteristics of the respondents, the IoP academic staff is not that diverse. The majority identify as male, white and heterosexual. Chart 4 shows that the majority mentions diversity to be somewhat or very important for the IoP. Only 10 of the 87 respondents rated the institute's diversity as very good and 34 as somewhat good, see chart 5.

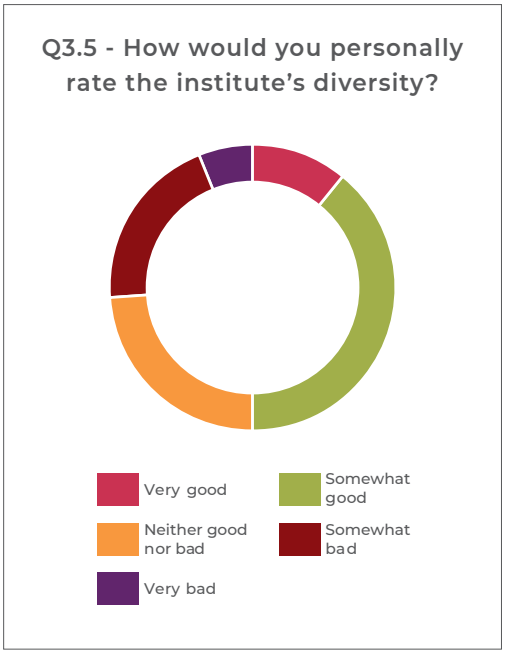
It all depends on what respondents mean by diversity. Chart 4 indicates a sense of awareness of the importance of diversity among staff at the IoP. The difficulty here is the broad definition of diversity. The more specific the definition is, the more specific respondents can reflect. Therefore, the very focused questions on racism, sexism and discrimination will provide a better view of the degree of consensus on the different dimensions of diversity.

Chart 4



Source: IoP

Chart 5

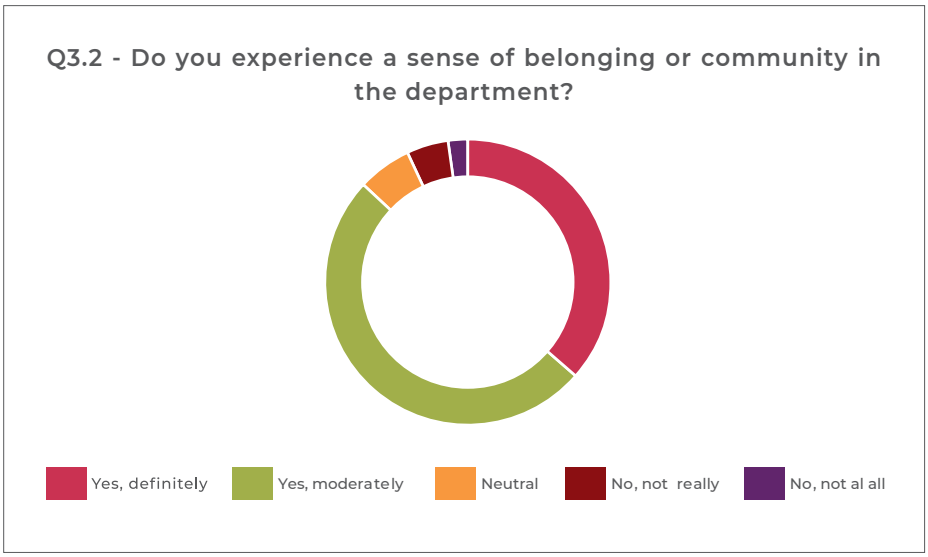


Source: IoP

Sense of belonging

Sense of belonging means being valued and acknowledged for who you are and bringing in other perspectives linked to your identity and personal and professional experience. “Belonging within higher education benefits students, staff and institutions.” (Mulrooney 2020). There is evidence of the positive added value of sense of belonging for students to feeling included and, therefore, academically more motivated and successful (Tinto 2015). The Belonging@VU report (Waldring 2020) shows a similar result. Minoritised groups among students experience and witness exclusion and discrimination substantially more often, indicating that demographic differences can impact their sense of belonging. In general, literature on sense of belonging focuses more on the context of students and less on staff.

Chart 6



Source: IoP

Sense of belonging for staff relates to personal and organisational expectations and experiences. It can be defined as “the congruence between the expectations of the role within the organisation and the personal needs of the employee” (Brion, 2015). Similarly to students, a sense of belonging for staff results in acceptance, inclusion and identity. These qualities motivate people to form and maintain lasting, positive and significant relationships with others (Generation Schools Network, 2019).

The survey shows positive experiences of belonging or community in the IoP (chart 6). The data on belonging does not explain why respondents feel they belong or do not. But when asked if respondents ever felt uncomfortable because of race, gender, religion and/or sexual orientation, 76 of the 87 respondents expressed they had not felt uncomfortable. The survey asked how comfortable respondents are in discussing issues of discrimination and harassment at the IoP with fellow students, colleagues, supervisors, the IoP secretary

and the IoP management. Table 1 shows that respondents feel quite comfortable engaging in conversations about sensitive issues like discrimination and harassment.

Table 1 Experiences discussing issues of discrimination and harassment with…

	Very comfortable	Comfortable	Uncomfortable	Very uncomfortable	N/A	Total
1 …fellow students	29	25	3	2	28	**87**
2 …colleagues	26	42	10	3	6	**87**
3 … my supervisor	23	37	15	2	10	**87**
4 … the IoP secretary	15	32	13	6	21	**87**
5 … IoP management	18	34	8	8	19	**87**

Respondents feel most comfortable discussing issues of discrimination and harassment with colleagues. Respondents are also asked to specify their preferred communication channel or why respondents think they do not know where to go for help if they experience discrimination or harassment. Respondents still choose to consult colleagues. A relatively large number also mention their supervisor, the IoP management and the institute manager, Joost van Mameren. Other options are also mentioned: the IoP secretary, peers, a mentor, the ombudsperson, the diversity officer, an outside person in combination with colleagues and the IoP management. The importance of confidentiality is stressed a few times.

> *"I think I would first go to my daily supervisor, otherwise I would go to the IoP secretary or Joost/Anne-Marieke."*

> *"I would prefer to file an anonymous complaint to someone in IoP management."*

> *"First, I'd discuss it with fellow students/colleagues, and only after that I would mention it to my supervisor or the IoP management (if I felt it was important enough)."*

> *"Depends on the frequency and origin of discrimination. Ideally if it comes from a single person a one-on-one discussion would be ideal. Otherwise, this discussion but moderated by someone we both know and trust. If this is not possible, I think I would go talk with my supervisor or Joost van Mameren".*

These qualitative responses (41) confirm respondents' positive sense of belonging and sense of community. The answers show that respondents are aware that sharing their experiences with colleagues is not enough to solve potential problems. Respondents have confidence in the support and agency of the IoP management. The responses also show

that there is no straightforward procedure and/or no common knowledge of what to do in case of harassment. Most important is that the IoP respondents don't feel barriers to consulting colleagues and members of the IoP management.

A few responses based on experiences show a need for clarity in vocabulary in case of discrimination and harassment. Having to face these situations is already discomforting and uncomfortable. It is vital to have clear procedures, a shared vocabulary to acknowledge what happened and support for the victim to share unapologetically. The university and the IoP define discrimination as intentionally excluding a person's access, participation, promotion, perspective, opinion etc. Discrimination excludes or denies a person based on gender, racial, ethnic identity, religion, sexual preference, ableism, age, lack of tenure, position, language proficiency, etc. But having the courage to go against the norm depends on the institute's values and standards and power structures within the specific context.

> *"I would not use any of the channels provided by the university. The lack of support I was given by any of the universities 'support' instances (not related to discrimination, but to much more serious issues), have not given me the impression that people are trying to help, rather they just do what they are being told to do."*

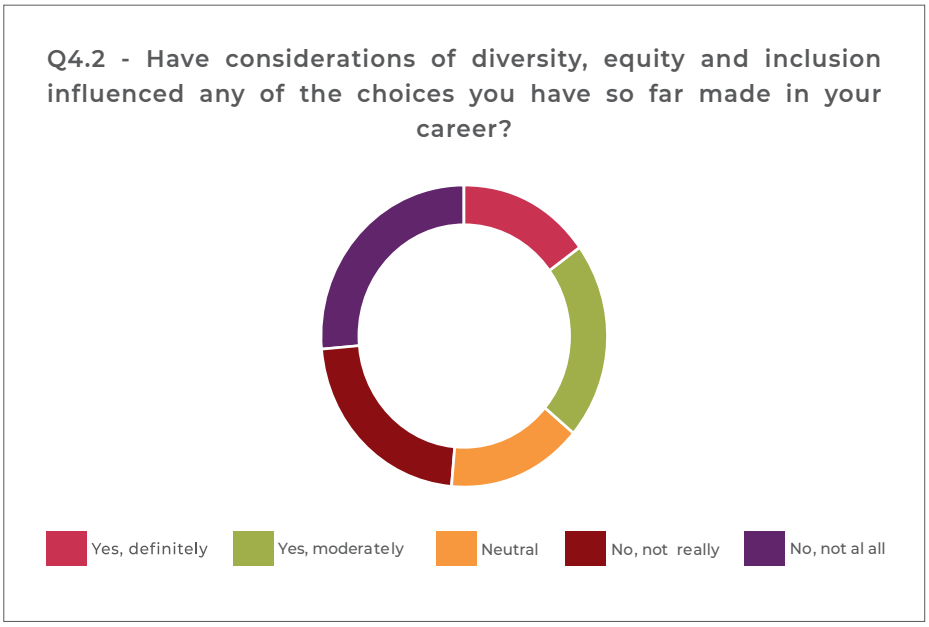
> *"Harassment is usually not obvious. When the moment comes that one him/herself finally acknowledges it, it is still a big step to discuss it with a supervisor who then also has to recognize this, probably of a known colleague, which in the first place usually sounds incredible"*

4.5 Equity, inclusion and diversity and career choices

This part of the survey focuses on the impact of equity, inclusion and diversity in career choices. The IoP is committed to increasing the diversity of staff working at the institute. The first part of the survey shows that the IoP is not that diverse. Aspiring to become a more diverse institute is a combination of intentional hiring aims, developing inclusive selection processes, and living up to the expectations of new staff who expect a scientifically rigorous and competitive research context as well as an inclusive and equitable working environment. Chart 7 reviews the answers to the question: "Have considerations of diversity, equity and inclusion influenced any of the choices you have so far made in your career, e.g., choosing to accept or decline a position, whether to continue at a certain institute or with a certain supervisor, etc.?" A third (31) of the respondents agree (definitely and moderately) that diversity, equity and inclusion influenced their choices made so far in their careers (chart 7). Among these respondents, 13 identified as male, 16 as female, 6 as PoC and 20 as white. Almost half (41) of the respondents mention that these aspects do

not really or not at all influenced their career choices. Of these 41 respondents, the majority (34) identified as male and white. Only 5 identified as female and 4 as PoC.

Chart 7



Source: IoP

Becoming more diverse is not just a matter of inclusive and bias-free selection and hiring. When considering applying, potential candidates take an organisation's diversity representation, equity, and inclusion practices into account. Respondents were asked to explain how these considerations influence their choices and why. The responses (25) referred to different motives. A few were based on (personal) aims and expectations of the working climate at the institute, taking equity and inclusion into account:

> *"I have chosen a position with promotors who I know are active in promoting diversity and hiring diversity"*

> *"I didn't even consider applying for positions in countries with anti-LGBT+ laws, even if there were relevant institutes for me in those countries."*

> *"I have declined or not even applied to positions because the job would be based in a country/institution/group with known issues with racism/sexism/homophobia."*

> *"I have declined job offers or decided not to apply to certain positions due to a lack in diversity in the faculty."*

General equity considerations led to the following:

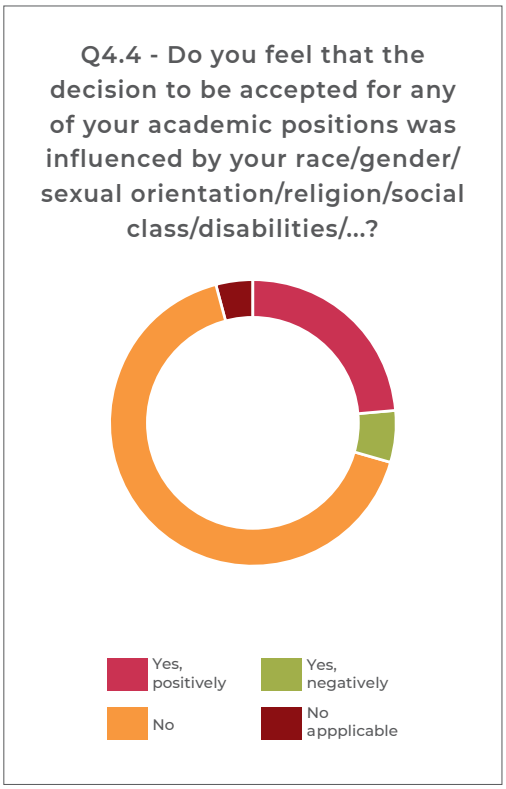
> *"Knowing that more women are reaching higher positions in the academic environment is motivational to pursue that path."*
>
> *"If we want more women in science, then it is important as a woman to keep pursuing a scientific career, as you can make a difference."*
>
> *"I declined a PhD position elsewhere because there were too few women in that group."*
>
> *"I have declined job offers or decided not to apply to certain positions due to a lack in diversity in the faculty."*
>
> *"After my time in the institute, I only now realize completely how male dominated physics culture is"*

Chart 8 summarises the responses to the question "Do you feel that the decision to be accepted for any of your academic positions was influenced by your race/gender/sexual orientation/religion/social class/disabilities/...?" 57 of the 85 respondents answered no, meaning they do not feel that they were accepted for their academic positions based on their identity. 46 of these respondents identify as male, 9 as female. Of the 57 respondents, 7 identify as PoC. 20 of the 85 responded "yes, positively"; 11 of them identified as female and 7 as male. Three of the 20 identify as PoC. Only 5 of the 85 responded "yes, negatively"; 3 identified as male and 1 as female. 1 of the 5 identify as PoC. These outcomes indicate the (at least perceived and interpreted) impact of general selection practices of candidates and practices as part of diversity and inclusion strategies. Given that the IoP is dominantly male and white, it can refer to the fact that male candidates are 'automatically' selected since they represent the current norm. Yet, 20 of the 85 respondents answered "yes, positively". 10 females, of which 2 PoCs feel positively about being accepted for an academic position based on their (intersecting) identities. This can indicate moderate progress of a diversity strategy in hiring to increase the share of females and PoCs.

The identity make-up of academic staff in physics will become more diverse if global, national and institutional aims to diversify are implemented well. The question is not so much if things will change but more about how and when. The chosen policy, strategies and actions will influence the pace and level of commitment. Looking at this from an equity lens and the view that excellence in research will benefit from diversity in perspectives, the IoP can even be more intentional and progressive by implementing affirmative (or positive) action strategies (*Positieve discriminatie*, n.d.). "Affirmative action is widely contested and misunderstood in academia" (Sánchez, 2015), also in the Dutch context. These strategies are often referred to as positive discrimination, which negatively affects

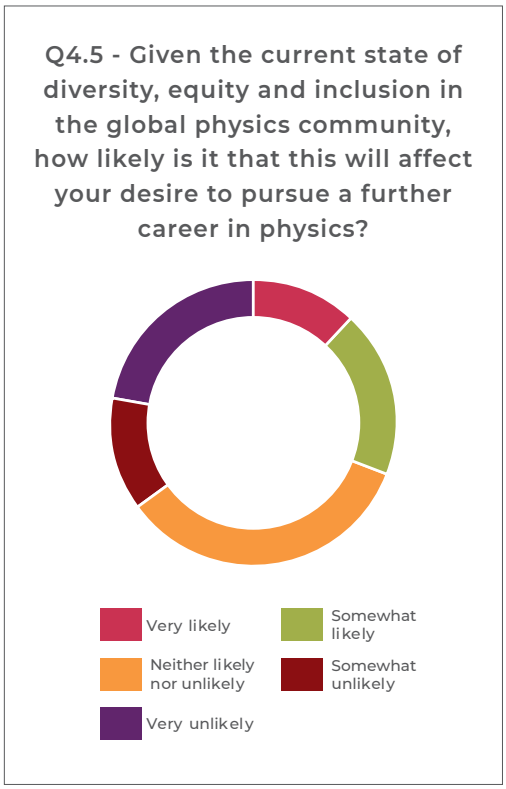
strategies meant to improve a gender and equity balance through positive action. Positive action is a proactive strategy to create a level playing field given the differences in social position and to make sure people are not discriminated against based on their gender or ethnic group (Sánchez, 2015).

Chart 8



Source: IoP

Chart 9



Source: IoP

Chart 9 summarises the responses to the question "Given the current state of diversity, equity, and inclusion in the global physics community, how likely is it that this will affect your desire to pursue a further career in physics?" 29 of 85 respondents answered that it is neither likely nor unlikely. 26 answered that is somewhat or very likely, and 29 responded that it was somewhat or very unlikely. Of the respondents not expecting their desire to pursue a career in physics to be affected, the majority (5) identify as male and 4 as female. The respondents who expect to be affected consisted of 12 persons identifying as male and 12 as female, and 2 not disclosing their gender. Of these 26 respondents, 5 identify as PoC.

4.6 Racism

The next part of the survey focuses on racism, particularly racial discrimination, at the IoP. The definition of racial discrimination is based on that of the European Commission: "any

distinction, exclusion, restriction or preference based on race, colour, descent, or national or ethnic origin which has the purpose or effect of nullifying or impairing the recognition, enjoyment or exercise, on an equal footing, of human rights and fundamental freedoms in the political, economic, social, cultural or any other field of public life." Racism in this context is the deliberate act of an *individual excluding another individual* based on race, colour, ethnicity, nationality etc. Institutional racism is not an act between individuals. Still, it refers to a historically developed ideology about the superiority and inferiority of races due to colonialism, slavery, religion and other unequal power structures. It is based on the idea that the image of white superiority and coloured inferiority is embedded in a social system of power structures and institutions. In the Dutch context, institutional racism, gender discrimination and sexism are similar acts and ideologies specifically posed against female physicists who are also seen as inferior, less capable, and not suitable to excel academically and have careers as leading physics scientists. These ideologies intentionally and unintentionally lead to the current status quo of inequity and underrepresentation of certain groups represented in physics in general and within an institute like the IoP, often unequal representation in different academic positions and organisational levels.

Racism refers to actions in a social system based on an ideology in which the idea prevails that a particular group is superior and anyone who does not belong to that group is inferior. What those groups look like depends on the context. Race does not necessarily have to be explicitly mentioned for this - racism is a 'chameleon' and can also take place based on culture, migration background or ethnicity. In the Dutch context, it can be argued that white people are considered superior and non-white people are considered inferior, even though people do not often speak of 'white people' and 'non-white people' (see Colour-conscious framework). This idea then acts as a justification for excluding and treating non-white people unequally.

Respondents were asked if they experienced any of the following situations in the workplace:

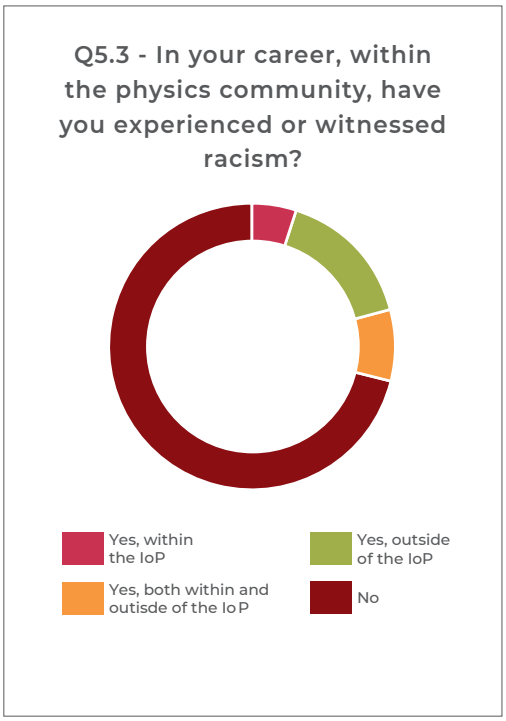
- I have been intentionally excluded from work or social events because of my race.
- I have been verbally or physically abused because of my race by other colleagues.
- I have been falsely accused or criticised by colleagues because of my race.
- Colleagues have made assumptions about my ability, character or behaviour based on stereotypes of my race.
- I have sometimes felt that because of my race, I am not always actively included by my colleagues.
- I sometimes feel that because of my race, colleagues treat me differently.
- None of the above.
- Other:

68 of the 81 respondents answered that none of those mentioned above situations happened, and 13 respondents experienced one of these situations. The number of respondents that encountered these situations was a combination of respondents who identified as white and PoC. Among the 13 respondents who identified as white, some respondents identified ethnically from a European country or region (5), from continents outside of Europe (4) or as Dutch (2). These answers represent experiences of racial discrimination that can happen to any individual of any racial or ethnic identity and members of the dominant group. Individuals in a dominant group might feel denied opportunities based on positive action or often referred to as positive discrimination. The above-mentioned experiences result from racial discrimination and institutional racism for individuals of minoritised and racialised groups.

Charts 10 and 11 present answers to the questions if respondents experienced or witnessed racism in their career within the physics community (chart 10). This might include one or more of the situations described in the previous question. Respondents were also asked if the racism they experienced or witnessed was directed toward them (chart 11).

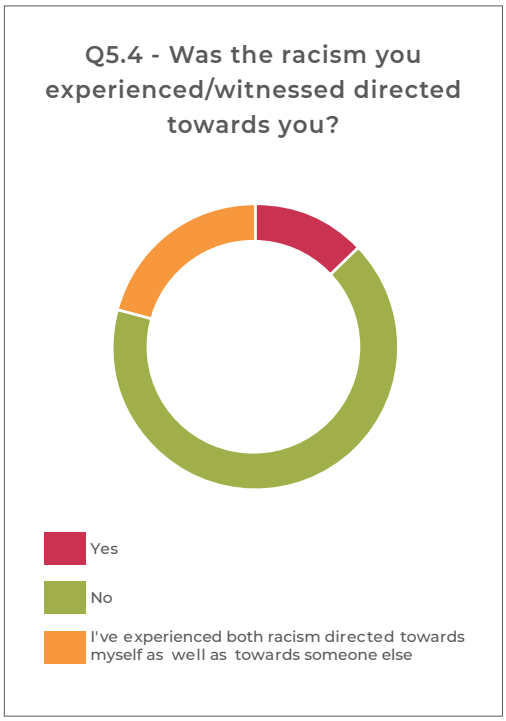
59 of the 83 respondents did not experience or witness racism. 24 respondents did: 4 within the IoP, 13 outside of the IoP and 7 in and outside of the IoP. On the follow-up question if this racism was directed towards them, 16 of the 24 respondents answered no, 3 answered yes, and 5 experienced racial discrimination directed towards themselves and others. Of the persons who responded yes, 2 identify as a PoC. Among the respondents who answered no, all respondents identify as white with different ethnic identities (Dutch, European and outside Europe).

Chart 10



Source: IoP

Chart 11

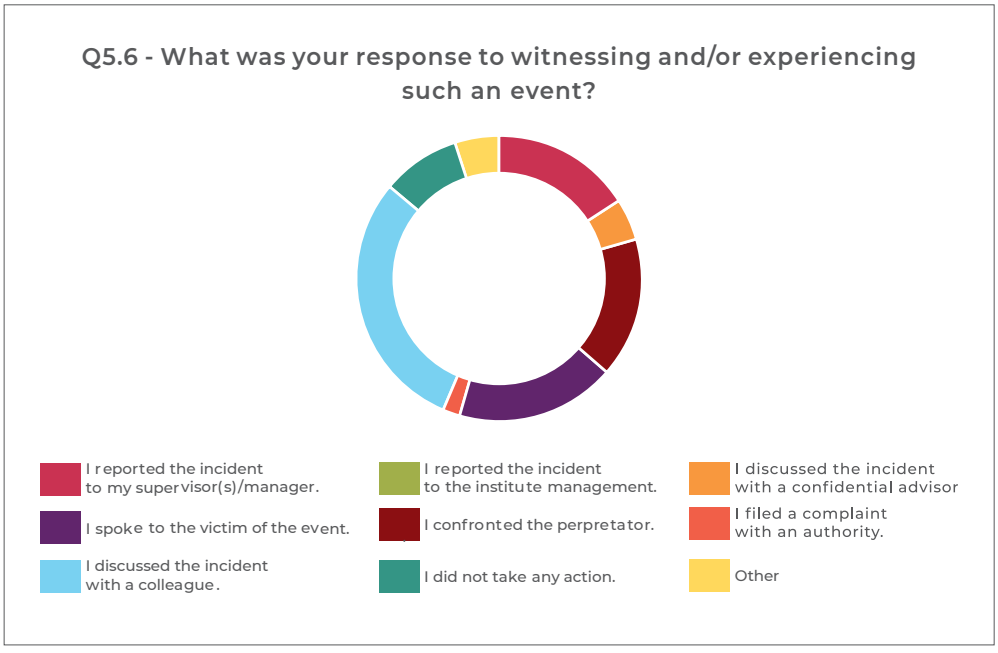


Source: IoP

The following questions explored the processes respondents went through after having experienced racial discrimination or witnessing a colleague being the victim. Every respondent being subjected to racial discrimination is one too many. Therefore, it is equally important to notice how the organisation actively responds to notifications and/or complaints. The respondents of the previous question who answered yes did report the incident to their supervisor. In 2 of the 3 instances, it eventually did not lead to noticeable action.

Chart 12 deals with what happened after the racism experienced and/or witnessed by respondents, detailing different options. 44 responses were counted, and respondents disclosed more than one action. In most cases (13), the indicent was discussed with a colleague. In other cases, the incident was reported to the supervisor (7), the respondent confronted the perpetrator (7) and the respondent spoke to the victim (8). Less mentioned options were discussing the incident with a confidential advisor (2) and filing a complaint with the authorities (1). No respondent chose to report the incident to the institute management. Respondents were also asked for the outcome in cases where action was taken. In cases where no action was taken, respondents were asked why. Only a few responses were given: respectively, 18 and 4 answers. There were few instances where appropriate steps were taken, and the situation eventually was dealt with satisfactorily. In these cases, the perpetrators were confronted. These were both instances outside of the IoP. Most of the cases did not lead to noticeable action. No information was provided on the timespan between the experience of racial discrimination and the outcome of actions. In cases of harassment, these processes can take years. In some instances, no follow-up steps are taken by a victim.

Chart 12



Source: IoP

These and the survey's previous question (chart 12) allowed respondents to describe and elaborate on their experiences with racism. 9 respondents gave more detailed descriptions of feeling racially discriminated:

> *"At the IoP level, it was having my skin color compared to a suntan or being told that I could use the "color card" in discussions about equity and inclusion for grant proposals by senior staff. Outside of IoP, it was marginalization and the wrong attribution of scientific contributions and credit in large collaborations."*

> *"Some professors, including in the Netherlands, openly say that they hire PhD students based on their race or nationality. Typically, they would only hire students from Eastern or Southern Asia, based on the belief that they would be more hardworking."*

> *"I have witnessed cases of mild racism/xenophobia during committee meetings to decide upon graduate and postdoctoral positions."*

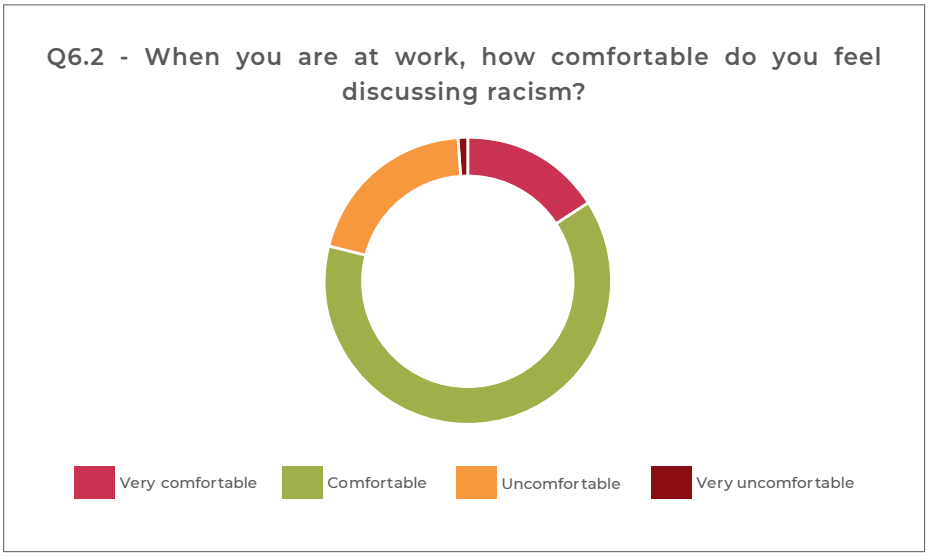
The above three examples are experiences with different connotations. The first example is a blatant example of racial discrimination and institutional racism, specifically the experience outside of the IoP. The second and third examples are examples of misuse of power. The second example can even support a diverse hiring policy only for the wrong reasons. All cases were shared with others in different ways, discussed with a colleague, and reported to a supervisor; perpetrators were confronted and spoken with a victim. None of these examples led to noticeable action.
Most of the options in case action were taken eventually did not lead to noticeable actions, but a few insights were shared that showed what can be done to support victims in addition to other steps that have been taken:

> *"My action was aimed towards the victim, encouraging them to take action and reassuring them that they are a valuable member of community. The issue itself was dealt with by the victim's supervisor."*

> *"The real entrenched racism cannot be dealt with completely by addressing individual perpetrators on single occasions, but for the victims I feel that it helps a lot to just listen and let them know that this is not how we want it and that he/she can always point things out to us on an individual level. That created trust between us I think and lets them know that they can talk with me even if they ever experience racism/sexism from me or anyone else."*

The following questions provide more insights into how comfortable and uncomfortable respondents feel when addressing racism at work.

Chart 13



Source: IoP

Chart 13 shows that 65 of 82 respondents feel (very) comfortable in discussing racism. This is a positive indication of feeling safe within the institute to discuss sensitive issues. 17 respondents feel (very) uncomfortable discussing racism. Not feeling comfortable talking about racism should not be ignored even though statistically it is a minority. Respondents were asked to explain what made or would make them feel uncomfortable or unsafe talking about racism at work. 12 explanations were given. A few of them are presented below, firstly regarding expectations of not feeling safe enough to have conversations about racism:

> *"This is a rather sensitive topic. I generally feel uncomfortable discussing such topics at work unless I have a good and personal relationship with the discussion partner."*

> *"My connection with my colleagues is not good enough that I would want to discuss such a topic with them."*

The following concerns were shared based on personal experiences:

> *"As I work in a mainly white department, I am constantly fearful of talking about racism and being accused of "tokenism" and "victimhood" and using the "color card." I am also one of the few people of color in IoP [...]. I have also had negative experiences with NL senior physicists telling me that they are color blind and basically minimizing all aspects of racism."*

The following concerns reflect current developments in society, such as polarisation, increasing awareness to address and act against racism:

"This topic is so much infected with political correctness and tension, that a conversation generally become unfriendly quite quickly. Everyone that openly doubts the current viewpoints and ideology, risks getting socially excluded from the group. The current environment is very polarizing."

"The meaning of the word "racism", and the set of phenomena that it entails, has broadened substantially over the last ten years or so. As a white person, talking about the topic requires the willingness to learn and to extend the horizon. This is good in many ways, but not necessarily comfortable."

"I feel there is too much focus on racism while other forms of discriminations are almost ignored. The community seems to have developed such a strong dedication to fighting racism, that often there is an obsession for seeing racism in any statement or behavior. It is possible for a person to be a strong opponent of racism and at the same time discriminate people on other grounds."

These last three reflections indicate the struggle of dealing with conversations about racism. Feeling uncomfortable to discuss racism is due to or amplified by a lack of vocabulary, a lack of acknowledging its existence and the political and sensitive nature. The last of the three reflections above insinuates favouritism of different types of discrimination and insinuates racism as an obsession. This shows how important it is to have conversations about experiences of discrimination to become aware that being excluded and discriminated against is often not related to only one dimension of a person's identity. It is commendable that this survey takes all types of discrimination, even racism, into account, which is too often avoided not to make the majority uncomfortable.

On the question "Does racism in the broader society directed toward you affect your ability to work or focus on your work?", 7 of the 82 respondents answered yes, and 75 answered no. The response to this question shows that even racism outside of the institute can impact the work of individual staff members at the IoP. The following reflections were provided when asking respondents to explain how racism in the broader society affects the ability to work or focus on work:

"It is something I have lived with all my life and normalised but in the recent five years […] I have had to start educating myself and confronting the trauma of racism. With the rise of populism, it is something that I am aware of and reminds me of my childhood where I was used to receiving racist abuse (i.e., taking a train, bus, I am always prepared to absorb racism)."

"The BLM movement also took quite an emotional personal toll and also in time of mentoring Black and POC/WOC students and younger scientists."

"Racism [negatively impacts my] sense of belonging which affects my concentration."

"Recruitment or visits of highly qualified researchers can be hampered by racism. Indeed, they can be victim of racism during their visit (when they come from a foreign country) or they can have a distorted view of their qualifications (when they are nationals of a Western country, and because of racism have been led to believing that they were inferior)."

These reflections regarding racism are examples of how implicit and explicit ways of racism are impacting the sense of belonging and working circumstances of staff but also (in the last reflection) how institutional racism can systematically impact collaboration with leading peer scientists from parts of the world that are systematically perceived as inferior and therefore scientific excellence is valued differently or not even expected.

4.7 Sexism

The survey also focused on questions considering sexism in the IoP. For this part of the survey, the definition of sexism was used as recommended by the Council of Europe. According to this definition, sexism concerns any act, gesture, visual representation, spoken or written words, practice or behaviour based upon the idea that a person or a group of persons is inferior because of their sex, which occurs in the public or private sphere, whether online or offline, with the purpose or effect of:

1. violating the inherent dignity or rights of a person or a group of persons; or
2. resulting in physical, sexual, psychological, or socio-economic harm or suffering to a person or a group of persons; or
3. creating an intimidating, hostile, degrading, humiliating or offensive environment; or
4. constituting a barrier to the autonomy and full realisation of human rights by a person or a group of persons; or maintaining and reinforcing gender stereotypes.

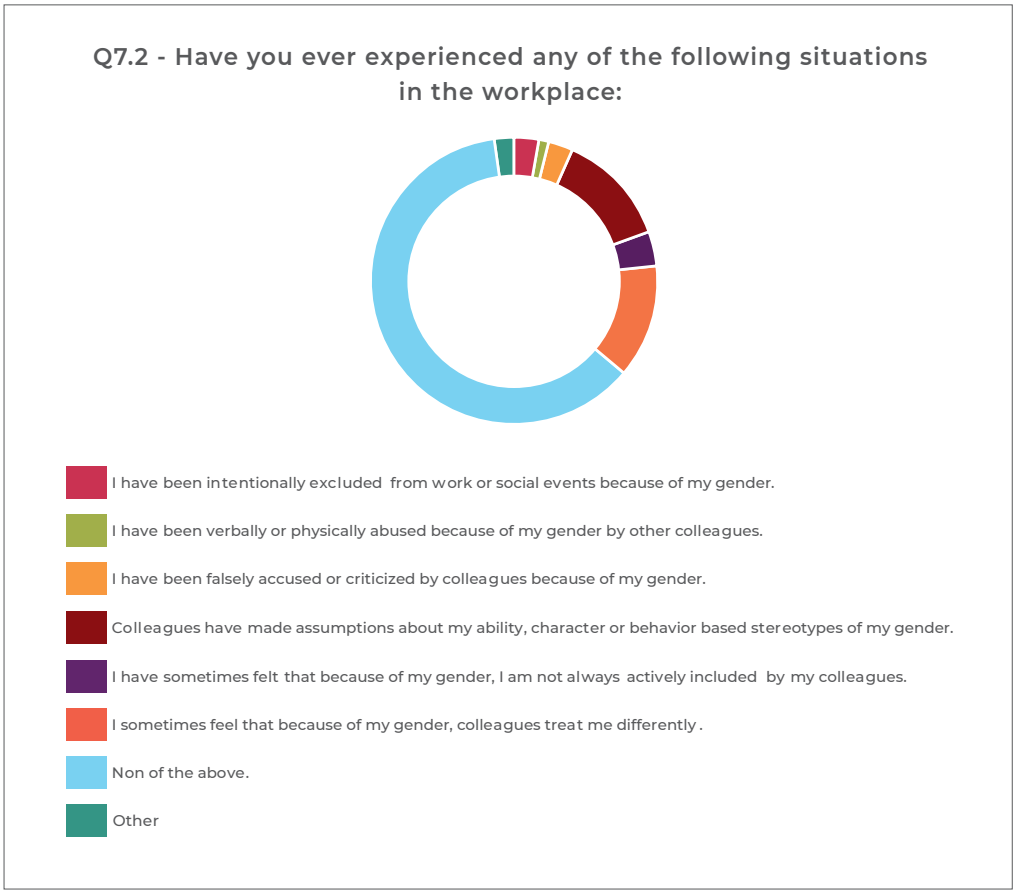
This definition of sexism not only addresses the act(s) against individuals but, like institutional racism, also addresses institutional sexism by imposing the idea of the superiority of one gender over another because of their sex, gender and sexual identity. Like racism, "Sexism is linked to power in that those with power are typically treated with favour, and those without power are typically discriminated against. Sexism is also related to stereotypes since discriminatory actions or attitudes are frequently based on false beliefs or generalisations about gender, and on considering gender as relevant where it is not." (sexism n.d.)

The higher number of respondents and elaborate answers in this part of the survey show that discussing issues of sexism is considered less uncomfortable, most likely not because it is less problematic but because diversity and inclusion activities focusing on gender discrimination and sexism have been debated and brought to the centre of attention. This means that talking about and addressing experiences of gender discrimination is the start of a process of acknowledgement in the first place and hopefully improvement, acceptance and prevention in the longer term. Not addressing sexism, racism and other forms of discrimination is not an option from an equity standpoint. In fact, addressing such issues is an organisational imperative and helps to normalise the conversation; it creates awareness among academic staff and hopefully more understanding of the seriousness of those affected by sexism, racism and other mechanisms of exclusion. It is equally important to communicate IoP's position and policy in fostering inclusion. It creates opportunities to discuss a tailormade structure and support provisions for the IoP and the infrastructure developed by the UvA in general (Diversity Office and Taskforce Sociale Veiligheid) and, in the end, helps prevent gender, racial and other types of discrimination as much as possible.

Chart 14 summarises the 102 responses (21 females) to the question if respondents experienced the following situations in the workplace, all related to sexism:

a. I have been intentionally excluded from work or social events because of my gender (3).
b. I have been verbally or physically abused because of my gender by other colleagues (1).
c. I have been falsely accused or criticised by colleagues because of my gender (3).
d. Colleagues have made assumptions about my ability, character or behaviour based on stereotypes of my gender (13).
e. I have sometimes felt that because of my gender, I am not always actively included by my colleagues (4).
f. I sometimes feel that because of my gender, colleagues treat me differently (13).
g. None of the above (63).
h. Other: (2)

Chart 14



Source: IoP

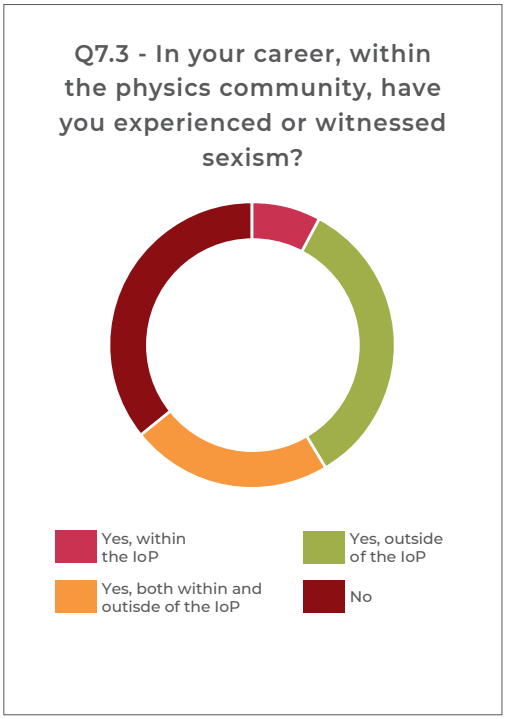
63 (9 females) of the 102 respondents answered "none of the above" (option g), indicating that they did not experience sexism themselves nor witnessed sexism in the workplace. Options a, b and c are intentional blatant acts of sexism linked to power structures. Even though the number of respondents selecting these options is relatively low, every experience of discrimination is one too many. Options d, e and f are more subtle, implicit, and often explained as microaggressions. These are unintentional acts of discrimination against members of a minoritised, gendered or racialised group. Microaggressions happen more frequently than intentional acts of sexism. This survey shows a similar pattern. Options a, b and c were selected by 7 (3 females) respondents and d, e and f were selected by 30 respondents (8 females). Option h was selected by 1 female respondent.

Microaggressions (Sue 2010) can happen on a daily basis and are not always meant or seen as offensive from the sender's perspective. Daily microaggressions are referred to as everyday sexism, everyday racism or everyday heterosexism. In "Microaggressions in Everyday Life" (Sue, 2010), an analysis is presented of these "unintended slights" that take their toll on people of colour, women, gay/lesbian and transgender persons, and other groups. Although the concepts of microaggression were developed based on the

framework of Critical Race Theory, they can be applied and explained from an intersectional perspective: race, class, gender and other individual characteristics “intersect” and overlap with each other (Crenshaw 1989).

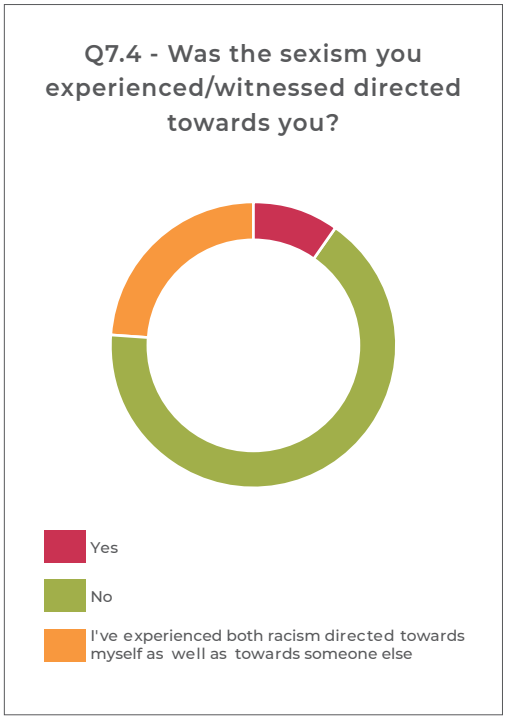
An intersectional perspective allows for a more realistic view of the complexity of reality because people never represent just one identity. On an individual and group level, people can be/are categorised in different identity dimensions simultaneously and can experience exclusion in society or within organisations based on one or more intersecting dimensions. For example, the theory of intersectionality is based on the position of women of colour. Women of colour do not just experience racism or sexism but experience a specific form of racism that is gendered towards their female identity. Therefore, it is essential to be aware of these intersecting social and individual identities and be mindful of how power relations contribute to specific forms of exclusion to particular groups based on those layered identities. Painful experiences of discrimination are often complex and layered experiences of being excluded, denied access etc. and cannot only be explained or resolved by looking at a single dimension only.

Chart 15



Source: IoP

Chart 16



Source: IoP

Respondents were asked if they experienced or witnessed sexism in their career in the physics community (chart 15). Of the 80 respondents, 6 (2 females) answered “yes, within the IoP”, 18 (4 females) “yes, both in and outside of the IoP”, 27 (9 females) “yes, outside of the IoP”, and 29 (6 females) of the 80 responded “no”. More than half of the respondents

experienced or witnessed sexism in the physics community. Chart 16 presents if experiences of sexism were directed towards respondents. Of the 51 respondents, 34 answered no, 5 answered yes and 12 answered they had experienced sexism directed towards themselves or someone else. In total, 17 respondents had an experience directed towards themselves or someone else. 14 of them identify as female, representing different positions within the IoP (PhD, assistant/associate professor and postdoc). Of these 17, a few identify as POC (2), bisexual (2) and have different ethnic identities (Dutch (6), from Europe (4), outside of Europe (3)).

If they felt comfortable, respondents were invited to describe what happened when they encountered or witnessed sexism. 26 respondents elaborated on their experiences. Respondents were also asked how they acted after experiencing or witnessing sexism, what the outcomes were of their actions, and how they reflect on their motivation in case they did not act. The responses were detailed and elaborate. Only a few respondents mentioned reporting what had happened to a supervisor or a confidential advisor. In most instances (11), respondents discussed their experiences with a colleague, 7 chose not to take any action, 6 confronted the perpetrator, and 5 talked to the victim. In one instance, a complaint was filed with an authority.

The following shared reflections show the harshness of institutional sexism. In different stages of the educational and professional pathway, female physicists are seen as inferior to their male colleagues or attributed qualifications based on negative stereotypes:

> *"I was told, during my PhD, by a potential supervisor that he did not accept female students because his previous female student did not perform well."*

> *"At conferences I have experienced women not taken seriously by members of the international scientific community, leading to comments, questions, and treatment that male presenters would not receive."*

> *"In several discussions with colleagues, the lack of women in physics was justified by my colleagues by saying that women are "less curious by nature" than men."*

> *"Two situations I've witnessed in hiring: the assumption that a female candidate for a vacancy was weaker because she was less assertive. A hiring committee (not IoP) for whom gender is more important than scientific merit."*

One of the respondents shared multiple experiences portraying unfair, untrue and gender-biased stereotypes, gender microaggressions and wrong assumptions. Interestingly, the respondent characterises those as 'mild things'. This can indicate that these insulting remarks are almost 'normalised', not because female physicists agree with these

stereotypes and insults but because they often happen and have perceived minimal harm (UNH, n.d.). The respondent of this reflection confronted the perpetrator and spoke with colleagues but did not take any further action. As mentioned earlier, in 7 instances, the respondents, despite these experiences, did not take any action. Are there no satisfying solutions or follow-up expectations, or are these actions 'silently' accepted since they are invisible? These instances are described as dilemmas and challenges in responding to gender microaggressions (UNH, n.d.).

> *"My experiences with sexism are all **mild things** - on the whole the IoP has always provided an inclusive and welcoming environment. In most incidences, someone just made either an uncomfortable joke, or some off-hand comments along the lines of 1) Women aren't expected to continue their academic career to a high level because at some point, surely, we'll want to settle down and start a family. 2) Many women who have recently been promoted to a higher position have benefited from positive discrimination, e.g., by institutes trying to become more diverse by hiring more women. Here the implication is that these women are commonly not as deserving of their new position as some of their (male) rivals. 3) Women generically work less hard and with less dedication. 4) Women are typically worse at things like maths and numerical computations. 5) Women are less emotionally stable, and more susceptible to burnouts and breakdowns. 6) Women have less authority, and when giving presentations you should be aware (as a woman) that the audience will often be less inclined to take you seriously from the get-go."*

Several experiences of harassment and misuse of power were mentioned. For instance, male faculty members harassing female PhD candidates and colleagues. Unfortunately, this is a global reality in academia based on earlier mentioned studies. Henriëtte Prast from Tilburg University refers to the myth of gender equality in the Netherlands (2019): "The Netherlands is not as progressive as we think". Her research shows that discrimination against women starts from a young age and influences career choices and opportunities in their education pathway and continues women's professional lives. In academia, for instance, there are fewer funding requests by women, fewer grants are given to women and there are differences in income and labour market participation (Prast, 2019).

In this context, a male respondent shared feeling discriminated against due to positive action strategies:

> *"I have seen many job vacancies that specifically discriminate positively. There is a pronounced preference for women, which in turn is a form of basic, unlawful, discrimination against men. These vacancies are publicly available texts being created by the institutes, yet despite being an open form of discrimination, no action is being taken against those."*

This last response shows how mechanisms that enhance institutional sexism are hard to tackle if sexism is not seen as an institutional injustice against women but is interpreted as discrimination toward men.

An explanation for not drawing attention to experiences of systemic exclusion, whether by gender (identity) or race and ethnicity, is a mechanism where the person who addresses an experience of injustice, intending to prevent a continuation of actions, is seen as the problem or 'the blockage point' (Ahmed, 2012). This is how injustices are being reproduced instead of dismantled and prevented. The following comment shows that in case of witnessing sexism and providing support to victims comes with emotional labour (Hochschild, 1983) and can impact a person's career:

> *"Well known professors and cases of sexual harassment and gender discrimination have impacted my own career personally as well as the time investment to support women and students affected. Academic bullying as well as minimizing one's contributions by white men (peers etc.); the expectation that I would not speak up etc."*

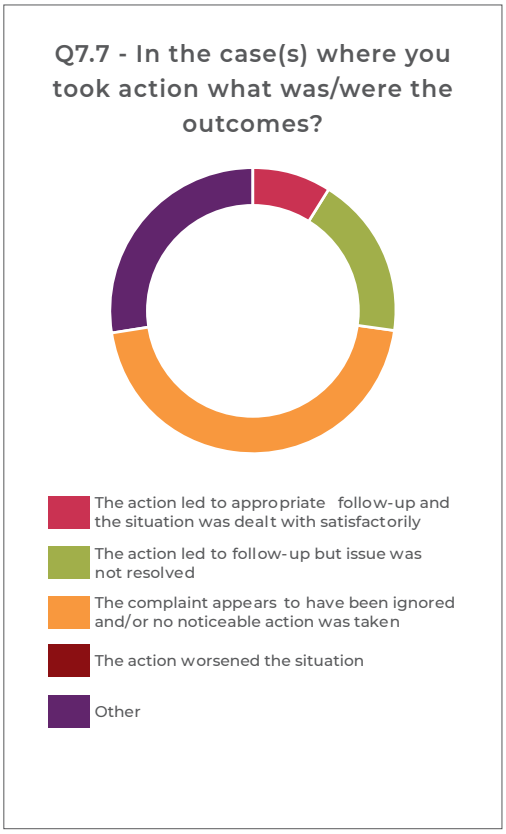
Charts 17 and 18 present the responses to questions about the outcomes if actions were taken, and about the reasons if respondents did not act. Only 11 responses were received to the first question (chart 17) and 29 to the second question (chart 18). Unfortunately, only 1 of the actions led to an appropriate follow-up. The responses in chart 18 partly explain why: of the 29 respondents 11 mentioned that they didn't consider it serious enough and 8 were unsure of who would be appropriate to talk to. A few even feared the consequences, and a few felt they didn't have the necessary tools. This indicates a reluctance to talk about sexism and a lack of transparency and/or access to information on how to report cases of sexism and harassment, and on how victims and bystanders of harassment can be protected and supported within the 'system'.

Support for victims and (assumed) perpetrators within the IoP creates transparency and should contribute to a level of social safety. In case assumptions about harassment were wrongfully made, support is also necessary. These situations however remain sensitive and uncomfortable for all involved and will also need the necessary care and monitoring. This was one of the reflections of a respondent:

> *"It was assumed that I tried to coerce a female student, perhaps sexually, in exchange for a helping hand in grading said the student. This was not at all the case! I was left to defend my actions and reputation based on hearsay. I believe, in the eyes of some, my reputation will never fully recover."*

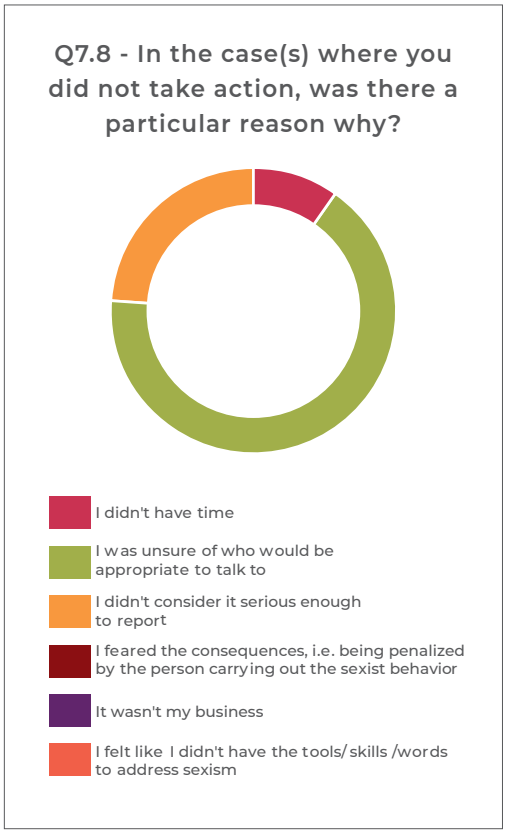
It is vital to foster an inclusive environment where employees feel safe and brave enough to share and reflect on microaggressions, negative stereotypes and how it affects their academic work and sense of belonging. There was no outcome in one of the instances where action was taken, but it led to “an open and fruitful discussion about women in academia”. These unintentional interventions can be effective and serve more purposes. In some organisations, employees create these informal ‘spaces’ to enhance belonging or have focused conversations. These initiatives start as a grassroots initiative within an organisation and serve as an employee resource entity

Chart 17



Source: IoP

Chart 18



Source: IoP

Respondents were asked if they feel comfortable talking about sexism at work (Q8.2) and if sexism in the broader society directed towards them affects their ability to work and focus on work (Q8.4). The responses are encouraging since more than three-quarters of the 80 respondents answered they feel comfortable talking about sexism, and can focus on their work despite sexism in the broader society. However, the number of respondents who answered the opposite is still enough reason for the organisation to develop effective strategies to diminish these feelings. Especially since institutes like the IoP and other STEM faculties are invested in attracting more female academic staff, these good intentions in creating more accessible pathways and a better representation can otherwise become a revolving door instead of increasing the share of underrepresented gender identities.

Respondents were asked to explain why they feel uncomfortable and unsafe talking about sexism at work.

> *"Being a man, I admit that I will never fully understand most of the obstacles women face. This, in part, invalidates my opinion a priori. I can still listen, of course, but cannot fully contribute."*

> *"Again, this is a sensitive topic both personally and societally for a lot of people. However, it is a lot easier to discuss sexism than racism as far as I'm concerned."*

> *"I find that in general one has to try very hard to convince people that it even exists. I have tried speaking to colleagues who for instance blame the wage gap on the fact that females do not hold high paying jobs. This is actually untrue, but they cannot be convinced. It is extremely tiring to argue each point one person at a time. There needs to be collective action and education."*

3 of the 11 explanations represent why staff feel uncomfortable talking about sexism from different perspectives. The last respondent represents the main message: "There needs to be collective action and education." The context of the IoP comes with challenges because of the resistance among male colleagues to 'give up (systemic) power and space'. On the other hand, there is also support and awareness among male colleagues and, therefore, opportunities to improve inequity and room for dialogue "in getting comfortable with the uncomfortable" (ECHO).

Respondents also elaborated on how sexism in the broader community affects the ability to work or focus on work; 10 explanations were given.

> *"Sexism in the broader society has led to women not feeling as justified in being in the positions they have earnt. Lots of people suffer from impostor syndrome, but it seems to be more common for women, and I have personally found this an incredibly crippling feeling at times which affects my ability to focus on my work. I believe this is in part due to the social conditioning that makes women feel like they don't deserve to be where they are."*

> *"There is always the underlying fear of only being hired because you are a woman, not because you have skills. The idea of being different meaning that thus you are not being good enough persists."*

> *"I must be extremely careful as a man to not overstep the perceived boundaries of (mostly female) co-workers and students. Things can be misconstrued in a sexual light, and this can be very damaging, and such situations must be avoided. This sometimes means being more distant and less personable than I would naturally be."*

These are 3 of the 10 explanations. They reflect how societal views and conversations in the broader community impact the lives of individuals within the physics community and specifically within the IoP. Active policies and strategies against sexism will enhance self-esteem and potentially the motivation and persistence of staff to grow scientifically and individually.

In one comment, a parallel with racism was drawn with regards to recruitment, specifically recruiting opportunities. On the other hand, individuals don't want to be stigmatised because of the diverse recruitment policy. This is a dilemma. Diversity recruitment and even affirmative action will not be valued in the scientific community if there is no evidence of its relevance. Considerations driven by fairness to focus on equity and diversity in general are often not a good enough reason for strategic change, while the scarcity for scientific human capital as an economic imperative is of great importance for the sciences on the short and longer term. An example of intentional diverse recruitment is the Irène Curie Fellowship at the University of Eindhoven (TU/e vacancies, 2019). In an interview, the rector stated, "We attach great importance to equal respect and opportunities for women and men. And it has long been known that a diverse workforce performs better. It leads to better strategies and more creative ideas and fosters innovation. We've had measures in place for years to increase the low percentage of women among our academic staff, but we're progressing too slowly. We're aware that we are suffering from an implicit gender bias. We are now using the fact that plans to expand our academic staff considerably in the coming years can be used as a means to make a big step forward in one fell swoop." The process of developing an initiative like this was both welcomed and rejected. The rector mentioned in another interview not having expected to be exposed to such a polarised discussion.

Introducing rigorous strategies requires the commitment of the institute's management, intentional aims in combination with expected sustainable benefits for the institute and a practice-driven process to develop broader organisational commitment by including academic staff to participate in the co-creation of practices collaboratively. This in combination with providing the organisation with a 'language' and vocabulary to talk about sexism, racism and discrimination in general and to get comfortable with the uncomfortable.

4.8 Discrimination

This part of the survey focuses on other types of discrimination that respondents might have experienced or witnessed (i.e., not related to racism or sexism). For the survey, the dimensions of diversity of Caleidoscopia were used to indicate other types of discrimination. Table 2 presents the dimensions of diversity of Caleidoscopia and the dimensions used in the survey.

Table 2 Dimensions of diversity to identify discrimination

Caleidoscopia	**Survey IoP**
Age/Phase of life	Age/Phase of life
Disabilities/ablebodiedness	Disabilities/ablebodiedness
Gender identity	Gender identity
Professional socialization	Professional socialization
Religion	Religion
Sexual orientation	Sexual orientation
Social class	Social class
Ethnicity	None of the above
Blank	Other:

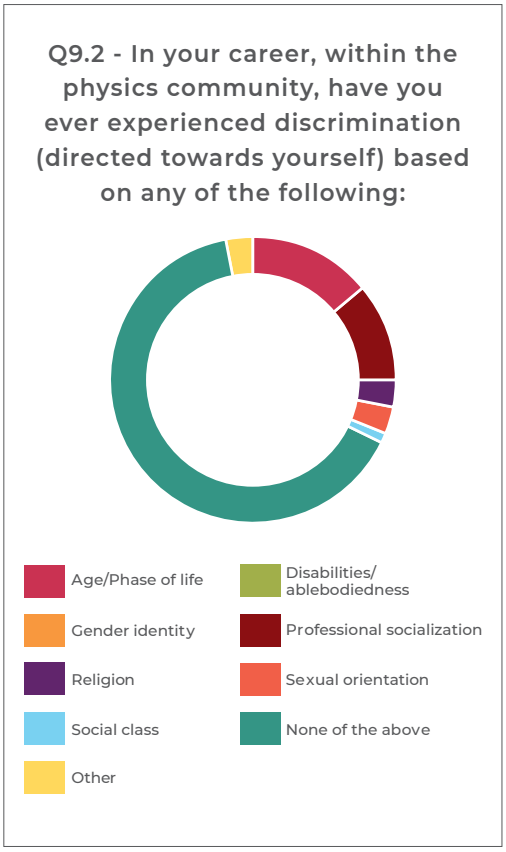
As summarised in chart 19, respondents answered if they experienced discrimination in the physics community (directed towards themselves) based on the dimensions of diversity mentioned above. In the survey, some clarifications were given: "*age*, e.g. someone is "too young to get a position" or "too old to reschool for a new position"; *phase of life*, e.g. a new parent adjusting to parenthood, a graduate student struggling to keep up; professional socialisation (a process through which people learn, during their education and training, the skills, knowledge, values, behaviours and attitudes needed to take up their professional role), e.g. someone is "too soft" for the group's professional subculture."

Of the 91 responses, almost two-thirds answered "none of the above" (chart 19). Respondents were able to choose more than one dimension. This was most prominent with age/phase of life, which was the most often experienced act of discrimination but almost always in combination with another dimension of diversity, with professional socialisation, social class and sexual orientation. A few experiences were single experiences of discrimination based on age, professional socialisation, religion, social class, sexual orientation, etc. Respondents selecting "other" (3) mentioned culture, stereotypes and nation. This shows that respondents missed the dimension of diversity linked to ethnic or racial identity. No experiences were shared on gender identity and disabilities/able-bodiedness.

In chart 20, respondents were asked if they witnessed discrimination in the physics community (directed towards someone else) based on one of the dimensions of diversity. Again, respondents were given the possibility to mention more than one act of witnessing discrimination. 116 responses were given. 49 of the responses were "none of the above". Among the other responses, all dimensions of diversity were mentioned. Age, gender identity and professional socialisation were mentioned in combination with other dimensions of diversity. Religion, social class, disabilities/able-bodied and sexual

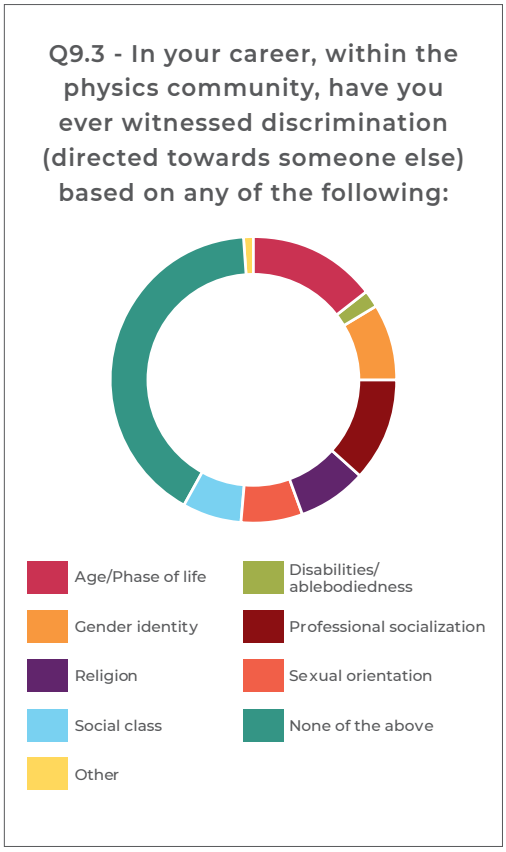
orientation were always mentioned in combination with other dimensions. For the option “other”, nation was mentioned. The dimension of nation is related to ethnic or racial identity, which makes sense given the international diversity within the IoP. Given that scientific institutes like the IoP have a growing international staff, discrimination due to ethnic identity is multidimensional.

Chart 19



Source: IoP

Chart 20



Source: IoP

The results of questions in charts 19 and 20 ask for an intersectional way of looking at discrimination. Discrimination based on age or professional socialisation can be reinforced with other identities such as gender, ethnicity, social class, sexual orientation, etc. The value of taking an intersectional approach brings discrimination of specific less discussed dimensions to the scope of attention, such as ‘nation’. It provides the opportunity to better understand and analyse the underlying systems and (power) structures that are foundational to inequity and discrimination.

If they felt comfortable, respondents were asked to describe what happened and how it affected them. 8 situations were shared related to different types of discrimination. Although discrimination based on ethnicity was not mentioned explicitly as a dimension of diversity, it also seems to be a reason for being addressed negatively.

"I have had many incidents where people make assumptions about where I come from and my culture. Often, they don't know anything about my ethnicity but make assumptions about it. I was also told by a colleague that I should apologize on behalf of the Muslim population b/c of ISIS. I am an atheist […]."

"Public homophobic comments and statements being stated as acceptable when awarding scientific prizes by senior physicists. Unconscious bias against those from lower socioeconomic classes."

Situations were shared on how deviating from the dominant group can enhance inequity in opportunities in the workplace. The following examples describe how injustice in power relations has an impact on being excluded from professional opportunities:

"Not directly a specific event, but the general impression that especially the challenge of 'adjusting to parenthood' was not appreciated by supervisors/those hiring. I do believe this has improved over the past few years."

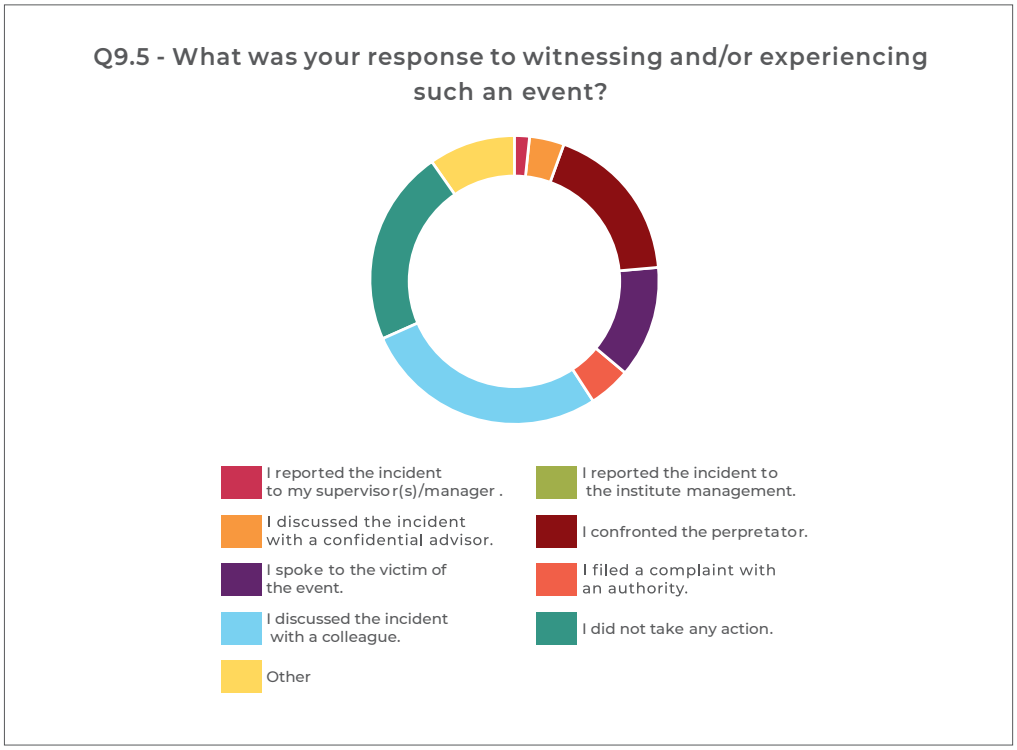
"PhD supervisors select which students they give which possibilities to go to conferences or schools and sometimes have favorites which they benefit over others. This leads to not all PhD students being given equal opportunities."

Some of the responses are very elaborate and show a 'struggle' to indicate how situations must be interpreted. Are they 'major' incidents of discrimination or examples of general biases? A respondent mentioned:

"I try to notice biases and learn from them or point them out."

Charts 21, 22 and 23 present the results on the questions about the actions respondents took when experiencing or witnessing discrimination (chart 21), the outcomes in case action was taken (chart 22), and the reasons if no action was taken (chart 23).

Chart 21

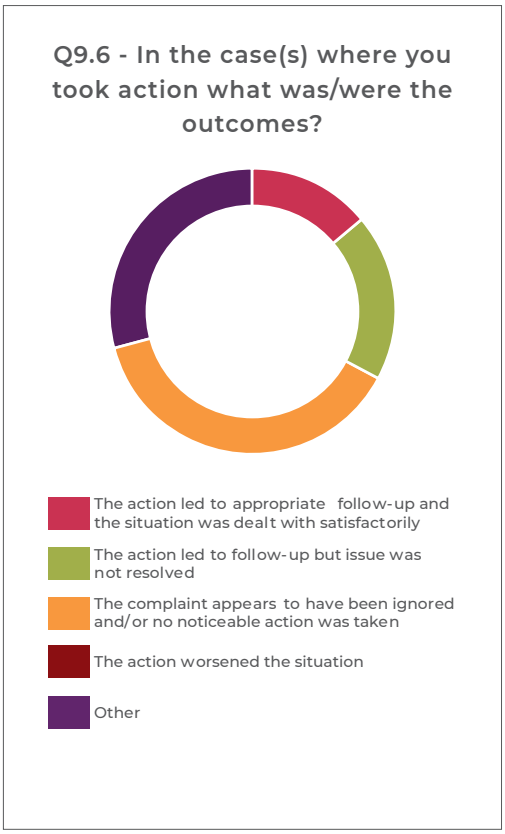


Source: IoP

Chart 22 represents the answers of 29 respondents. 21 took action and 8 did not. The ones who did take action gave multiple answers, which resulted in 48 responses. Respondents often (14) chose to discuss the incident with a colleague in combination with other options. Only in 1 instance, the incident was reported to a supervisor or management, and in only 2 cases the incident was discussed with a confidential advisor.

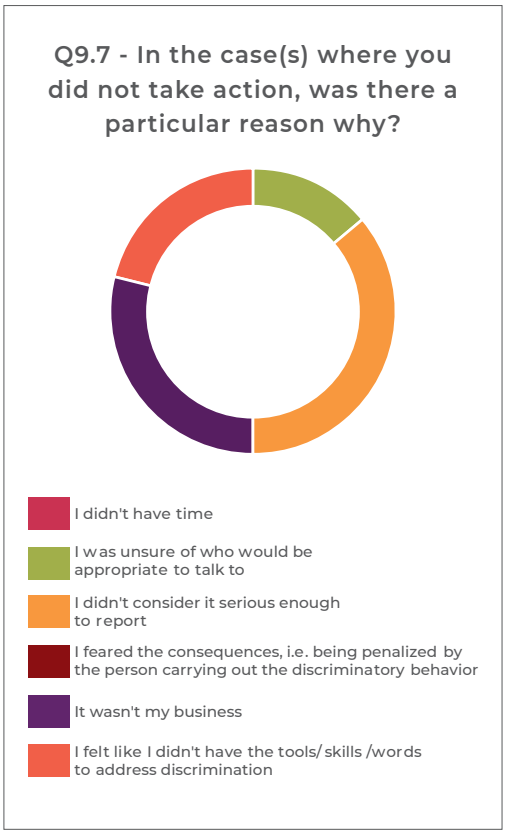
Chart 23 shows the result of the outcomes of the actions taken. 3 of the 21 actions led to an appropriate follow-up, and the situation was dealt with satisfactorily. In all these 3 instances, the respondents confronted the perpetrator combined with other actions. In the cases in which respondents reported the incident to a supervisor, or the management or discussed it with a confidential advisor, the issue was not resolved or even appeared to have been ignored and/or no noticeable action taken. This can explain why respondents hardly choose to discuss their experiences with a supervisor, management or a confidential advisor but instead choose to discuss them in a safe environment with colleagues.

Chart 22



Source: IoP

Chart 23



Source: IoP

Respondents who did not take action (8) gave several explanations (chart 23). In most cases, respondents mentioned that they did not consider it serious enough or thought it was not their business. Nobody chose the option “I feared the consequences”, which is a good sign. In 3 instances, respondents felt they did not have the tools/skills/words to address discrimination. This last answer is a reason for the institute to follow up. Discussing experiences of or witnessing discrimination, racism and sexism should be ‘normalised’ within the institute, combined with means of support.

The question if discrimination in the broader society directed towards respondents affects the ability or focus on work is denied by 72 of the 79 respondents. A few of the respondents that confirmed being affected explained why:

> *“Aware that we are not inclusive for LGBTQ, disabilities, social class etc.”*

> *“It can happen that something (a discriminatory comment, someone saying something hurtful) happened during the weekend or in the evening after work that makes me angry and then keeps my mind from focusing on my research. After a small discriminatory event this can last for a day or two, if the event was a bit more severe it can affect my mood / concentration for longer periods.”*

Both discrimination in the institute and discrimination in the broader society can impact a person's concentration, self-esteem and, eventually, careers of individuals within physics and in the IoP. The IoP cannot prevent or influence what happens in the broader society but can control what is happening inside the institute.

4.9 Intersectionality

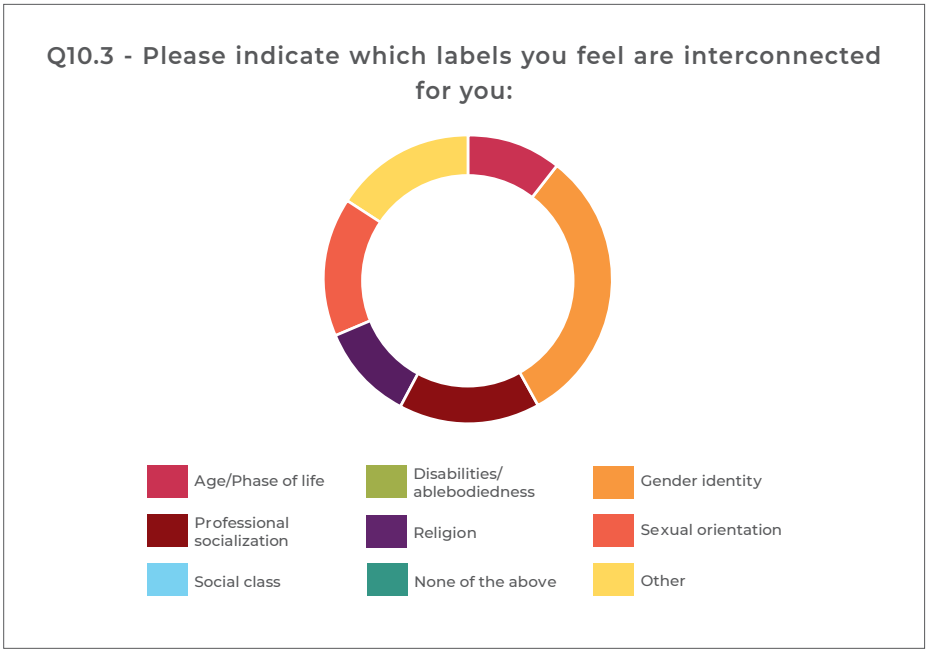
The last part of the survey focuses on intersectionality. The survey uses the definition given in the report "Let's do diversity" of the UvA: "Intersectionality is a perspective that allows us to see how various forms of discrimination cannot be seen as separate but need to be understood in relation to each other. Being a woman influences how someone experiences being white; being LGBT and from a working-class background means one encounters different situations than a white middle-class gay man. Practising intersectionality means that we avoid the tendency to separate the axes of difference that shape society, institutions and ourselves. (…) [It] allows us to see why distinct social positions of individual students and staff determine how they experience the University. Intersectionality urges us to be sensitive to the variety of trajectories, experiences and perspectives among students and staff." The IoP takes an intersectional approach since policies meant to mitigate the discrimination of women might negatively impact people of colour (IoP 2021).
Respondents were asked if they experienced discrimination differently or more severely as being part of multiple underrepresented groups. In total, 78 persons responded. 71 answered no and 7 persons answered yes. Chart 24 presents the outcomes of the question which labels are relevant to the respondents. Labels are based on the dimensions of diversity of Caleidoscopia, except for ethnicity (table 2). Gender identity was most often mentioned in combination with other dimensions of diversity. Respondents were also asked which other label is relevant to them. Colour, descent and ethnicity were mentioned as alternatives pertinent to 3 of the 7 respondents. This again shows that racial and ethnic identity is an appropriate dimension to consider when discussing discrimination, especially when focusing on intersectionality. Descent is another diversification referring to either family background or nationality. In the context of the IoP and academia with a growing international staff, these dimensions of diversity matter, especially when positioned as a means for inclusion policy. For future surveys, it is recommended to include ethnicity as a separate dimension of diversity like the dimensions of Caleidoscopia, which for IoP is a small addition since the survey is already consistent in taking ethnicity into account. Ethnicity can even be elaborated based on the additions mentioned in the responses like nation, descent, race or colour. Table 3 shows the combination of layered identities of the persons who responded to this question.

Table 3 Combinations of layered identities as provided by respondents

Gender identity, Professional socialization	Gender identity, Other: Colour	Gender identity, Professional socialization, Religion, Sexual orientation	Age/Phase of life, Gender identity, Professional socialization, Other: Descent	Gender identity, Sexual orientation	Age/Phase of life, Sexual orientation	Gender identity, Religion, Other: Ethnicity

Source: IoP

Chart 24



Source: IoP

Respondents were also asked to elaborate on intersectionality, given the implications for adequate policymaking and the general functioning of the institute, and to give suggestions to improve an intersectional approach: "It is possible that implications of intersections have escaped the IoP's notice so far. Do you feel that the IoP has failed to acknowledge this in the past?"

Some reflections (14) address different interpretations and issues related to intersectionality.

> *"I feel the IoP is doing a good job overall on this front. The diversity of staff has greatly improved in the last decade. The intake of students has also witnessed a continued internationalization, although this could arguably be dramatically improved (given the attractiveness of the Netherlands in general, and Amsterdam in particular). I would love to see more concrete commitments from IoP on international collaborations at the educational level. There exist plenty of opportunities for this in Africa, the Middle East, Asia and South America. I could envision the IoP contributing to a true international, multilingual educational hub which would enhance recruitment opportunities."*

"Speaking generally, I did not observe very explicit racist or sexist incidents. There are however numerous instances where undesirable biases emerge. In Physics the (white) male bias is prevalent, although slightly decreasing now that more women enter the field. Physics is very meritocratic and the enrolling students are very often coming from higher Social Economic class, and there is a lack of attention for the demographic changes in the Netherlands. The physics and astronomy science communities are very open and international, and in that sense identity is not important/not discussed. At the same time the subject is a kind of blind spot, human nature is this thing for other faculties to study. University people in general tend to look down on those of lesser training."

"Of course, it is clear that in a wider context all types of discrimination and their interactions are present in society as a whole and it is safe to assume that mistakes were made in the past in the IoP specifically as well. Overall, academia is a very internationally minded environment and most people are inclusive towards others. However, it is also very individually focused on personal projects and I think it is important to stress that in addition to working on personal research topics we are all also employees of the UvA, an (inter)national institution. And therefore any initiatives to increase inclusivity should not be optional or only engaged in when there happens to be time outside of (theory/lab) work. I think it should be clearly communicated that just as much as professional output this should have a certain priority for all students and employees. That is important for those of our coworkers that do feel negative effects of discrimination. One specific suggestion could be mandatory courses or trainings in bringing our own (most of the time) unintentional biases to the surface to deal with them."

"I don't understand why there are 'strong implications' caused by a group that consisted of (I guess) 1% of the total population."

This last response shows that the concept of intersectionality is interpreted as a separate group or dimension of diversity. Table 3 shows that intersectionality within the IoP is a combination of many identities and dimensions of diversity, which means that implications for policymaking relate to more representants than the stated 1% of the population. Ignorance and a lack of awareness are reasons for resistance to diversity and inclusion policy.

In general, the provided reflections show a sense of awareness and commitment toward focusing on intersectionality in connection to discrimination to improve policy at the IoP. An observation that is not only relevant for the IoP context is how intersectionality is interpreted and how it was meant to be interpreted in the late nineties. These interpretations are also represented in the reflections of respondents.

"I am not that familiar with the concept of intersectionality, but based on the given definition, I do think that it is somewhat mitigated at IoP due to the fairly large national diversity (but not ethnicity) in the staff and students, especially at the junior or medio researcher level. However, the fact remains that all the full professors are male and overwhelmingly with a Dutch background. I personally think that it is paramount to focus on hiring female full professors in the coming years. They will help with intersectionality, but also serve as role models for other female and minority physics community members."

"I have absolutely experienced gender diversity being prioritized and negatively impacting me as a woman of colour. The lack of understanding of intersectionality is quite immense in physics, and what has taken me aback, is the lack of awareness on this issue with white women colleagues and peers."

An intersectional perspective allows for a more effective approach to countering discrimination against specific marginalised communities. For example, in developing policy or analysing policies, it is essential to ask some of the following questions: "If we take measures that aim to support women, are they also impactful for women of colour?" But also: "If we start these policies, will they be mindful of intra-group differences and tailored to, for example, white women, women of colour as well as a Muslim woman or a woman who is the first in her family to enter higher education and the science community?" If the answer is no, an intersectional approach is absent. One of the downfalls of single-issue policies is that often the groups that need policy support or protection the most are underserved. Solutions aiming at countering racism, sexism and other mechanisms of exclusion, as well as policies to improve diverse representation, should therefore be developed from an intersectional perspective, taking at least different overlapping gender, racial and sexual identities into account in combination with specific identities that are relevant for the physics community, for instance, the context of young families:

"In the research culture, we should improve at avoiding creating difficult situations for young families due to peer pressure on working continuously outside the working hours to achieve more/better results. This pressure is omnipresent in the broader physics community, and therefore extremely difficult to tackle."

4.10 Policy suggestions and final remarks

At the end of the survey, respondents were asked to provide input considering the issues of diversity, equity, inclusion and discrimination, to improve IoP's policy, activities, research content, research culture, hiring process or other areas. In total, 34 responses were given. The majority (30) were positive, supportive and provided concrete ideas to

improve policy and practices. These will be presented in chapter 6. Striving for institutional change to enhance equity, diversity and inclusion, and prevent acts of racism, sexism and other mechanisms of exclusion will be more impactful if members of the organisation are actively involved and consulted from the design stage to the implementation and evaluation. Opposing reflections are expressions of feeling excluded from opportunities because of the strategic intentions of the IoP management to diversify and become more equitable and inclusive. Resistance against a change of the current status quo is expected and can be seen as part of the process. These respondents are less aware that diversity is not a choice but a reality, given existing (gender) policy and demographic changes. Even more in a city like Amsterdam and since the IoP is part of an international and globalising community. So, diversifying is not the big goal but becoming more inclusive and equitable is the short term and long-term pursuit. Besides that, the survey shows and cannot refute that even in a context of less diversity and equity, discrimination and mechanisms of exclusion are also a reality within the physics community - fortunately, to a lesser extent within the IoP. Combating racism, sexism and other mechanisms of exclusion aims to create safer and more inclusive learning and working environments to enhance a sense of belonging for all students and staff.

> *"I applaud the institute for striving towards more diversity, equity, inclusion, and for working against discrimination. As a member of the 'majority' (white, male, …), it is not so easy for me to suggest good ways to achieve these goals, however."*

An issue that has not been explicitly addressed is the diversity in types of labour contracts:

> *"Stress that, besides professional output, inclusivity has priority, perhaps of a different nature but still important. It is not an afterthought or something we think about when we have time besides our normal work.*

Different but related perhaps, in academia there is a clear divide between those with temporary and permanent contracts. I am not sure how, but please consider how to adequately safeguard inclusivity in those moments where a conflict arises between a permanent and temporary staff member. If inclusivity is a priority then in any conflict resolution where issues of inclusivity arise then the contract duration should not be a factor in how you resolve those conflicts, even though the permanent (research) staff members are really important for continuity and focus of the research taking place here. It might be tempting to think that just because a temporary employee might leave soon, any issues, of inclusivity, that came up during their stay here will also disappear once they have left. Obviously, this is not true, it is worthwhile to still address those issues for the atmosphere and culture of the institute as a whole even/especially if that means addressing the more permanent contract employees."

Respondents had the opportunity to share any additional thought (15). Most of them were positive about the fact that the institute management is committed to not only focus on equity, diversity and inclusion but also to provide a platform to share experiences and reflections on excluding practices and raising awareness on intersectionality.

> *"Things tend to always 'not look so bad' on the surface and it bothers me that some talk in a way "I don't have problems with women or black or gay people, neither do the people around me, and I don't see much of discrimination, so it can't be that bad, that can't be the reason they're not around". These people (and I think it's many of us including me!) need to be confronted with reality."*

> *"I think in many policies at the UvA/FNWI, and therefore at the IoP, the intention towards diversity is good, but there is a lack of awareness on intersectionality. The report 'diversiteit is een werkwoord' should have been read by many more policy makers and other staff. I'm very happy to see this questionnaire is being sent to everyone, as it might shed some light on what is happening in the IoP but also educate somewhat. Thanks!"*

5. Conclusions

This chapter presents concluding remarks on the findings of the survey and the questions raised in the introduction. The survey outcomes confirm the necessity for the Institute of Physics to intentionally focus and act on aspects of *equity, inclusion, diversity and experiences of discrimination*. The outcomes also show an appreciation of respondents for raising awareness and providing an opportunity to share and reflect on these issues. Experiences of discrimination are always a reason to act but not the only reason to develop equity, inclusion and diversity strategies. Although worldwide social movements like #MeToo, #ShutDownSTEM #BlackLivesMatter, and #AsianLivesMatter served as accelerators for change, "strong evidence is emerging that equity is correlated with better academic performance measures" (Feder, 2021).

The survey is an intentional act and policy statement communicating the level of commitment of the IoP management. With the survey, IoP's equity and inclusion aims are more than a value proposition because it also addresses issues that are often experienced as uncomfortable. The IoP can make informed decisions and develop tailor-made actions that are relevant and, therefore, more applicable to the context of the IoP since context matters (Camilleri et al., 2016). The survey can be seen as a "means of doing", a unit of measurement to document diversity (Ahmed, 2012).

The aims of the leadership of the IoP are threefold:

- *Equity* enhances fairness and justice in the way staff (and students) are treated by each other and within the institute (Statement of Values, 2022).
- *Inclusion* provides an increasingly safe and transparent culture. Discrimination of any kind is not tolerated, and where any potential cases can be safely discussed, addressed, and adequately acted upon.
- *Diversity*, increasing the representation of currently underrepresented groups and identities in IoP's community.

Diversity

The part on individual characteristics (pages 10 – 13) provides a 'snapshot' of the representation of respondents based on different identity dimensions, positions and departments within the IoP. It can serve as a baseline metric for diversity. The IoP is diverse on specific dimensions of diversity, like age group and ethnic backgrounds, given the share of international staff, but less diverse in gender and racial identity. Assessing the diversity balance based on separate identities of diversity only is not enough since diversity is a means to an end. These metrics are more relevant if combined with data on the type of positions within the academy, (leading) roles in research committees/projects, number of funding grants, publications and citations. This will give a better sense of the level of (under)representation and the (in)equity in payment, academic position and power balance within the institute. Creating a level playing field within IoP requires a multi-dimensional approach in the short and longer term.

Inclusion, Equity and Exclusion

The part on individual experiences of equity, inclusion and diversity within the IoP focuses on a sense of belonging, the importance of diversity and career choices (pages 13 – 15), and experiences of racism, sexism and discrimination within and outside IoP (pages 15 – 35).

The outcomes of individual experiences of feeling or being excluded or witnessing others being excluded give insight into the challenges respondents encountered and witnessed with racism, sexism and other mechanisms of exclusion. The qualitative reflections are open and offer revelations that cannot be ignored. Even though the number of these revelations is small and will probably not have statistical significance on an institutional level, it is still significant to the person sharing the information. The reflections show that facing either racism, sexism or encounters related to other mechanisms of exclusion and discrimination impacts a person's peace of mind and can eventually have other unwanted effects. This way, the open door to more diversity becomes a revolving door with a loss of human potential and human capital.

The survey shows collegiality among respondents by providing support to victims if they witnessed encounters of discrimination or confrontations with perpetrators. Most of the

respondents discussed their experiences with colleagues. Conversations with colleagues give a sense of safety and serve as informal safe spaces. In general, respondents feel comfortable discussing issues of harassment and discrimination with a supervisor or the institute management. But when asked which action respondents took when experiencing or witnessing racism, sexism and discrimination, reporting or discussing with a supervisor or management is not an option chosen often. This is not because of a lack of trust but a perceived lack of vocabulary on inclusion and exclusion and 'spaces' to discuss these experiences combined with a lack of transparency on existing procedures and provisions. The fact that academic staff have been able to provide experiences of racism, sexism and other mechanisms of exclusion anonymously, knowing that the institute management is involved, is important for being acknowledged. This way, the institute takes ownership of the situation. By doing so, the IoP prevents victims of racism, sexism and other mechanisms of exclusion *from becoming the problem* when reporting these experiences. "To point out what is blocked is to be experienced as the blockage point" (Ahmed 2012).

The survey shows that discrimination, in general, is also a reality within and outside of the IoP and within the physics community, especially for academic staff who do not represent the (former) majority. The increased attention in the past years on the gender gap and sexism is noticeable in this survey. There is less hesitation to open up and share experiences, and there is a general commitment toward the importance of diversity and a willingness to tackle sexism. It is, however, less common to talk about experiences of racism. Talking about racism is often experienced as sensitive and less customary, let alone being normalised. There is a lack of vocabulary and knowledge, resulting in a reluctance to discuss racism. Besides that, microaggressions with a racial or sexual connotation are not meant or seen as racism or sexism by the sender. Microaggressions can happen daily and are referred to as everyday racism, sexism and heterosexism (Sue, 2010). Institutional racism and (hetero)sexism are where exclusion coincides with social unjust and inequitable framing. Institutional racism and (hetero)sexism are systematic ways of framing and considering (respectively) people of colour, women and persons who identify as LGBTQIA+ as inferior. Institutional racism and (hetero)sexism are embedded in historically maintained power structures and therefore need a systematic approach to dismantle, which is beyond the scope of the IoP but can be addressed in the broader physics community. Tackling all forms of racism, sexism, other mechanisms of exclusion, and discrimination is a constant process of challenging the dominant norm.

Also, other discriminating factors were brought up, such as position and type of contract within the institute and the context of young families. This concerns how parents with young children must juggle work, parental responsibilities and 'normalised' expectations of, for instance, working hours. The rigorous and competitive academic culture within physics is not used to changing norms with respect to work-life balance. It can create pressure on staff and a divide among academic staff.

One respondent shared concerns and expressions of feeling excluded because of the strategic aims of the IoP management on equity, inclusion and diversity. Resistance, invoked by fear of change, missing out on opportunities and a fear of giving up space and making way for new scientists from underrepresented communities, are to be expected, especially with the intentional focus and determination of the leadership of the IoP. Voices of resistance are inherent in these processes of change. However, the survey predominantly showed commitment and willingness among respondents with different positions to the importance of diversity. These colleagues are potential allies in the process of implementation.

6. Recommendations

The recommendations are (A) inspired by concrete ideas shared by respondents and (B) based on the analysis of the survey outcomes.

A. Recommendations of respondents

Areas of intervention based on concrete ideas of respondents:

Increasing diversity	Increasing the hiring of more diverse staff at all levels, specifically more female full professors. Developing concrete policy and targets for diverse hiring.
Improving inclusion & belonging	Deepening the understanding of equity, inclusion and mechanisms of exclusion through dialogue and professional development. Raising awareness on cultural sensitivity. Becoming aware of unconscious and implicit bias through self-reflection.
Preventing exclusion & unsafety	Creating opportunities to discuss mechanisms of exclusion and experiences of harassment openly and safely. Developing a more transparent but confidential and safe (infra)structure to enhance social safety. Developing clear policy towards perpetrators and victims in cases of harassment. Answering the need for tools, skills, and vocabulary to address discrimination, racism, (hetero)sexism and other mechanisms of exclusion.
Outreach for diversity and equity	Creating a long-term strategy by developing pathways through outreach activities in collaboration with (high) schools and community organizations with a more diverse composition of students to raise aspiration and motivation for physics.

Most of the ideas for concrete actions elaborate on existing policy and practice but ask for a more intentional approach and concrete actions. Such as the need for more diversity in hiring and the need for more awareness-raising through training and workshops to make the IoP a more equitable and inclusive workplace and a more transparent and inclusive culture.

B. Recommendations based on the analysis

The recommendations based on the analysis focus on five main areas of intervention: (1) From intention to impact, (2) Diversity, (3) Inclusion, (4) Dealing with discomfort and (5) Maintaining impact. The areas of intervention complement each other and are meant to impact an individual and an institutional level, specifically for the IoP context.

01 From intention to impact

A transformation from intention to impact needs to aim at improving equity, inclusion and diversity and acknowledging, preventing, and acting against racism, sexism, and other mechanisms of exclusion. Although both aims are interconnected and complementary, each still needs specific action and policy. Reflections that respondents gave also focused on both aims.

From intention to impact *@the IoP*

This survey is an important catalyst and baseline for action by better understanding employees' perspectives and experiences on diversity, inclusion and exclusion. The next stage is to 'translate' these individual reflections into an institutional strategy by transforming expressed needs and ambitions into policy and practice. For many organisations, the transition from good intentions to impact is a steep learning curve that asks for an intentional focus, consistency in vision and strategy, and valuing perspectives and ideas to co-create a sustainable path to inclusion.

02 Diversity *The future is intersectional, international, and intergenerational*

Increasing diversity means accepting a diversity of thoughts, perspectives and responsibilities inhabited by a more equitable representation of underrepresented groups and identities (gender and cultural diversity) in combination with changing demographics due to international/global mobility, an ageing population and a growing share of younger employees. The diversity of individuals in organisations is not a collective of single identities but a collective of multiple and layered identities. The future of the IoP will be even more intersectional, which is part of more significant and global developments in STEM since universities worldwide aim to increase gender balance and other dimensions of diversity in academia (Feder, 2021).

Diversity *@the IoP*

Increasing the diversity in representation will involve necessary adjustments in the current recruitment and hiring process.

- The impact of this process will depend on the choices in hiring strategy (generic or specific policies) and how the recruitment process will be executed (which networks are targeted, affirmative action as a potential strategy, diversity of the hiring committee, involvement of the IoP, FNWI or UvA diversity office in the selection process etc.)
- Diverse hiring is part of a holistic vision of change within the institute and the physics community. Increasing the diversity in hiring requires inclusive recruitment, selection and hiring processes but cannot be viewed separately from a strategy on retention, belonging and inclusion.

03

Inclusion *Making excellence inclusive*

Countering the dichotomy between meritocracy and excellence on the one hand and equity and diversity in academia on the other hand, is part of the journey towards inclusion and belonging. “Inclusive excellence is a process that includes excellence in teaching and learning, student development, institutional functioning, community engagement and workforce development” (Salazar, Norton and Tuitt, 2010).

Inclusion *Getting comfortable with the uncomfortable*

Enabling uncomfortable conversations is part of a (growth) process of getting comfortable with the uncomfortable (Baboeram and Karaaslan, 2020). Not having these conversations will support the reproduction of inequities (Ahmed 2012).

Inclusion *From Colour blind to Colour brave*

A colour-brave approach supports the notion of being intentional and purposeful in enhancing inclusion in education (Hobson, 2014, Tupan-Wenno, van Marlen & Aumaj, 2020). It requires the acknowledgement of differences in ethnicity, (gender) identity and access to power to create a sense of belonging. Being colour-brave is an intentional way to value different perspectives and is relevant for organisations where diversity is increasing. A colour-brave approach often leads to specific measures, with intentional programmes offered to employees to reach an equitable starting position.

Inclusion *@the IoP*

Developing a gender & colour-conscious approach from an intersectional perspective is essential to recognising power structures such as sexism and racism. These institutionalised, reproducing mechanisms cause inequality in opportunities and inequity in positions. Therefore, creating a climate to discuss experiences of inclusion and exclusion is part of the organisation’s growth process. Building on what has already been done within the

institute is equally important as identifying what can be done differently based on the survey.

Next steps

- *Language:* develop a shared vocabulary on equity, diversity, inclusion and mechanisms of exclusion within the context of the IoP through dialogue and professional development.
- *Ownership:* build a coalition of IoP initiators keen to invest in jump-starting a learning process and engaging with colleagues to develop and implement new ideas for the IoP context.
- *Training:* provide training opportunities for knowledge development, creating awareness and mastering skills to better interpret experiences and challenges of the institute to strategy, policy and practice.

04 Dealing with discomfort and unsafety *Safe, Brave and Accountable Spaces*

These spaces support creating a culture to discuss and combat experiences of racism, sexism and other systemic ways of discrimination (Ali, 2017). Safe spaces are means for members of minoritised identities to share and explore ideas without feeling marginalised. Brave spaces are meant to discuss similar experiences with the purpose for employees to understand one another better and participate in challenging dialogues equally. Accountable spaces stress the importance of also structuring responsibility and accountability in addition to the brave space. The accountable space supports a deeper understanding of diverse lived experiences in real-time (Ahenkorah, 2020).

Dealing with discomfort and unsafety *@IoP*

Participants with different perspectives and opinions join the conversation to share, express and uncover potential biases and opportunities that can be addressed and implemented. Brave and accountable spaces support conversations to get comfortable with the uncomfortable. Creating opportunities to discuss mechanisms of exclusion and experiences of harassment openly and safely are necessary means in addition to an already existing (infra)structure to prevent situations of unacceptable behaviour. There is a need for more transparent and accessible information about the support structure and clear policy toward perpetrators and victims in cases of harassment. The UvA policy and support related to social safety are separate from the diversity and inclusion policy. Ideally, this should be an integrated approach. An inclusive culture and working environment should be safe from harassment and misuse of power, whether sexually, racially or otherwise.

05 Maintaining impact *@IoP*

Transforming from intention to impact to ensure equity, inclusion and diversity are collaborative processes and a shared responsibility. The survey jumpstarted this process and captured the experiences and perspectives of the employees of the IoP. The survey highlights the determination of the IoP management not to shy away from experiences of exclusion within the institute. The recommendations in this chapter can be seen as building blocks: “something essential on which a larger entity is based.” The components will be of value separately but will be more meaningful and complementary if implemented holistically in responding to the needs of the IoP context.

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Colophon

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