

GYA

connections

The magazine of the Global Young Academy



Inclusiveness



GLOBAL
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ACADEMY

Issue 7 — April 2019

This is to notify our readers that the Global Young Academy has retracted the article titled “Scientists and scientific performance in Africa: A gendered perspective” from Connections Issue 7 on 3 May. The retracted article, authored by a project staff member, was published without adequate review and without the consent of the GYA members leading the project. After publication, the project leaders identified errors in the text and they do not support the recommendations included within the article. The retraction was carried out within two days of the identification of the errors and the request for retraction.

James Curtiss

Connections Executive Editor

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Editorial

by **Anindita Bhadra**

Connections Editor 2018, GYA member 2016–2021

The GYA is a melting pot of languages, cultures, habits, academic disciplines and belief systems, united by the thread of scientific thought. While our community is strongly grounded in the principles of equality, we also appreciate and respect diversity.

This year, the GYA completes a milestone in its journey – 10 years of existence! This is a time for celebration, but also for introspection. We feel that we are indeed inclusive at the GYA, but are we? Have we explored all the myriad aspects of diversity in the world? Is it possible to have an umbrella large enough to include all aspects of diversity and should we even attempt to indulge in such an exercise? Perhaps the world is as diverse as its population size and more – in fact, unlike the size of the human population, in this case the whole might indeed be much smaller than the sum of the parts.

In the true spirit of introspection, we bring you this year's issue of Connections with the theme of 'Inclusiveness', an idea that is so easy to understand and yet so difficult to put into practice in its true essence. The thematic section is diverse, with members discussing their perspectives on inclusiveness, both as a philosophy and within the specific context of the GYA. We hope that these thoughts will stimulate further discussion and help to build newer and stronger bridges within the GYA, as well as provoke dialogues beyond the GYA.

To celebrate our journey of ten years, we have a section titled 'GYA in Memories', written by some of the founding GYA members. We hope that this will

enliven fond memories among our current members and alumni and give our new members a feel for the GYA's strong feeling of camaraderie.

The GYA has grown from strength to strength with support from friends and mentors both inside and outside of core GYA membership. We have thus included statements from friends who we hope will remain by our side during our journey forward.

Further, like every year, we report on some of the interesting projects of GYA members and we welcome our new members to the GYA family.

It has been a great pleasure putting together this issue and we hope that you will enjoy reading and sharing it with your friends and colleagues to spread the excitement of the GYA. Here's wishing our GYA a happy 10th year! Let's join hands to take the GYA forward in a spirit of inclusiveness.



Image: © Ayan Banerjee

Precurity vs. academic inclusiveness



by Cristina Blanco Sío-López

Despite the pervasive effects of multi-level precarity for academic inclusiveness, this multiplying factor is seldom denounced as a structural problem to be distinctively addressed, or as a gap to be filled within a good global academic governance mindset.

Nonetheless, precarity, in all its possible declinations (poverty; precarious living conditions; precarious access to food resources, hygienic goods and medicines; denial of social and labour rights; limitation of time and resources for research in favour of funding applications nearly as an end in itself; forced administrative and management overload for researchers; discrimination; unequal opportunities; mistreatment; work-related deterioration of physical and mental health; exploitative and abusive behaviours in the academic workplace, etc.) is by far a conditioning element not only of the quality of academic teaching and research, but also of the very existence and sustainability of internationally interconnected academic careers.

Within its poverty and fragility meaning, academic precarity especially preys on early-career researchers, implying fundamental lacks in their quality of life, their access to funding and resources and their socially-fundamental job stability.

Indeed, highly-skilled early-career scholars highlight how they 'are under historically high pressure to publish, secure funding and earn permanent positions, leaving precious little time for actual research,' (Powell 2016). This affects excellence in research but also sets unacceptable standards for the future, taking into account that basic job stability and research resources are determined by obsolete, extremely hierarchical, corrupt and exclusionary power structures and not by creativity, originality, actual productivity or innovation-driven ventures.

Rigid and unfairly dominating structures towards early-career academics are also related to overarching economic variables, which entail the infection of the public space by increasingly competing and preeminent private interests directly resulting in a precarity of daily lifestyles. However, while it is extremely difficult to tackle these systemic causal points single-handedly, there is perhaps a better chance at dealing with particular aggravating components of precarity.

Firstly, systematic precarity is aggravated by supplementary dimensions such as gender discrimination (Murgia and Poggio 2018), very remarkably in the form of permanent tasks and work charge loops that prevent merit-based career advancement for women. As a result, women eternally cover basic functions without being allowed to pursue upward mobility via societal impact-oriented research dynamism.



In these cases, an age factor also accompanies this aggravated form of precarity, as the lack of equal opportunities for women in the academic workplace is related to their aging within structures devoid of career development opportunities and work–life balance infrastructures.

Secondly, precarity is deepened by socioeconomic inequality discrimination, intolerance towards minorities, xenophobia and racism (Deshingkar 2018). These are also root factors for a growing dissociation between ethical premises of job stability and an academic workplace integration of equality and diversity on the one hand, versus actual legal voids leading to discriminatory career and research production blockages on the other hand.

All these aggravating variables are paradoxically in consonance with the trend marked by the academic workplace being socially considered as less and less of a hub for expert scholarship and innovative cultural productions, despite our necessity to stress such roles as we move towards an ever closer ‘Technocene’.

In short, some key questions within this remit (also to be launched as new and urgently necessary research questions) are: How can we effectively connect fragility with solidarity? And, more importantly: How can we imbue our cross-scale solidarity with a compelling energy able to dispel the manifold shadows of precarity within a distributed international network that is basically ‘us’ – that is, our very own community?

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The veterans of inclusiveness

by Lisa Herzog

Sometimes you meet individuals in academia who have been fighters for inclusiveness from their first hour. Often, they are elderly women, sometimes dressed a tad too colorfully for academic settings. Or perhaps they are non-caucasians who, in western academia, stand out by the color of their skin. You recognize the type when you see them – they have spent all their lives combating ‘the patriarchy’ – an all-male, all-white, all-bourgeois academy in which so many voices never had a chance to be heard. Some of these people have become bitter, some have become whimsical, but all of them have paid a high price.

It is these individuals who have paved the way for us younger scholars and scientists who are non-white, non-male, or otherwise ‘different’. These fighters have hammered against the walls of academia to create the cracks through which the light came in and they have fought for inclusiveness with grit and patience.

Nowadays, most academic institutions claim to be inclusive, but all too often this is only lip service. Rather, the prevailing approach is the same old habit of preferring candidates that are similar to the existing demography. The common mechanism is a very simple one: whenever one must select a candidate for a post, or a keynote speaker, or a new member of a prestigious committee, one should simply be ‘flexible’ with the criteria. At every stage of the decision-making process, one should focus on the criteria that make certain candidates look

better than the woman, or the interdisciplinary fellow, or the person from abroad.

The inclusiveness fighters are the ones who stand up in committees, who point out biases, who repeat, again and again, that it is not okay to compare the CVs of different candidates without taking into account additional circumstances such as parental leave. These fighters do not mind getting on everyone’s nerves and emphasise the importance of diversity like a mantra. They have learned not to be silenced, even if, on many occasions, they secretly want to scream or cry because it is still so difficult to fight these fights.

I would like to thank all these individuals, every single one of them, for what they have done to get us to where we are today. It is so easy to take for granted the degree of inclusiveness – still so limited – that academia has reached, and to forget how hard it had to be fought for.

The fight is far from over, so much more needs to be done – not least with regard to class, maybe the least visible category of exclusion. But we can all take inspiration from these veterans who have had the courage to be stubborn and to get on everyone’s nerves to make academia more inclusive.

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Inclusiveness of young scientists in academia, policy-making, and practices of disaster risk reduction and climate change: The significance of networking platforms

by **Shabana Khan, Mizan B.S. Bisri, Annisa Triyanti, Riyanti Djalante, Nova Ahmad, Meghnath Dhimel and Ayesha Fleming**

Young scientists' keen interest, enthusiasm, and active participation in research play a critical role in the global knowledge economy (GYA 2014). However, when we talk about their inclusiveness in the creation of knowledge, policies, and practices, there are some significant gaps. Young scientists or researchers working in the field of disaster risk reduction (DRR) and climate change (CC) frequently face challenges in terms of making their voices heard or inadequate visibility. This article highlights the role of networking platforms in enhancing their inclusiveness in academia, policy-making, and practices.

This article is the outcome of exploratory research conducted through an online survey with 40 young scientists working in the field of DRR and CC around the world. In order to bring clarity and maintain consistency, all the research scholars, PhD scholars, post-doctoral fellows, early career researchers and academics are considered as 'young scientists'. The sample was collected using the snowball sampling method (Biernacki 1981) through a network of researchers connected through various platforms that have DRR and CC as sub-themes. The participants were asked various open-ended and closed questions that brought forth some interesting insights into the existing and expected role of the networks in enhancing the inclusiveness of young scientists.

Addressing the need for formal networks

Networks play an imperative role in the integration of knowledge, capacities, and decision-making by bringing different stakeholders together (Kienberger 2014). For young scientists, networks become all the more important as they provide a platform to share their ideas, access various opportunities, and meet and connect with a wider group of people with similar interests. While all the participants in the online survey were connected to members of some network, nearly 27% of the participants said that they are not members of any formal network themselves (Figure 1). This is likely to be much higher in terms of the total number of young scientists working in the field of DRR and CC across the world. This raises a set of questions: Why join a formal network? How do these networks support young scientists? Do existing networks have sufficient capacity and structure to involve all or most of young scientists working in a particular field?

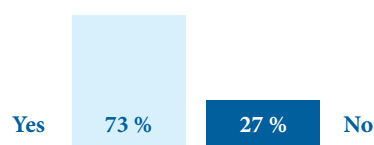


Figure 1: Young Scientists' Membership in Formal Networks
Based on an online survey conducted in 2016-17.

Defining a 'young scientist'

While young scientists can be classified as a community, their definition not only varies across disciplines but also across platforms. According to the Global State of Young Scientists project (GloSYS), 'a young scientist is defined as a postgraduate or early career researcher of any discipline actively pursuing a research career, usually without being fully established yet. Besides, she/he will have received a PhD or an equivalent doctoral qualification up to 10 years ago and is usually between 30-40 years old,' (GYA 2014, p.22). The United Nations Major Group for Children and Youth (UNMGCY) provides no such definition for a young researcher, but in the management of young scientists in DRR, those aged 30 or below are prioritised to represent a young scientist.

On the other hand, the International Institute for Applied System Analysis (IIASA) does offer a young scientists program that is open to advanced graduate students about 2 years prior to receiving a PhD (see www.iias.ac.at). As this paragraph illustrates, the variation in the understanding of a young scientist is not limited to institutions but also prevails within the broader research and academic community.

When participants were asked about being a young scientist, nearly 5% did not identify themselves as such. The reasons provided were age, subject, or work that related more to teaching than to research. The participants were also asked to define a young scientist, which brought forth varied perceptions regarding the criteria that define young scientists (Figure 2).

While research outcome or publications were shown to be a benchmark, participants also mentioned the stage of research, age, experience, subject and potential as defining criteria for being a young scientist.

From knowledge to policy to practices: Establishing the link

Young scientist contributions in the field of DRR and CC include, but are not limited to, their research, advocacy and voluntary activities, as well as activities that inform policy and practices. The nature of young scientists' contributions is very diverse and can be broadly classified into three categories: knowledge, policy, and practice.

The participants found weak integration of the work done by young scientists in the knowledge, policy-making, and practices of DRR and CC. While a few reasons were associated with the characteristics of individual young scientists, many factors were found in the outside environment, that is, in academ-

ic and socio-cultural ecosystems (Figure 3).

The participants noted that networks could play an important role in changing this trend and could be relevant to young scientists in multiple ways, as described below.

Achieving research-driven outcomes

Many young scientists lack credentials either due to inadequate publications or because they fail to present their research to a broader academic community, policymakers or practitioners. Many young scientists, particularly from developing countries, lack sufficient training, exposure or funding support to achieve their research goals. As a result, their output is mainly tangential and not mainstream. Networks could thus act as a catalyst to encourage and enhance the productivity of early-career scientists. The participants noted the significance of networks as a platform to facilitate joint research, publications and exchange programs.

Enhancing involvement in the knowledge-policy interface

Effective changes in policies require close collaboration and knowledge exchange between different stakeholders from the government, non-government organisations, and the scientific and academic communities (Kienberger 2014). There are increasing efforts to expand the role of science towards evidence-based policy-making.

However, there are inadequate references of the work of young scientists in the DRR and CC projects and policies. One participant noted that 'young scientists are often neglected, viewed as cheap labour in scientific enterprises, excluded in decision making and global policy process.' While there is constant pressure to publish, it is difficult to find young scientists who act as policymakers.

Many research or government organisations that participate in policy making often lack the structures or processes to involve young scientists. The role of networks in such cases becomes important to bring the voice of young scientists to the forefront through advocacy and support. While some new networks are already working towards this situation, more work needs to be done.

Effective participation and visibility in practices

The participants noted that seniority is important in large-scale decision-making; however, many young scientists could effectively contribute to DRR on the basis of their research and interest. These scientists also found that 'most decision making processes and

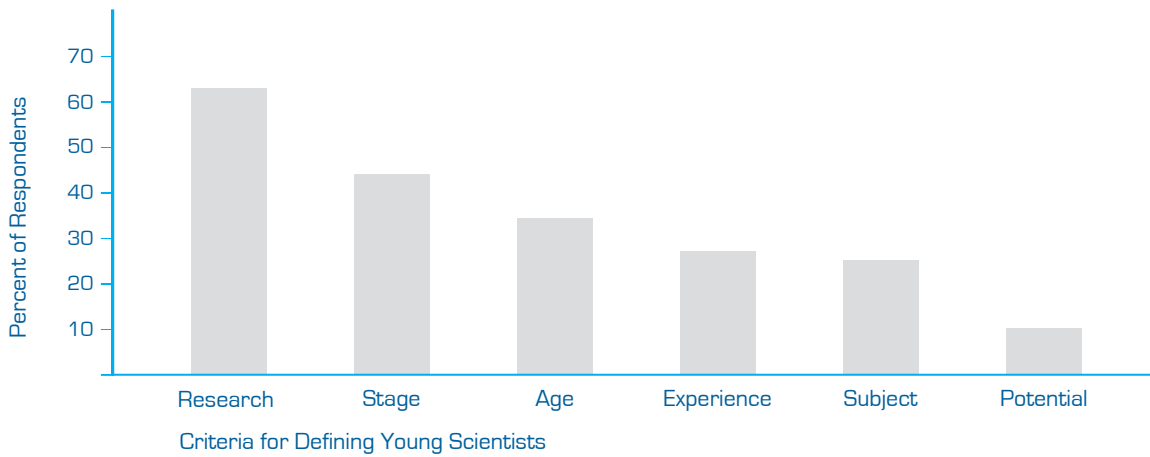


Figure 2: Criteria that define young scientists as noted by participants
 Source: Authors, based on an online survey conducted in 2016-17.

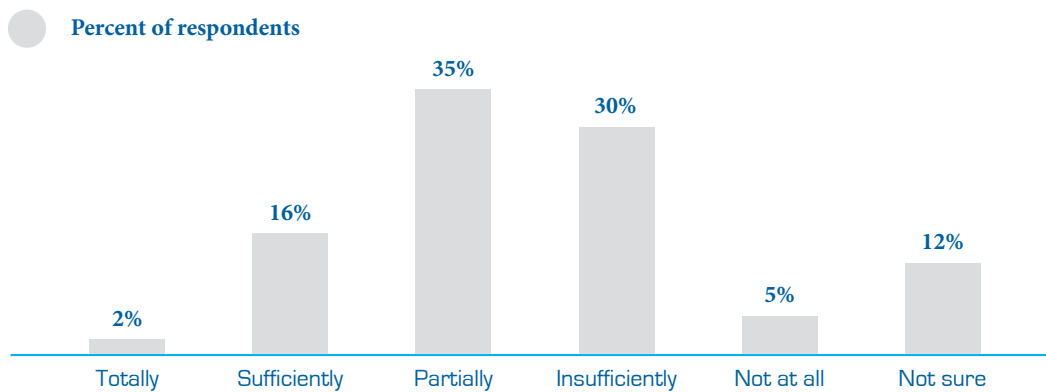


Figure 3: Integration of knowledge produced by young scientists into practice
 Source: Authors, based on an online survey conducted in 2016-17.

Internal reasons	External reasons
<ul style="list-style-type: none"> Lack of publication Lack of professional exposure Limited focus of PhD Limited knowledge and understanding of complexity 	<ul style="list-style-type: none"> Hierarchical education system Lack of encouragement for young scientists Media preference for senior and big names Absence of a clear process for implementation of knowledge Lack of space for young scientists to participate effectively Ongoing gap between knowledge and practices Lack of a platform for young scientists on DRR Most young scientists work under the supervision of senior scientists and hence lack exposure

frameworks do not have a clear mechanism and platform for young scientists to engage and contribute.’ In practice, it is rather common to find youth working for non-government organisations where they lack sufficient skills, resources or support systems to pursue their research. Many young researchers, par-

ticularly in the field of DRR and CC, are also exposed to serious threats (e.g., violence or harassment), and they lack safety and protection measures (HT Correspondent 2017). Such cases can be handled better through networks, particularly in the event of crises or situations that occur while abroad.



Conclusion

There is a growing awareness and use of networks by young scientists across the world. The requirement for the networks is identified beyond the common theme of funding and opportunities to grow and connect with other fellow scientists. Young scientists also consider networks useful for advocacy purposes, as well as when dealing with multiple risks that they are exposed to in both academic and non-academic environments. While this is an evolving process, there is a need for further research to identify the clear pathways and structures in which networks could support young scientists, particularly in the domain of policies and practices, where their efforts, enthusiasm and creativity can be used for a greater good. Thus, young scientist networks can help influence agenda setting, and can also assist in knowledge creation and deliberation in policy making, as well as the implementation of their findings.

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Better equity for women without further disadvantaging others?

by Anina Rich

At my institution we are making progress towards gender equity by taking an approach of fixing the system to minimise the impact of factors such as unconscious bias, rather than trying to fix the women.

What I've noticed along the way, though, is that in attempting to create a fairer playing field for women to succeed, we perpetuate some other inequities, especially those related to binary definitions of gender.

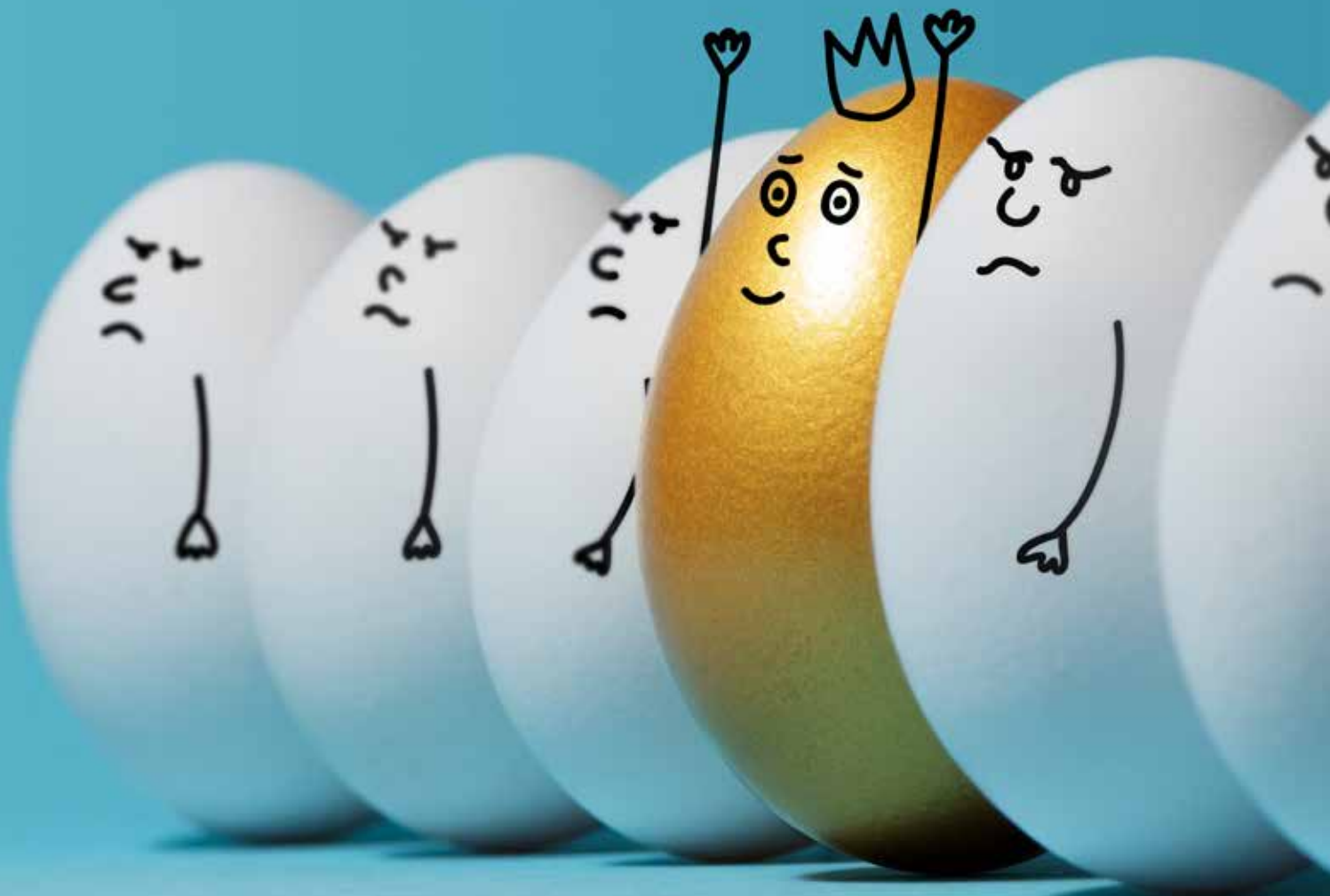
When I was leading the Australasian Cognitive Neuroscience Society, we created guidelines for our society (particularly for conference organisation) to ensure the following: that we would deliberately and consciously ensure that keynotes would be delivered by women and men in equal numbers; that women would be encouraged and supported to take on high-

profile leadership roles within the society; and that equal awards would be granted to women and men.

What I didn't realise at the time was that the language of binary gender was unintentionally emphasising the exclusion of gender minorities. I still do not know what the appropriate solution is – how do we ensure we push for gender equity for women, which is affecting so many people worldwide, without further disadvantaging and excluding minorities who constantly have to deal with a binary gender world?

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The dichotomous reproduction of exclusion while seeking excellence



by **Abdeslam Badre**

This article sheds light on the concept of ‘inclusiveness’ as one of the taglines that most societies of scientists, if not all, claim to embrace today. The term ‘societies of scientists’ is used here to refer to all forms of non-profit academic organisations, science academies, and similar organisations that offer selection-based memberships. I chose to look at the concept of ‘inclusiveness’ by unpacking its implied meaning, and then reconstructing it by considering its discursive implications from the sociological theory of Bourdieu’s ‘the field’ (Bourdieu 1993). The concept is therefore examined beyond being a discursive event, but rather an institutional practice driven by predefined organisational principles and values that shape the field in which new social classes (in our context, young scientists) are formulated, adopted, and empowered; thus by default, other groups are created (the excluded). Finally, the Global Young Academy (GYA) model of membership ‘inclusiveness’ is showcased and scrutinised.

Inclusiveness between discourse and practice

The trend for democratising knowledge and driving communities toward knowledge-based societies has urged both governments and non-profit academic organisations to establish short- and medium-term membership-based programs that offer varied and innovative forms of capacity-building training, research grants, as well as workshops, and more, with competitive and sometimes overlapping goals. For instance, the mission of some scientific societies is to ensure international platforms that seek promising young scientists from diverse geographical regions and interdisciplinary walks of science, and connect them under specific networks with the aim of exchanging knowledge and creating potential collaborations. Others work more on enforcing under-demanded academic and research skills, and granting international exposure to their members; still others try to combine all of these among other services.

In the quest to identify, connect, and empower new generations of young scientists, science societies continue to pride themselves on setting up rigorous membership eligibility criteria and selection exigencies. As such, policies are often motivated by at least two rationales. On the one hand, robust selection schemes aim to ensure quality and aim for excellence; this up-scales the organisation’s brand-image. On the other hand, providing young scientists with platforms for meeting and networking with like-minded peers, voicing their science, and gaining exposure, are efforts usually claimed to be part of efforts to democratize and generate new knowledge. Caught between these two ambitions, many of these societies engender (or claim to) principles of equity, ethnic as well as racial diversity, and tolerance in their mission statements, and have even constructed concrete policies addressing issues pertinent to multiculturalism and inclusiveness.

Scientific societies are often met with scepticism, if not criticism, when they have both the ambition to seek out distinguished young scientists, and at the same time promise to help build their academic capacities. This sets forth two questions that deserve attention. First, how inclusive can a young scientist organisation be when it prides itself on being highly selective? Second, can these scientific arrangements still claim a mission of empowering young science leaders when they look to recruit only those who can prove that they are already good enough? In other words, if a candidate needs to demonstrate an outstanding profile to be accepted as a member, this implies that the organisation's claim of 'empowering' young scientist does not hold since the candidate already possesses a powerful profile.

Answering the first question from the point of view of young scientists, a number of international organisations fail to live up to their acclaimed principle of inclusiveness. For instance, E.F., a young Nigerian scientist, states that 'When an organisation sets high exigencies with a long and complex application form, and a list of required documents, to me applying for membership becomes a full time job; or as if applying for a U.S. tourist visa. I don't have problem with setting up a selection process, my issue is with the fact that these people's claimed discursive approach of inclusiveness is not reflected in their actual approach.' E.F. explains that his frustration stems from his experience with a global organisation of science to which his application was rejected four times over four consecutive years, before his age disqualified his eligibility so he could no longer apply.

E.F.'s testimony provokes two ideas. At one level, scientific societies tease Bourdieu's concept of the 'field', wherein inclusion/exclusion exigencies delimit the eligibility criteria that rule in or out the participants of a call for membership. In an experimental research design, processes of exclusion criteria are put forward to identify subjects who will not be included or who will have to withdraw from a research study after being included. Together with inclusion criteria, exclusion criteria make up the eligibility criteria that rule participants in or out of a research study. Similar to inclusion criteria, exclusion criteria are guided by the scientific objective of the study and have important implications for the scientific rigor of a study, as well as for assurance of ethical principles.

To give them legitimacy, exclusion criteria in the context of science organisations are incarnated pseudo-scientific rationales with regulatory implications (such as scientific rigor and/or quality assurance). In this regard, Bourdieu's concept of the 'field' seems well-fitted as it alludes to a formative or framing context that helps to produce distinctive forms of action, shaped by academic class (Bourdieu quoted in Gewirtz et al. 1995, p. 23). Thus, if we view E.F.'s testimony through Bourdieu's lenses, we might conclude that selection-based organisations that adopt this discursive duality might, unintentionally, fall in the trap of vindicating stratifications among young scientists, and build up elitist, closed clubs of scientists that are somehow disconnected from their local academic and social landscapes.

At another level, E.F.'s testimony questions the very meaning of 'inclusiveness'. It seems that the concept of 'inclusiveness' is often taken to mean 'open access'. According to A.E. Goodman¹, President of the Institute of International Education (IIE) a U.S.-based not-for-profit science organisation, 'being an inclusive organisation simply means that any applicant whose academic profile meets the requirements of the call, regardless of race, gender, ethnicity, or age, should have an eligibility ticket to be accepted in a given program, but of course within the available but limited capacities'. The main reasons behind setting up selective criteria accordingly come down to two main factors: a) limited capacities and funding to accommodate a finite number of applicants every year; b) forging an internationally-accepted model of 'scientific excellence', which entails maintaining a certain level of rigor in terms of eligibility requirements. In this context, the ambitions of young scientists like E.F. clash with the constrained commitments that scientific organisations have to abide by for their funders, partners, and their organisational vision.

The challenges of seeking excellence

Young scientists are not the only ones facing challenges. Scientific societies also have to deal with various challenges in the course of recruiting and ‘empowering’ potential bright members. Two such challenges are raised here to tease out an answer to the second question raised in this article. Many people refute the implementation of rigorous eligibility criteria and review processes. This assumption is backed up by the idea that if scientific organisations claim to empower young scientists by providing them with various capacity-building programs and collaboration opportunities, then these organisations should strive to recruit novice young researchers who still do not have ample scientific and research experience and skills because supposedly they are expected to acquire those skills when they become members and not before it. Otherwise, what added value will these organisations bring to its members if the members are supposed to have a strong and competitive profile in order to be granted membership?

According to IIE’s President, ‘One of the objectives we work hard to materialize is “connecting bright brains”. This means that every year we work hard to find those potential brains worldwide, and get them to apply to our programs; and this is not an easy task. Once applied and selected, our job is to provide them a safe and incentivized environment wherein they occasionally meet each other, exchange knowledge, and build-up friendships and collaborations.’ Based on this testimony, the environment that scientists’ organisations work hard to create is what empowers young scientists, and not the teaching of specific skills or content knowledge. In other words, a safe environment offers them an opportunity to meet up and learn from peers they would have never been able to meet and interact with had it not been thanks to those organisations that recruited them. In this regard, this ‘safe environment’ could be seen as ‘the field’ for which young potential members compete to access.

The other challenge that many organisations face when recruiting an outstanding pool of members lurks in their ability to keep the core of their memberships active and involved in the various programs under offer. The truth is that outstanding young members are usually involved in two or three sci-

ence societies since their profile is under demand. They are also busy building their careers, and often get involved in many research projects, programs, working groups, and co-publications. This means they can barely find the time and energy to remain equally committed and active in the programs they are involved with. Thus, these individuals turn into dormant members who contribute too little to a given organisation, and become a burden rather than being a change-maker. This recurring phenomenon pushes science societies to work out ways on how to deal with dormant members, and in doing so they invest more effort than what they would have needed had they recruited a novice with a young profile and worked to empower him or her.

The Global Young Academy

The Global Young Academy (GYA) is an internationally dynamic organisation that strives to empower young scientists through various programs and voice their science in valuable international platforms. Over ten years, the organisation has welcomed hundreds of young scientists coming up from all fields of science and hailing from over 80 countries. One of the landmarks of the GYA is its world-class scientists, who are selected annually through very rigorous processes. The GYA only appoints members of outstanding academic excellence, as evidenced, for example, by a substantial number of our members being alumni or former holders of fellowships of national academies of sciences.

Furthermore, being aware of the skill development needed by young scientists in Africa, in 2014 the GYA in partnership with the University of Pretoria launched a flagship capacity-building program called the African Science Leadership Program² (ASLP), which benefits dozens of Africa’s highly motivated researchers, and prepares them to compete on the world stage of science. This has proven to be an outstandingly unique initiative. The program has been duplicated in the ASEAN region, with a future aim to also starting it in the Latin American region. One of many benefits of the program is that selected candidates get to know more about the GYA and to develop contacts with its members.



Conclusion

Despite the success of the Science Leadership Program and other initiatives, like many other organisations, the GYA also faces the challenge of keeping its 200 members active during the five-year term of membership. A considerable portion of the selected individuals remain dormant members whose presence within the organisation is a missed opportunity for another applicant whose profile did not seem to be competitive enough, but could have been more active and involved if selected. One of the reasons behind being an inactive member could be that the outstanding profiles of members reflect that they are so busy with other academic activities that they barely find time for the GYA.

It could be concluded that putting too much emphasis on selecting only competitive profiles could be sometimes misleading. This situation calls for working out innovative approaches of selection processes, while also celebrating inclusiveness and cultural diversity within the academy.

After 10 years of being such an inspiring organisation, and as it walks its way steadily towards an internationally renowned science reputation dedicated to societal science and young scientists, the GYA should now move to the next level when considering the selection of its new member cohort.

Abdeslam Badre (Germany) is the Founder of EDU Globe for research and training.


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Notes

1. Dr. Allan E. Goodman is the sixth President of the Institute of International Education, A leading not-for-profit organization in the field of international educational exchange and development training.
2. More Information about the ASLP can be found on both the GYA's as well as the Future Africa's websites, respectively: <https://globallyoungacademy.net> and <http://www.futureafrica.science>.

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GYA Rainbow Incubator: A step towards embracing sexual and gender diversity

by Abhijit Majumder and Monika Kedra

Lesbian, Gay, Bisexual, Transgender, Queer and Others (LGBTQ+) communities all over the world face different levels of injustice and discrimination, varying from country to country. While in some countries the oppression is overt, in more progressive societies the discrimination can be subtle. Statistics show that even in countries where same-sex marriage has been legalised, LGBTQ+ people face an invisible glass ceiling and harassment in the workplace. Academia is no different. Bullying in schools, sexual violence in colleges and feelings of alienation in universities is not uncommon. What is reported is just the tip of the iceberg, as many cases of discrimination and harassment often go unreported either due to social stigma or a feeling of hopelessness about justice being realised.

As a result, psychological issues among LGBTQ+ university students and early-career researchers are disproportionately high. The rate of drop-out from academia is alarming among LGBTQ+ people. If this is the situation in many progressive societies, it is not difficult to imagine the misery of sexual minorities in countries where homosexual relations are punished by death or life imprisonment. The LGBTQ+ people in those countries are forced to lead a life of secrecy. Should we use a different yardstick when measuring the academic and scientific achievements of LGBTQ+ students and researchers? Do we need to introduce affirmative action? What should be the official policy of the GYA, an international body of young researchers, which aspires to be inclusive? How can this body accommodate LGBTQ+ researchers from countries where they are detested and face persecution? What role should the National Young Academies play to bring justice to LGBTQ+ academicians facing harassment?

With these questions in mind, during the 2018 Annual General Meeting of the GYA in Thailand a few GYA members came together to form the “GYA Rainbow Incubator”, the first-ever GYA group that specifically and actively addresses the challenges faced by LGBTQ+ researchers. We believe that the mere existence of such a group will give courage and hope to LGBTQ+ academicians all over the world. It will also send a strong signal to potential applicants about the inclusive nature and core values of the GYA.

As our first project, we will collect Non-Discrimination Policies of institutes and universities across the world and critically examine the content related to the rights of LGBTQ+ people. The GYA Rainbow group will also work on a white paper on a proposed policy to ensure a safe space for LGBTQ+ people inside the GYA and a code of conduct for how all members should be treated. We believe that every person – irrespective of their creed, color, race, gender, religion, language, sexuality and gender identity, must have equal opportunity and equal rights. We encourage anyone interested in creating a more inclusive research environment to join the GYA Rainbow Incubator to help advance these goals and develop a future where all are welcome.

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**The (Africa)
Science Leadership
Programme & me!**

by **Connie Nshemereirwe**

In early 2015 I was selected as a fellow for the inaugural edition of the Africa Science Leadership Programme (ASLP), which was held in Pretoria, South Africa. This fellowship came at precisely the right time for me. I had returned from the Netherlands after completing my PhD about a year previously and had a strong desire to really make a difference in my society, but did not really know what to do or how to do it. At the same time, my position and duties at the rural private university where I taught had not changed, and I could see no opportunities for much growth, either horizontally or vertically. Suffice to say, I was feeling fairly lost.

At the ASLP, however, I met African scientists similarly motivated to make a difference in their respective societies, but also having no clue about how to do it. The 7.5 days we spent together listening to provocations from leading African scientists and leaders, reflecting on the challenges that we face as a continent, and reflecting on our journeys as African scientists were nothing short of life-changing! The workshop process enabled us to deeply reflect on ourselves as individuals, our place as citizens in our own society, and most importantly, the leadership role that our communities had thrust upon us simply because we were the most highly-educated individuals there. I left Pretoria with a much stronger sense of what I could do, how I could do it, and with whom I could do it.

Over the next three years, this sense would mature into a whole new occupation – I now identify as a *Science and Policy Facilitator* – a title that my fellow GYA member Maral Davar (Germany) helped me craft at the last AGM. What this means is that I now act at the interface of the science and policy sectors, through science communication, training both scientists and policy actors to better understand one another across this ‘divide’, and engaging with various civil society bodies to promote evidence-based policy. The GYA certainly plays a big role in giving me the platform to build my capacity and networks, both through engagements with the membership and alumni, but also through the various opportunities to represent us at global science and policy meetings.

Now in its fifth year, the ASLP was an initiative of GYA Alumni Bernard Slippers (South Africa) & Eva Alisic (Australia), and the GYA has since adapted the workshop into so-called mini-SLPs, 1-2 day science leadership workshops that we offer as part of our participation at important science and policy gatherings. Thus far, we have held these mini-SLPs at the World Science Forum in Jordan in November 2017, the Latin America and Caribbean Open Science Forum (CILAC) in Panama in October 2018, and the 3rd Biennial International Network for Government Science Advice (INGSA) conference in Tokyo in November 2018. Plans are also underway to run another SLP at the World Science Forum in Hungary in November 2019, not to mention the mini-SLPs that we hope will soon become an integral part of every Annual General Meeting.

Offering these SLPs serves the purpose of advancing several of our goals at the GYA. In the first place, through the SLPs we can enhance the capacity of young scientists to better engage at the science-policy interface and fulfill their leadership roles in these spaces. Further, by offering SLPs to diverse gatherings of young scientists, they serve as a platform for cross-cultural, cross-disciplinary, and cross-generational interaction. Finally, SLPs have proven to be a catalyst for the formation of new National Young Academies, as we recently experienced with the emergence of various initiatives in the Latin American and Caribbean region after the pre-CILAC mini-SLP.

Going forward, we look forward to more and more young scientists from across the globe discovering their purpose and building stronger networks through these SLPs. In this way, perhaps the GYA can truly fulfill its mandate to give a voice to young scientists around the world.

GYA Co-Chair Connie Nshemereirwe (Uganda) is an independent Science and Policy Facilitator, and acts at the science-policy interface as a trainer, writer and speaker.

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Supporting the United Nations Sustainable Development Goals:

The role of young academy members



by Teresa Stoepler, Eva Alisic and Tracey Elliott

In 2018, members of the GYA and many national young academies (NYAs) were active in discussions on the role that academies might have in supporting the implementation of the United Nations Sustainable Development Goals (SDGs). The SDGs constitute a major global agenda that balances the social, economic and environmental components of development. In 2016, these 17 goals were adopted by all United Nations (UN) Member States, which agreed to develop national plans to put the goals into practice. Through the InterAcademy Partnership (IAP) project, ‘Improving scientific input into global policymaking’¹, young academy members have participated in interactive workshops, UN fora and other events highlighting how senior and young academies can best contribute to the implementation of the goals at the individual, institutional, national and regional levels. If we are to achieve the SDGs by 2030, the international scholarly community has an urgent and vital role to play. Here we describe some of the ways in which young scholars have recently engaged, followed by suggestions for fruitful avenues in the future.

Why is it important for young scholars to engage with the SDGs?

As early-career researchers and – for some – as young academy members, young scholars can be effective intermediaries and advocates to their higher education systems and, more broadly, to their respective national science systems. Young scholars may be more comfortable working at the intersection of multiple technical fields and confronting the complex ethics and governance issues demanded by the SDGs. Young scholars may also be more familiar with new and emerging fields and new lines of research. These qualities can enable GYA and NYA members to help bridge policymakers and the science community, aided by their commitment to science serving society. Young academies may also have the freedom to be less risk-averse and more innovative in the way they address challenges and topics relative to their senior academy counterparts. At the same time, senior academies can bring the experience, recognition by their national governments and established networks of their members. The complementary strengths of the senior and young academies should be leveraged in order to support the policymaking community’s need for timely, intelligible technical information.

How have young academy members been engaging with the SDGs?

One activity that local NYA and GYA members have engaged in is participating in UN regional Annual Fora on Sustainable Development², hosted by the respective UN Regional Commissions³ and attended by their Member States and different stakeholder communities. Members of the GYA and/or NYAs attended the

Left to Right: Aysha Fleming (GYA, Australia), Teresa Stoepler (GYA, USA, and Executive Director of the InterAcademy Partnership for Research; IAP-R), Tracey Elliott (IAP-R Project Director), Soracha Thampiwatana (GYA, Thailand, and Thai Young Scientists Academy), Orakanoke Phanraksa (GYA alumna, Thailand and Thai Young Scientists Academy), Mahesh Kumar (GYA, India, and Indian National Young Academy of Science), Aftab Ahmad (GYA, Pakistan, and National Academy of Young Scientists of Pakistan), Abhi Veerakumarasivam (GYA, Malaysia, and Young Scientists Network - Academy of Sciences Malaysia), and Mitsunobu Kano (GYA Alumni, Japan, and Young Academy of Japan) at the InterAcademy Partnership-Association of Academies and Societies of Sciences in Asia workshop, Kuala Lumpur. Image: © The InterAcademy Partnership

forum for each UN region, and collaborated to organise side events with senior colleagues to advocate for science, technology and innovation (STI) to support the SDGs, and to raise the profile of the academies and their networks. Through participation in these fora, participants noted that the scientific community was typically poorly represented relative to other key civil society stakeholder groups. With its global reach, the GYA can leverage these types of events to continue to advocate for evidence-informed policy related to the SDGs.

Complementing this UN-level engagement, 17 NYAs and several GYA members and alumni participated in four regional workshops hosted by IAP and its regional networks from May to September 2018. These included the following workshop locations: for academies in the Americas, in Mexico City, Mexico; for Asia, in Kuala Lumpur, Malaysia; for Europe, in Halle (Saale), Germany; and in Africa, in Nairobi, Kenya. Each workshop included policymakers and practitioners from the national and regional levels. These interactive workshops were designed to (1) improve knowledge of the SDGs and determine how the academies can best support them; (2) share national and regional experiences – opportunities, challenges, lessons learned, and good practices; (3) identify priority knowledge gaps where stronger intervention is most needed; and (4) develop a set of voluntary actions/interventions for how senior and young academy members can work together to support the SDGs and translate this to national and institutional levels. Some examples of concrete actions are distilled into the box (opposite) and will be detailed in the forthcoming final report for the IAP project⁴. It is anticipated that academies and their networks will use these voluntary action plans to inform their own strategic plans and work programmes from 2019 onwards.

Another important component of the IAP workshops were discussions of the Voluntary National Review process, the primary mechanism by which UN Member States report their progress on implementing the SDGs to the UN. This national government-led process should be an inclusive one and involve key stakeholders including scientists, but the extent to which this occurs varies and there are opportunities for the scientific community to be more proactive.

Notes

1. <http://www.interacademies.org/36061.aspx>
2. <http://www.regionalcommissions.org/regional-forums-on-sustainable-development/>
3. <http://www.regionalcommissions.org/>
4. The final IAP project report is available online at <http://www.interacademies.org/36061.aspx>.
5. For an overview of the SDGs and the UN system, including ways to engage, one place to start is the InterAcademy Partnership's 2017 'Supporting the Sustainable Development Goals: A Guide for Merit-based Academies', available for free download at: http://www.interacademies.org/37864/IAP_SDG_Guide
6. <https://globalyoungacademy.net/activities/incubator-citizen-science-for-the-2030-sdg-agenda/>
7. <https://globalyoungacademy.net/sdgs/>
8. <http://www.interacademies.org/35255/SDG>
9. Find your country's most recent VNR and the focal point individual here: <https://sustainabledevelopment.un.org/vnrs/>
10. <http://sdg.iisd.org/news/21-countries-to-date-planning-to-present-vnrs-at-hlpf-2019/>
11. <https://sustainabledevelopment.un.org/tfm>
12. <https://sustainabledevelopment.un.org/globalsdreport/2019>
13. <https://www.unmgcy.org/>

Teresa Stoepler (USA) is Executive Director of the InterAcademy Partnership (IAP) for Research. Eva Alisic (Australia) is a GYA alumna and Co-Chair of the IAP project 'Improving scientific input into global policymaking'. Tracey Elliott is the IAP Project Director of 'Improving scientific input into global policymaking'. Email: teresa.stoepler@gmail.com

How can you support the implementation of the SDGs?

There are many different ways young academy members can engage with the SDGs. Below are just a few examples based on the findings of the InterAcademy Partnership (IAP) project, “Improving scientific input into global policymaking”¹.

At the young academy level, you can:

- **Be an SDGs ambassador for the GYA, your NYA, and your networks.** Learn about the UN system⁵. Stay informed about the state of implementation of the SDGs in your region.
- **Get involved with the GYA incubator group, “Citizen science for the 2030 Agenda”⁶** and other GYA-led SDGs initiatives⁷.
- **Ensure your academy’s SDGs-related publications are uploaded to the IAP SDGs publication database⁸,** as a repository of information for policymakers and other stakeholders. Ensure all future publications include a non-technical executive summary written for policymakers. Help create a central database for all academies (senior and young) with publications, projects and expertise organized by SDG as a resource for policymakers.
- **Partner with your senior national academy counterpart** on an SDG-related initiative (e.g., a project, study, workshop, meeting) on a topic of priority to your national government that engages policymakers and other key stakeholders.

Plugging into the UN processes is not as difficult as you might think. At the national and UN levels you can:

- **Review your country’s most recent Voluntary National Review (VNR)⁹.** Were the appropriate stakeholders involved in its preparation? Is the evidence presented accurate? Are key aspects missing? Share this review with the assigned focal point for your country’s VNR and ask how your academy may be able to assist in the next VNR process.
- **Stay informed about the VNR schedule in your region.** Check the list of countries to report in 2019 – are any of them yours¹⁰? Once the list of countries to report in 2020 is announced, check if there are opportunities to be involved in stakeholder consultations if your country will report.
- **Participate in your region’s UN Annual Sustainable Development Fora and/or the STI Multi-stakeholder Forum.** Apply to organise a side-event. Ensure that science is part of the conversation.
- **Offer to help support the key scientists in the UN system in your region in their role.** Reach out to the scientists in your region or network appointed to bodies such as the 10 Member Group on the Technology Facilitation Mechanism¹¹ and 15 Member Independent Group of Experts¹².
- **Volunteer to review UN reports,** such as the Global Sustainable Development Report and the UNESCO Science report, when reviewer nomination calls are issued.
- **Help initiate and lead collaborations between the GYA/your NYA and the UN Major Group for Children and Youth¹³,** such as through joint proposals for workshops, panels, etc., related to the SDGs.

The burgeoning of our small club called 'GYA'

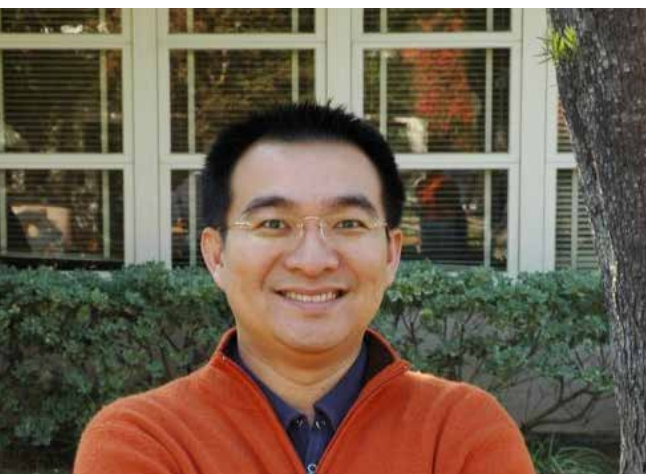


Image: © Wibool Piyawattanametha

by Wibool Piyawattanametha

The starting point of the GYA was constituted by an Inter Academy Partnership (IAP) initiative to convene global young scientists at both the World Economic Forum (WEF) 2008 in Tainjin, China, and in 2009 in Dalian, China. It was in Dalian that I started to get involved with what would eventually become the GYA. The WEF meeting was a world-class event providing opportunities to interact with many global thinkers, leaders, politicians, policy makers, and entrepreneurs.

However, I found a true comfort zone among a group of young scientists. It was not that difficult to understand why we huddled together: we speak similar scientific languages. One night in 2008 in Tianjin, I heard a young scientist mention that we could perhaps continue this little club beyond the WEF and perhaps enable societal changes via science globally. I think many of us were very excited to hear how we could contribute to those vague ideas.

Exactly 5 months after the 2009 Dalian WEF, some of us met again in Berlin, Germany, to work on realising those conceptual ideas. I was among those who were invited to attend, but I can honestly say I was very skeptical about the whole thing. Still, I decided to give it a go.

The 2-day event in Berlin in 2010 was called the International Workshop on Founding National Young Scientists Academies and the GYA. The workshop was held at the Hotel Aquino Conference Center in Berlin, and there were around 40 of us from



28 countries. The workshop will always be a special meeting for me on at least 4 counts. First, it was snowing for the entire workshop period, which kept us working because we could not go shopping. Second, the workshop was incredibly well-organised and very efficient: a German Standard. Everyone worked tirelessly beyond midnight to craft the GYA constitution draft and activities for the next official meeting. Third, I had never stayed at a hotel located right next to a cemetery before. It was such an eerie experience and probably motivated us to stay together long into the nights. Fourth, I remember vividly that the pillows at the hotel were so flat that some of us experienced neck pain almost every day (including myself). Despite these minor inconveniences, everyone knew that we were on a great path to realize this little club called GYA.

I would like to close by mentioning three of my proudest contributions to the GYA. First, after the Berlin workshop I received an email from a Co-Chair requesting my help designing a GYA logo. I did not want to reply to our Co-Chair that sketching or drawing anything, including logo designs, has never been my greatest strength, so I eventually accepted this formidable task. I managed to recruit a student trainee who could help realise my sketches into actual logo designs in a digital format. Eventually I sent 3 logo designs to the GYA executive committees to be voted on. We still use the one that was selected.

Secondly, I managed to recruit a lawyer (Orakanoke Phanraksa) from my former workplace to join the GYA as a new member

in 2011. She spoke very little when we first met. However, she has always been a great strategizer, executioner, and a strong proponent of young scientists' careers in every possible way. Eventually, she became a GYA Co-Chair from 2015-2017. Of course, I knew that she is kind of OK, but I could never imagine she would be as great as she turned out to be!

Third, I was a part of the team writing the Global State of Young Scientists (GloSYS) ASEAN report in 2017, which I can honestly say was one of the most difficult tasks I ever carried out for GYA.

Even though in the beginning I had lots of doubts about the sustainability of the GYA, ten years later our little club is still here and growing. Most importantly, we have achieved many great things along the way. I have to admit that I am very proud to be a part of this organization as both a GYA founding member and a past-Executive Committee member.

I look forward to seeing many monumental achievements coming out from my beloved organization for the next century. Keep up the great work, GYA members!

Wibool Piyawattanametha (Thailand) is a Co-Founder of the GYA and served as an Executive Committee member. Currently, he is a Professor at KMITL, Thailand, and an Adjunct Professor at Michigan State University, USA.

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My journey to the GYA



Image: © Shoji Komai

by **Shoji Komai**

My journey to the GYA started very suddenly at the end of 2009 when I received an email from the President of our institute, the Nara Institute of Science and Technology, Japan. The email told me about this global gathering happening in Germany, where I studied when I was a Postdoc. The words that really hit home were these: 'lots of young scientists were getting together to discuss various global issues to make a difference'. I was so impressed to learn that such an innovative gathering was happening instead of a usual academic meeting. There was no reason not to accept this fascinating invitation, so I filled in the application form quickly. I was thus accepted to participate in that meeting, the first AGM of GYA in 2010.

It was a chilly day in Berlin when we met for the first time. Everything was frozen outside, even the surface of the river. But I felt a warm atmosphere permeate inside of the quaint hotel on the small street where we were all staying. This was not just because of the effective heating system, but rather because there were many international, heartwarming and energised new friends coming together. All the members were so passionate to make



an impact and push the world forward and solve global issues, simply because we felt that together we could make a difference. I am passionate about empowering people in my community and beyond, as I believe that will help not only others but also myself. As individuals, we have only one body and one brain, which is physically limiting, and alone it is more challenging to bring about changes.

That's why I believe the empowerment of the communities where I belong will help make a significant difference to create a hopeful future. This belief has driven me to be involved in global and national academies. I was thus a founding member of the Young Academy of Japan. Indeed, as its first Chair, I have tried to connect with others through the activities in GYA because I think that connection is the first, and thus the most important and most difficult step to produce true impact through our academies and societies. After my graduation from GYA in 2014, I have continued to network with different people and communities to bring about change.

As an alumnus, I am very active in GYA activities and participate in the AGMs. I am also involved in other global endeavors that

connect scientists across the globe. 'The Science Bridge' is one example of my efforts to solve international issues such as discrimination and disparities among countries. Communication, including scientific and academic exchanges, is key to learning about each other.

We've been trying to construct an international framework to communicate between western and Arabic communities using science as a common language. Our scientists basically use common words and languages based on numerical data and common units. And we also try to be objective by using evidence to analyze data and understand the facts. We believe that using scientific approaches help us communicate and understand each other in an impartial and dispassionate manner.

Shoji Komai (Japan) is a Co-Founder of the GYA. Currently he is an Associate Professor at the Nara Institute of Science and Technology, Japan.

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One ‘very special’ Valentine night in Berlin!



Image: © Caroline Perron

by Catherine Beaudry

From 14 to 16 February 2010 a workshop took place that would lay the foundations of the GYA. After a first day of intense discussions, I felt the need for fresh air, and so did a number of my African colleagues. International collaboration has its challenges and reaching consensus often occurs at the very last minute of meetings.

During the extremely rare free time that GYA leadership has come to be notorious about granting, we took to the streets of Berlin and went for a walk. On the night of 14 February 2010, St. Valentine’s Day, a light snow was falling. The snow on the ground was crisp and squeaked as was walked.



I was equipped with Michelin's "guide vert" of Berlin, my Canadian duffle coat with fur-trimmed hood, my gloves, my tuque, my scarf and my winter boots, while my African colleagues were wearing nearly all the clothes that they could find in their suitcases. As we wandered around the streets admiring the beautiful Berlin architecture and historical sites absorbing the fairy-tale scenery, I slowly parted with my gloves (I had pockets), tuque (I had a hood) and scarf, and lent them to my African friends.

We all reminisced about our time at the World Economic Forum Summer Davos in Dalian the previous September (2009), tried to convince each other of the way forward for the GYA constitution, and exchanged perceptions about the historical sites we were passing by. The conversation was fascinating, funny, challenging

at times, and the company was fantastic. But it was perishingly cold on this Valentine's night.

My African colleagues arrived back at the hotel completely frozen, and a strong feeling of guilt has followed me ever since. This may explain why African scientists have been on my mind since then. Indeed, it was on that night that the seeds of my recently-published book were sown. Thank you, my friends – this book is for you!

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<I haven't thought of a title yet>

by Rob Jenkins

Imagine a world with no GYA.

Ex_ctl_ _ou c_n feel the colour dr_inin_ out of _our f_ce, c_n't _ou? Well th_t's wh_t it w_s like when I w_s _rowin_ up. We didn't h_ve _oun_ _c_ demies. These d__s, the kids have it e_s_ _ou c_n't turn around without bumpin_ into __oun_ _c_ dem_.

And that's the way it should be. The GYA has opened many possibilities: edGY Academics, ecoLoGY Advice, dodGY Airlines, sometimes even lonG YAwns due to jet lag.

But even our beloved founders (may they ever roll up their sleeves; may they ever sleep on the plane ride home) recognised that the GYA was just a stepping stone to greater things. Global? Puh-lease. Wake me when you're ready to think big. Young? Listen, if you're weaned, you're history—okay?

I myself am now 'an old', which I regard as a terrible mistake. So in the spirit of overcompensation, I am delighted to announce the launch of the Galactic Baby Academy—the gurgle of infant scientists around the cosmos. Membership is limited to 5 weeks to ensure vigorous turnover, and to focus members' minds on tangible outputs.

Now, I know what you're thinking. But hear me out. First, the logo's great (see Figure 1). Second, imagine a world with no GBA.

It simply doesn't _e_r thinkin_ __out.



Figure 1. The Galactic Baby Academy: Pacifying the Universe.

Note: The following correspondence took place between the writer and the Editor.

Dear Rob,
Thanks for the submission. Unfortunately, there is some problem in the file. There are letters missing.
Best,
Anindita

Hi Anindita - The missing letters (G, Y, and A) are supposed to be a joke about a world without GYA. But I'm willing to accept if the joke falls flat.
Rob

Hi Rob,
SORRY!
I was reading this on my phone and simply couldn't understand what was wrong. I like the joke. But consider if you would like to keep three whole paragraphs with the missing alphabets or make it a bit shorter so that it is not too difficult to read.
Best,
Anindita

Dear Anindita - That's hilarious! How embarrassing that this correspondence is actually the best bit! Can we publish it below the original article?
Rob

*Rob Jenkins (UK) is a British Psychological Society Chartered Psychologist and a member of the Royal Society of Edinburgh Young Academy of Scotland. In 2013 he was appointed Reader in Psychology at the University of York, UK.
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The GYA has been pivotal in getting African young researchers organised into formidable teams of National Young Academies (NYAs) over the past ten years. These African NYAs have meanwhile been greatly supported by the Network of African Science Academies (NASAC). Together, the NASAC, GYA and NYAs have promoted the significance of collaborative and integrated research in Africa. For NASAC, it has been an honour and privilege to see dynamic young African scientists realise the belief that world-class science and research can and does happen in Africa.

Over the years, we have endeavoured to co-create developmental solutions in partnership with the senior and young academies working hand-in-hand with policymakers and relevant communities. Our approach on issues of critical concern to the continent has seen unprecedented participation by young African scientists in regional and global fora as producers of relevant knowledge, not just consumers.

To this end, senior African Science Academies have come to accept NYAs as counterparts who have a complementary niche in delivering the 'Africa we want' through unwavering support of the African Union Agenda 2063 and the Science, Technology and Innovation Strategy for Africa 2024.

The continued association of NASAC with the GYA in coming years will foster both the involvement and impact of young researchers in realising the United Nations Sustainable Development Goals on the continent.

Together, we will continue to give science a voice on issues that truly matter.

*Jackie Olang Kado, Executive Director,
Network of African Science Academies*

The beauty of science is its universality, unfettered by national and disciplinary boundaries. The GYA has been practicing this mantra successfully for 10 years now, and I can only express my sincere congratulations and admiration for this achievement to everyone involved. The GYA has been able to empower young researchers and provide an inclusive platform for intergenerational dialogue.

ALLEA has always highly valued and appreciated working with the GYA towards our shared interests in the science policy field and beyond, and we are looking forward to further intensifying our cooperation in the future. I believe we have a lot to learn from each other and I cannot wait to get going.

Congratulations again and my best wishes for the future.

Antonio Loprieno, President of the European Federation of Academies of Sciences and Humanities, ALLEA (All European Academies)

03 GYA in Memories - Friends of the GYA



The Global Young Academy not only plays an important role in supporting and facilitating the collaboration between existing national young academies, in many cases it has also been central to the foundation of new NYAs across the globe.

The GYA is closely connected to important international policy debates, both with regard to the development of science and research (such as Open Science, Open Access, etc.) and broader societal questions (such as the United Nations Sustainable Development Goals). As such, the GYA taps into important policy-making networks (e.g., the United Nations and the European Commission) and is thus well positioned to provide advice on salient points in political debates.

Marion Schulte zu Berge, Managing Director, The German Young Academy (Die Junge Akademie)

The Volkswagen Foundation was one of the first supporters of the Global Young Academy and has actively accompanied the GYA's development and progress from the very beginning, starting with the constitutional workshop that was held in February 2010 in Berlin. Early-career researchers have always been a primary focus of the Volkswagen Foundation's funding activities.

The idea of unlocking the potential of young researchers from around the world by gathering them in a truly global academy was a very convincing vision for the discussions during this workshop and for the further steps that followed when the GYA's secretariat was installed with the help of a starting grant from our Foundation.

Establishing symmetric relations between researchers from all regions of the world, encouraging novel approaches to solve scientific problems of international significance, promoting interdisciplinary, international and intergenerational scientific dialogue, championing academia as a career for young people and providing a voice for young academics around the world – these aims are equally on the Volkswagen Foundation's and the Global Young Academy's agenda.

The Volkswagen Foundation wishes the Global Young Academy, its members and supporters the best of success for the years to come!

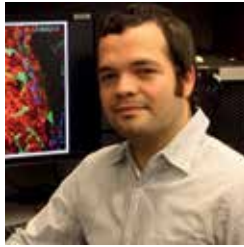
Wilhelm Krull, Secretary General, Volkswagen Foundation



Alaa Hamdon (Iraq)

Lecturer / Earth sciences

Alaa is a lecturer and researcher at the Remote Sensing Center, University of Mosul, Iraq. His expertise is in Earth sciences, remote sensing, disaster risk management of cultural heritage sites, and seismic activity. Alaa is a member of the International Council on Monuments and Sites.



Alexander Birbrair (Brazil)

Cell Biologist / Stem cells

Alexander received a Bachelor's degree from Santa Cruz State University in Brazil before finishing his PhD in Neuroscience. He then joined Paul Frenette's laboratory at the Albert Einstein School of Medicine. In 2016, he was appointed faculty at the Federal University of Minas Gerais in Brazil, where he started his own lab. Currently, Alexander is also a young member of the Brazilian Academy of Sciences.



Alison Flynn (Canada)

Associate Professor / Chemistry and biomolecular sciences

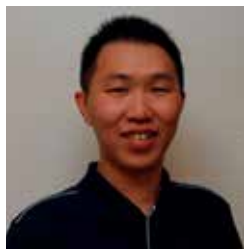
Alison is a 3M National Teaching Fellow, Canada's highest recognition for excellence in postsecondary education, at the University of Ottawa. Her research group studies student learning in organic chemistry and evaluates the effectiveness of learning opportunities. Her work includes developing open-access online learning tools, curricula, and teaching methods.



Anet Rezek Jambrak (Croatia)

Food Technologist / Biotechnical sciences

Anet is a Professor in the Faculty of Food Technology and Biotechnology of the University of Zagreb. She was trained at Coventry University, UK, and at the University of Avignon, France. Her fields of research are food chemistry, food physics, non-thermal processing, advanced thermal processing, sustainability, and food processing.



Chang Da Wan (Malaysia)

Researcher / Higher education policy

Wan is a Senior Lecturer at the National Higher Education Research Institute (IPPTN), Universiti Sains Malaysia. He is a Committee Member of the Malaysian Society for Higher Education Policy and Research Development and an Affiliate Member of the Young Scientists Network-Academy of Sciences Malaysia.



Chern Ein Oon (Malaysia)

Molecular Oncologist / Cancer drug discovery

Chern completed her Bachelor's degree in Biotechnology at the Universiti Kebangsaan Malaysia, and her doctoral studies in medical oncology at the University of Oxford. Chern served as EXCO for the Young Scientists Network-Academy of Sciences Malaysia from 2016 to 2018.



Dipak Pinjari (India)

Assistant Professor / Material characterisation

Dipak has developed protocols for synthesising various nano-materials in the laboratory, as well as at the pilot scale using a cavitation technique. He is actively working in the area of process intensification, environmental remediation, energy transformation and utilisation of cavitation into various fields.



Easwaramoorthi Ramasamy (India)

Energy Scientist / Photovoltaics

Easwaramoorthi is a scientist in the Centre for Solar Energy Materials, International Advanced Research Centre for Powder Metallurgy and New Materials in India. He is working on the development of cost-effective and high efficiency next generation solar cell modules using perovskite absorber materials.



Ebrahim Karimi (Canada)

Professor and Editor / Quantum optics

Ebrahim is the Canada Research Chair in the field of Structured Light and the Group Leader of the Structured Quantum Optics laboratory. He is also an Adjunct Professor at IASBS-Iran, and a Visiting Professor at the Max Planck Institute for the Science of Light, Erlangen, Germany.



Eqbal Mohammed Abdu Dauqan (Norway)

Biochemist / Natural antioxidants

Eqbal's main research areas are in biochemistry, food antioxidants, and nutrition. In July 2013 she was appointed a Senior Lecturer at the Department of Medical Laboratory Sciences- Faculty of Medical Sciences, Al-Saeed University, Taiz, Yemen.



Fatemeh Mohammadipanah (Iran)

Microbiologist / Pharmaceutical biotechnology

Fatemeh received her Bachelor's and Master's degrees in Microbiology from the University of Tehran, Iran. She completed her PhD by working on the discovery of new bioactive molecules from Actinobacteria in 2011 as a sandwich PhD program between the University of Tehran and the University of Goettingen, Germany.



Felix Moronta Barrios (Italy)

Biologist / Biosafety of genetically modified organisms

Felix helps developing countries fulfil their obligations under the Cartagena Protocol on Biosafety. This international agreement seeks to protect biological diversity from the potential risks posed by genetically modified organisms resulting from modern biotechnology. He is the Co-Founder of an NGO for science communication in Spanish.



Fernanda Werneck (Brazil)

Biodiversity Scientist / Integrative biology

Fernanda is a researcher at the National Institute of Amazonian Research-INPA, Brazil. Currently on a sabbatical as a CAPES Visiting Professor at Harvard University, she is developing work on genomics and climate change adaptation.



Filippo Rossi (Italy)

Assistant Professor / Chemistry

Filippo works in the Department of Chemistry, Materials and Chemical Engineering 'Giulio Natta' at Politecnico di Milano, Italy. He also spent research periods in 2009 as a visiting PhD student at Imperial College London, in 2012 as a Post-Doc at Uppsala University, Sweden, and in 2018 as a Visiting Professor at Keio University, Japan.



George Mbogo (Australia)

Researcher / Biotechnology and pharmaceutical sciences

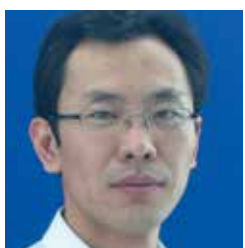
George is currently a Laboratory Medicine Graduate Student at RMIT University Australia. He completed his PhD in Biochemistry in 2017 as Summa Claude at La Trobe University, Australia, where he discovered 5 novel drug classes for Heart Failure. George intends to transfer the best practices he acquires to Africa through research and training.



Goran Bandov (Croatia)

Lawyer and Political Scientist / International relations

Goran is an Associate Professor and Vice Dean at Dag Hammarskjöld University College of International Relations and Diplomacy in Zagreb, Croatia, and also an Associate Fellow of the World Academy of Art and Science. He is a European expert in international relations and international law.



Haiguang Zhao (China)

Materials Scientist / Optoelectric materials

In 2018, Zhao became a Professor at Qingdao University, China. His research interests focus on the synthesis of low-dimensional semiconductor materials (including metal oxide, quantum dot, nanoplatelets, and inorganic perovskite) for solar energy applications such as solar cells, luminescent solar concentrators, and nanoscale thermal sensors.



Iwona Janicka (United Kingdom)

Innovation Fellow / French and German philosophy

Iwona is an Early Career Innovation Fellow in the Institute of Advanced Study at the University of Warwick, UK, and an Affiliated Researcher with the Centre Marc Bloch in Berlin, Germany. As a Gates Scholar, Iwona completed her PhD in French at the University of Cambridge, Trinity Hall.



Jonas Radl (Spain)

Sociologist / Social stratification

Jonas is an Associate Professor of Sociology and ‘Ramón y Cajal’ Fellow at the Department of Social Sciences of Universidad Carlos III de Madrid, Spain, as well as a member of the Carlos III-Juan March Institute of Social Sciences. Jonas’ research focuses on the relationship between social stratification and the life course.



Joy Wolfram (United States)

Assistant Professor / Nanomedicine

Joy is the Director of the Nanomedicine and Extracellular Vesicles Laboratory at the Mayo Clinic in Florida. In the past five years she has authored over 40 publications and received more than 30 awards, including Forbes 30 Under 30. As a TEDx and Hello Tomorrow speaker, she strives to bring science to a wider audience.



Martijn Wieling (Netherlands)

(Computational) Linguist / Language variation and change

Martijn is a Professor by special appointment of Low Saxon / Groningen Language and Culture at the Center for Groningen Language and Culture, and an Associate Professor at the University of Groningen, Netherlands. Between April 2018 and March 2020, Martijn Wieling is the Vice Chairman of De Jonge Akademie.



Mohamed Abou El-Enein (Germany)

Junior Professor / Regenerative medicine

A pioneer in the clinical development of cell and gene therapies, Mohamed leads a team of researchers who are transforming promising scientific discoveries in the field of regenerative medicine into clinical applications at Charité (Berlin). Mohamed was awarded the Max-Rubner Prize for innovation, as well as the prestigious Eisenhower Fellowship.



Mona Abdel-Mottaleb (Egypt)

Associate Professor / Dermatology and pharmacy

Mona obtained her PhD from the University of Bonn at the Institute of Pharmaceutical Technology. Her main area of expertise is the use of nanotechnology for enhanced dermal and transdermal drug delivery. Mona is currently focusing on the development of improved cancer therapeutic approaches and efficient vaccination.



Noreen Mdege (United Kingdom)

Pharmacist and Researcher / Health care systems

Noreen is interested in applied health research aimed at maximising the benefits and equity in developing and developed health systems. She has almost 20 years experience in global public health; 15 years were spent leading and contributing to designing, planning, implementing, monitoring and evaluating health interventions and programs.



Özge Yaka (Germany)

Research Fellow / Sociology

Özge is an Alexander von Humboldt PSI fellow at the Centre for Citizenship, Religious Diversity and Social Pluralism, Universität Potsdam. She works at the intersection of sociology, human geography and gender studies. Her research interests include social movements, environmental justice, feminist theory, migration, body and subjectivity.



Paulina Carmona-Mora (United States)

Biochemist / Gene regulation in human disease

Paulina's current research interests focus on using genomic and molecular tools to understand mechanisms that control neurological and developmental disorders. Paulina also serves as North and Central American representative for Ekpa'palek, where she also mentors Latin American students.



Renard Siew (Malaysia)

Environmental Engineer / Climate change and sustainable development

Renard is a Climate Change Advisor for the Centre for Governance and Political Studies who works across the nexus of engineering and economics. He is a Climate Reality Leader and a member of the World Economic Forum Expert Network.



Sabrina Daniela Silva Wurzba (Canada)

Research Scientist / Head and neck oncology

Sabrina is currently an Assistant Professor and Scientist at McGill, and has a long-standing interest in the integration of molecular mechanisms influencing tumor progression and metastatic processes in head and neck cancer. Her aim is to identify innovative therapeutic/prognostic targets for incurable diseases.



Sandeep Kaur (India)

Chemist / Bioinorganic chemistry

Sandeep joined the Department of Chemistry, University of Delhi, as an Assistant Professor in 2010, and is a Researcher at the Leibniz Institute for Catalysis, Rostock, Germany. Sandeep's research interests include bioinorganic, organometallic and coordination chemistry, electro-catalysis, and developing alternative renewable energy resources.



Sophie Carencó (France)

Materials Scientist / Nanochemistry

Sophie graduated from Ecole Polytechnique, Palaiseau, France, in 2008. From 2012 to 2013, she was a post-doctoral fellow at Lawrence Berkeley National Lab, Berkeley, California, where she used synchrotron-based in situ spectroscopies to monitor the surface state of metallic nanoparticles during catalytic reactions.



Sudesh Sivarasu (South Africa)

Associate Professor / Biomedical engineering

Sudesh heads the Medical Devices and Orthopaedic Biomechanics Research Group at the University of Cape Town, South Africa. His work in medical device innovation has received over 18 MedTech awards across 4 continents. He was also listed as one of *The Mail and Guardian's* top 200 young South Africans for 2017.



Syed Ishtiaque Ahmed (Canada)

Assistant Professor / Computer science

Syed conducts research in the intersection between Human-Computer Interaction (HCI) and Information and Communication Technology and Development. Syed established the first HCI research lab in Bangladesh in 2009, and also launched the first open-source digital map-making initiative in Bangladesh in 2010.



Tina Gruosso (Canada)

Translational Researcher / Oncology

Tina is a passionate scientist doing translational research in oncology and fibrosis at Forbius, a biotech company, in Montreal, Canada. Tina is an advocate for evidence-based policymaking, innovation, and science diplomacy. She represents early-career scientists as President for the student-led non-profit organisation Science & Policy Exchange.



Tyrone Grandison (United States)

Computer and Data Scientist / Information technology

Tyrone's work lies at the interaction of technology, data, and social goods. He is a computer scientist, executive, technologist, researcher, entrepreneur, futurist, data scientist, keynote speaker, and coach. He received a PhD in Computer Science from the Imperial College of Science, Technology & Medicine in London.



Udi Sommer (Israel)

Senior Lecturer / Political science

Udi is Chair of the Israel Young Academy and Head of the Center for the Study of the United States at Tel Aviv University with the Fulbright Program. Udi's broad research interests are in the interface of law and politics and the politics of gender and sexuality. He regularly appears as an expert commentator on a range of Israeli and foreign media outlets.



Vanessa MacDonnell (Canada)

Legal Scholar / Constitutional and criminal law

Vanessa is an Associate Professor at the University of Ottawa Faculty of Law and an expert in constitutional law, constitutional theory, comparative constitutional law and criminal law. In 2019 she is Scholar-in-Residence in the Constitutional, Administrative and International Law Section of the Canadian Federal Department of Justice.



Vanessa Schweizer (Canada)

Sustainability Scientist / Scenario analysis

Vanessa is an Assistant Professor of Knowledge Integration at the University of Waterloo, Canada. Her scenario research played an influential role in the development of the Shared Socio-economic Pathways, the socio-economic scenarios used for climate change impact assessments by the Intergovernmental Panel on Climate Change (IPCC). She was also a Contributing Author to the IPCC Fifth Assessment Report.



Velia Siciliano (Italy)

Principal Investigator / Synthetic biology

Velia carried out her PhD in Human Genetics at the Telethon Institute of Genetics and Medicine Naples, Italy. Her research interest lies in synthetic biology, a field of bioengineering that aims to reprogram cells with genetic circuits to confer new properties and function. She also studies the mechanisms underlying biological pathways.



Wahajuddin (India)

Senior Scientist / Pharmacokinetics and biopharmaceutics

Wahajuddin is a Senior Scientist in the Division of Pharmaceutics and Pharmacokinetics, CSIR Central Drug Research Institute, Lucknow, India, where he studies pharmacokinetics and biopharmaceutics. Wahajuddin has 91 research papers, 6 science popularization articles, 6 patents and 6 book chapters to his credit.



Wai Shin Ho (Malaysia)

Senior Lecturer / Chemical engineering

In addition to his duties at the Universiti Teknologi Malaysia, Ho is a member of the Young Scientist Network, Academy of Science Malaysia. His research interests lie in energy system improvement, energy efficiency, demand-side management, rain water harvesting, and solid waste management.



Wei Gao (United States)

Assistant Professor / Medical engineering

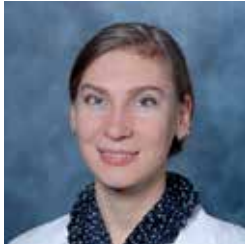
Gao is interested in the future of personalised and precision medicine, and is engineering the next generation of wearable health monitors and nanorobots. At 31, Gao was selected for MIT Technology Review's 2016 list of '35 Innovators under 35' for his development of a wearable health monitor that tracks indicators of health by analyzing sweat.



William Godsoe (New Zealand)

Ecologist / Evolution, information and game theory

William completed a postdoctoral fellowship at the U.S. National Institute for Mathematical and Biological synthesis and now works in the BioProtection Research Centre at Lincoln University in New Zealand, where he seeks to better predict how species will respond to climate change and other environmental disturbances.



Yuliya Linhares (United States)

Medical Doctor / Malignant hermatology

Yuliya's research focuses on targeted therapies for hematologic malignancies. She also supervises and instructs internal medicine residents and hematology oncology fellows. She created a successful Monarch butterfly sanctuary and is a member of Bat Conservation International. She tirelessly educates her patients and students on the importance of an eco-sensitive lifestyle.

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About the Global Young Academy

The Global Young Academy (GYA) was founded in 2010 with the vision to provide a voice for young scientists around the world. The GYA empowers early-career researchers to lead international, interdisciplinary, and inter-generational dialogue by developing and mobilising talent from six continents. Its purpose is to promote reason and inclusiveness in global decision-making. Members are chosen for their demonstrated excellence in scientific achievement and commitment to service. Currently, there are 200 members and 216 alumni from 83 countries.

The GYA is hosted at the German National Academy of Sciences Leopoldina, and received its seed funding from the Volkswagen Foundation. Since 2014, the GYA receives core funding from the German Federal Ministry of Education and Research (BMBF) and is also supported by the InterAcademy Partnership (IAP) and other international donors.

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Find out more at: www.globalyoungacademy.net
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