



# EARLY CAREER SCHOLARS PANEL

Role of National Academies and  
Universities in Promoting Human  
Rights and Enhancing Equality.

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## PROCEEDINGS REPORT



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The Academy of Science of South Africa (ASSAf) was inaugurated in May 1996. It was formed in response to the need for an Academy of Science consonant with the dawn of democracy in South Africa: activist in its mission of using science and scholarship for the benefit of society, with a mandate encompassing all scholarly disciplines that use an open-minded and evidence-based approach to build knowledge. ASSAf thus, adopted in its name the term 'science' in the singular as reflecting a common way of enquiring rather than an aggregation of different disciplines. Its members are elected based on a combination of two principal criteria, academic excellence and significant contributions to society. The Parliament of South Africa passed the Academy of Science of South Africa Act (No 67 of 2001), which came into force on 15 May 2002. This made ASSAf the only academy of science in South Africa officially recognised by government and representing the country in the international community of science academies and elsewhere

This report reflects the proceedings of  
*Early Career Scholars Panel: Role of National Academies and Universities in Promoting Human Rights and Enhancing Equality, June 2023.*

Views expressed are those of the individuals and not necessarily those of the Academy nor a consensus view of the Academy based on an in-depth evidence-based study.

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**OPENING AND SETTING THE SCENE (Prof Himla Soodyall, Executive Officer, ASSAf)**

Prof Soodyall extended a warm welcome to the delegates attending the Early Career Scholars Panel, co-hosted by the Academy of Science of South Africa (ASSAf) and the International Human Rights Network of Academies and Scholarly Societies (IHRN). The IHRN meeting was previously postponed due to the global COVID-19 pandemic and Prof Soodyall conveyed the academy's pleasure in cohosting the meeting and present a programme focused on current global challenges. In this session, early-career scholars will give their perspectives on topics related to the theme of the IHRN meeting, 'The Role of National Academies and Universities in Promoting Human Rights and Enhancing Equality'. Prof Soodyall encouraged the delegates to participate with questions and discussions, thereby contributing to the discourse.

**PANEL DISCUSSION: The role of national academies and universities in promoting human rights and enhancing equality (Moderator: Prof Catherine Burns, Associate Professor of Medical History, University of the Witwatersrand, South Africa)**

*Prof Catherine Burns was educated at the University of the Witwatersrand (Wits), the Johns Hopkins University and Northwestern University, where she earned her PhD in History. Her research interests focus on medical and health history, the history and ethnography of reproduction and sex, ethics in biomedical research, and the history of gender in southern Africa. She has taught at several universities in the USA, and at the University of KwaZulu-Natal, where she was based from 1995 to 2009. From 1999 to 2002, she was head of the interdisciplinary Programme of Gender Studies, and from 2005 to 2007 head of History at UKZN -- where she was Associate Professor of History from 2005 until her appointment as a Technical Advisor at the Maternal, Adolescent and Child Health Centre, a division of Wits Health Consortium in Durban. Prof Burns joined the Wits Institute for Social and Economic Research (WISER) in January 2012. She has taught History in Medicine and Public Health, and in Gender Studies, and has supervised many master's and doctoral students across several disciplines.*

Prof Burns also welcomed the delegates, especially those who had travelled from elsewhere in Africa and from countries abroad. She applauded the Academy for arranging this session, with its focus on young scholars and professionals in the early phases of their careers, who are establishing their place in the world of research and science.

Prof Burns argued that today the world is more connected than it was before the COVID-19 pandemic, and that society has learnt much about a common humanity during the last three years. Everyone has been impacted because this zoonotic disease has affected the entire global community and shaped all aspects of the world and economy. It has brought science and humanity to the very edge of their realms. In the wake of the COVID-19 pandemic, humankind is still facing the scourges of war, of misunderstanding between peoples of different groups in the world, the collapse of infrastructure, and the impact on economies and a great number of ecological, scientific and humanitarian crises. This conference is a good moment to reflect on the positioning of the community of learning, scholarship, free thought and science on these matters. Scientists' obligations to one another, and the connections to their respective histories, give them a responsibility as global citizens to have a voice. That is the purpose of this meeting.

Prof Burns made reference to the proximity to the Cradle of Humankind and its implications for human origins and a common ancestry. She also mentioned the close proximity of the City of Tshwane, the capital city of South Africa, a country that had been subject to a great deal of pain and injustice in the past. Today, South Africans are still living with the ramifications of that structural injustice and the enormous struggle and sufferings it has brought to the indigenous people of this region. It is a complex space within which science has to take up the challenge and confront the issues, many of which will surface in the discussions at this meeting.

At a time when the role of science in society is debated as well as polarised, politicised and often taken up in very partial terms, scholars need to reflect on the role of human rights to science and rights-based approaches. The right to science itself remains poorly understood and neglected in national and global human rights processes. Beyond defending the freedom of scientific expression which all present are committed to. Upholding the right to science and scientific enquiry is essential and fundamental to solving a number of key sustainability challenges of our planet and of our time. These include climate change, - the biodiversity crisis, the right to global health and pandemic preparedness, the right to food security and clean water, the right to safety and the right to education.

The COVID-19 pandemic has revealed persistent global inequalities, not least the privatisation of science, medical science and pharmaceutical discoveries, and the current intellectual property regimes have hindered just and equitable access to science and its benefits.

Moreover, the science community is not ignorant of the huge scientific debate in which it is immersed on the role of artificial intelligence and algorithm-driven capacities, and the potential terrors that these pose. This has prompted the need for a shift from single-issue approaches to comprehensive and systematic methodologies. The right to scientific enquiry as an augmentation to human rights needs to be articulated across multiple arenas, to counter the fragmentation and the breaking up of intellectual capital into subgroups and silos.

In this discussion, the panel represents young scientists from different backgrounds and contexts, who are global in their thinking and outreach, which bolsters their participation in this important debate.

### **The effects of the electricity crisis on human rights in South Africa (Lt Col Dr Esewu Mxolisi Mathebula, South African Association of PhDs, South Africa)**

*Dr Esewu Mxolisi Mathebula joined the South African National Defence Force (SANDF) in 1996 and continued to study while serving in the South African Corps of Military Police. He has a National Diploma in Policing from Technikon South Africa (2003), a Bachelor of Technology in Policing from the University of South Africa (UNISA) (2010), a Master of Technology in Policing from UNISA (2014), and a Doctor of Literature and Philosophy in Police Science from UNISA (2019). He obtained an Executive Development Programme Certificate in 2022 from the Wits Business School. He served under the United Nations Peacekeeping Mission in the Democratic Republic of the Congo (DRC) and was part of Mission Thebe in the DRC in 2011, providing training to the DRC Army. Dr Mathebula works part time at UNISA and Tshwane University of Technology (Soshanguve Campus) as an examiner for master's students. He is also an analyst on crime and policing matters on radio and television. His research interests are in policing, crime prevention and leadership.*

Dr Mathebula introduced the South African Association of PhDs (SAAPhDs)<sup>1</sup>, a young growing organisation that is open to all PhD holders in South Africa. It was formed as a platform to bring together academic scholars and professional doctorates from universities, industry and government to share ideas and network to bring about impactful change. The association will be launched in October 2023, and it is hoped that at future events, colleagues and delegates at this meeting will be invited to address the organisation.

Dr Mathebula's talk focused on the adverse effects that the South African electricity crisis has had on human rights. He defined human rights as 'fundamental rights that must be enjoyed by all of us, simply because we are human, and no one has the right to take them away'. The definition from the United Nations<sup>2</sup> states that 'human rights are inherent to the dignity of all human beings regardless of race, sex, nationality, ethnicity, language, religion, or any other

<sup>1</sup> <https://saaphds.org.za/>

<sup>2</sup> <https://www.un.org/en/global-issues/human-rights>

status.<sup>1</sup> Human rights are interrelated and cannot be seen in isolation. In South Africa, human rights are enshrined in the Constitution and include, to name a few, the right to life, education, freedom of movement and residence, human dignity, freedom and security of the person, privacy, freedom of association, access to a clean environment and equality<sup>3</sup>.

Dr Mathebula posed the question of whether access to energy is a human right. According to Dube and Moyo (2022)<sup>4</sup>, 'international law and domestic legal systems do not specifically prescribe a human right or access to electricity. In international law, the implied right to electricity is viewed as an add-on to the right to development, which encompasses access to clean and efficient energy.' In this light, Dr Mathebula proposed that access to energy should be a human right, based on the interconnectedness of the human rights granted to citizens in South Africa. Rights such as access to the economy; quality of life; access to schools and education; freedom of movement; environmental integrity; access to employment, food, water and health services; prevention of traffic congestion and crime; and access to digital network coverage all rely on a functional electricity supply. As an example, he quoted the crime statistics for South Africa, released in June 2023<sup>5</sup>, which indicate that most crimes occurred during times of loadshedding, when there was no power. Yet, South Africans have adapted to this crisis and have normalised the adverse effects of loadshedding based on power availability schedules. Nonetheless, load shedding is resulting in a failing economy, job losses, lack of water and high food prices that affect the lives of all citizens. It therefore cannot be argued that Energy is not a human.

Some ways were suggested in which scientists and national academies can promote human rights, other than relying on the solutions driven by the Minister of Electricity. National academies can play a crucial role in promoting human rights only if they function independently of the state. They can provide assistance to colleagues facing human rights challenges and support research that addresses energy security and generation.

Human rights also pertain to equality. Section 9(1) of the Constitution of the Republic of South Africa, 1996<sup>6</sup> states that 'everyone is equal before the law and has the right to equal protection and benefit of the law', and according to Section 9(2) 'equality includes the full and equal enjoyment of all rights and freedoms'. In spite of these rights, there are still great disparities within society. This was illustrated by some areas being more affected by loadshedding than others. In response to the question of what national academies can do to enhance equality within their space of influence, Dr Mathebula suggested that members of the academies within the sectors need to be heard and become more prominent in debates, especially on public platforms. Moreover, just as lawyers may make their services available to address societal issues on a *pro bono* basis, so should scientists make their skills available, and at the same time speak out about how human rights are linked to science and technology.

This would educate citizens, so that they know and understand the importance of equality as a safeguard, and that all people are treated as equals and offered similar opportunities irrespective of their background or lifestyle. It would also ensure that their dignity is not violated and that they receive the respect they deserve as human beings.

Other areas where academies could be involved would be to engage in public debates on human rights issues; advocate that the justice system be applied to everyone; denounce discrimination based on gender, age, sexual orientation, religion, disability or age; encourage organisations to have a code of conduct or constitution; and ensure that organisations are equipped for equality.

<sup>3</sup> <https://www.justice.gov.za/constitution/SACConstitution-web-eng-02.pdf>.

<sup>4</sup> Dube, Felix and Moyo, Chantelle. The Right to Electricity in South Africa (March 4, 2022). PER / PELJ 2021 (24) <http://www.saflii.org/za/journals/PER/2022/37.pdf>

<sup>5</sup> [https://www.saps.gov.za/services/downloads/April-2022\\_23-presentation.pdf](https://www.saps.gov.za/services/downloads/April-2022_23-presentation.pdf)

<sup>6</sup> <https://www.gov.za/sites/default/files/images/a108-96.pdf>

Academies have an obligation to engage meaningfully on the topic of human rights and to ensure the dignity of citizens.

### Views from the United States National Academies New Voices Program (Dr Michael Martin, New Voices in Sciences, Engineering and Medicine, US National Academies)

*Dr Michael Martin is a member of the second cohort of the New Voices Program<sup>7</sup> of the US National Academies of Science, Engineering and Medicine. In this role, he works with the Committee on Human Rights to bring the perspectives of early- to mid-career scientists to the committee, and to create strategies for educating the scientific community on the relationship between science and human rights. Dr Martin is an aerospace engineer by training who has held research positions in multiple federal laboratories and academic institutions, as well as policy positions in the Department of Energy and the US Senate. His scientific publications include work in fluid mechanics and heat transfer applied to challenges in sustainability, space exploration, and micro- and nano-technology. Dr Martin is a fellow of the American Society of Mechanical Engineers (ASME) and an associate fellow of the American Institute of Aeronautics and Astronautics (AIAA).*

Dr Martin introduced the institution he represented, the National Academies New Voices Program. This program brings together early and mid-career scientists to provide diverse perspectives to discussions of the future of science, engineering, and medicine, and to complement the expertise of senior scientists at the US National Academies. The group was chosen to incorporate a range of fields, cultural and geographical diversity, as well as scientific, policy and advocacy perspectives. The viewpoints presented in this talk are a synthesis of discussions from the 2<sup>nd</sup> Cohort (2021–2023) of the New Voices Program.

In the USA, three societal trends are impacting science:

1. Trust in all institutions is declining, including science and medicine. Data from the Pew Research Center<sup>8</sup> indicated an 8% drop of trust in medical scientists, and a similar drop in trust of all scientists. In spite of this decrease, scientists remain relatively highly trusted compared to groups such as business leaders and elected officials.

The response to the treatment of racial and other minority groups by law enforcement in the US, a resurgence in hate crimes and prejudice, and disproportionate impacts from COVID-19 led to an examination of equity in all institutions of American life, including science and academia. Impacted communities included not only African Americans, but also Asian Americans, Native Americans, Latinos, and the Lesbian, gay, bisexual, transgenLesbian, gay, bisexual, transgender, queer and questioning

Lesbian, gay, bisexual, transgender, queer and questioning

2. LGBTQ+ community. All these communities responded with increased advocacy. This initiated an ongoing examination of the history of science in the USA; how science is performed; and who has the opportunity to become a scientist.
3. Increasing political polarisation in the US carries over into science, particularly COVID-19 and climate science. This can be seen in the discrepancy in vaccination rates between counties with different political leanings<sup>9</sup>, implying that political viewpoints impact the way in which individuals approach personal health decisions. Another example is the percentage of adults believing that climate change was caused by humans<sup>10</sup>, which has a large geographical variation within the US.

In light of these trends, six issues of concern that impact science and scientists were presented:

<sup>7</sup> The New Voices program engages diverse groups of outstanding early-career leaders in science, engineering, and medicine to provide new perspectives on issues and communication modes for the National Academies, and to help identify and try out activities designed to expand the diversity of expertise that is engaged in the convening and advisory functions of the National Academies. <https://www.nationalacademies.org/our-work/new-voices-in-sciences-engineering-and-medicine>

<sup>8</sup> <https://www.pewresearch.org/science/2022/02/15/americans-trust-in-scientists-other-groups-declines/>

<sup>9</sup> <https://www.kff.org/policy-watch/the-red-blue-divide-in-COVID-19-vaccination-rates-continues-an-update/>

<sup>10</sup> <https://climatecommunication.yale.edu/visualizations-data/ycom-us/>

### 1. Equity and inclusion in science in the USA

Any discussion of equity needs to begin with considering our reasons as scientists for prioritizing diversity. Do we seek to ensure a larger pool of scientists? Is race used as a proxy for diversity of backgrounds and thought? Is it important to include the lived experiences of scientists from a range of groups in decision-making? Do we seek to maintain equality of opportunity as a societal goal?

Approaches to diversity are impacted by motivations for prioritizing diversity in science. One major shift is moving from the commonly used model of the 'leaky pipeline' for under-represented groups. A more realistic model may be a 'hostile obstacle course', where members of different demographical groups experience different obstacles in order to succeed as scientists.<sup>11</sup> The challenge then shifts to actively identifying and removing these obstacles.

Equity and inclusion concerns appear in collaboration between universities. The extremely heterogeneous US university system includes 4 000 degree-granting institutions. These include 107 historically black colleges and universities (HBCUs), 35 tribal colleges and 130 minority-serving institutions. (The first two reflect previous legal segregation, while the final category reflects demographic data. While the existence of HBCUs and tribal colleges is tied to past racial injustices, the institutions themselves are highly valued by the communities they serve.) A major challenge is including scientists and students from these institutions in science in an equitable manner. Issues that contribute to unequal collaborations include:

- treating these schools as feeder schools to large institutions,
- inviting researchers only to join collaborations in areas where minority participation was seen as needed for funding,
- failing to acknowledge the unique mission of these institutions, and
- not building capacity at these schools.

### 2. Equity and inclusion in international science

The challenges with respect to equity and inclusion in US domestic science are mirrored in collaborations with the global South. Obstacles to equitable collaboration include:

- failure to consider the history, culture and physical conditions of non-US partners,
- including researchers from the global South only in the deployment, and not the development, of technologies,
- including researchers only when international collaborators to access resources,
- failure to include partners early in the development/planning stages of science,
- not recognising that scientists want to be fully engaged in all aspects of the scientific enterprise, not just the parts relevant to their countries, and
- lack of training of scientists in cultural competency to recognise these and other issues.

### 3. The decline in public trust in science

While science was generally viewed positively, the climate change debate and the COVID-19 pandemic show significant public mistrust of science. Addressing this requires multiple changes within science:

- Do we need to reconsider science communications? Scientists are trained to communicate with other scientists in their field but not with the public, policy-makers, or other groups. Scientists are also not trained to communicate to diverse audiences.
- The challenges may be larger than communications skills. Science itself may need to consider what a more trustworthy science might look like. This may require greater engagement and understanding of different viewpoints. The lack of diversity in science, particularly across socio-economic groups, may impact the trustworthiness of science.

### 4. Decreasing academic freedom and threats to individual scientists

<sup>11</sup> Berhe, A.A., et al. Scientists from historically excluded groups face a hostile obstacle course. *Nat. Geosci.* **15**, 2–4 (2022). <https://doi.org/10.1038/s41561-021-00868-0>



Increasing distrust of institutions and greater polarization has led to a threatening atmosphere for scientists active in certain topics. During the COVID-19 pandemic, 70% of scientists who spoke publicly on the scientific and health aspects of the pandemic received threats, with 15% reporting death threats. Similarly, 39% of climate scientists reported online harassment or cyberbullying. Physicians and researchers in reproductive health, gun violence and LGBTQ+ health have also been targeted by intimidation tactics.

Threats to the independence of public universities are also increasing. This has taken the form of pressure from governing bodies to eliminate Diversity, Equity and Inclusion programmes, erosion of tenure protection, and requirements to teach particular perspectives of history. In some cases, scientists and other technical experts have been denied permission to provide expert testimonies in court cases.

#### 5. Defining human rights impacts of climate and ensuring a just energy transition

Climate change was initially treated as an ecological challenge, but the larger impacts on humanity are now becoming apparent. The impacts of climate and the burdens of mitigation and adaptation will be felt disproportionately by minority populations and poorer communities within the US, and by less industrialised countries globally. The new energy technologies and carbon management approaches created to address these challenges must be developed and deployed in an equitable manner to avoid worsening the human rights impacts of climate change. This will require bridging the gaps between human rights frameworks and scientific understanding of climate change.

#### 6. The importance of support and solidarity with international scientists displaced by conflict and persecution

In the past decade, scientists in multiple countries have been either displaced by conflict (Syria, Afghanistan, and Ukraine) or subject to political persecution for stances on COVID-19, environmental and conservation issues, or other human rights issues. The US scientific community is continuing to seek the most effective ways of advocating for fellow scientists. Creating programs that allow displaced scientists to continue their scientific careers in new host countries is an area of particular interest to the US scientific community.

These challenges are not unique to the United States. These concerns are presented in the hopes of beginning a discussion of shared challenges in science and human rights.

#### **Universities (academies) and human rights in a constantly evolving society (Prof Mzukisi Njotini, Dean of the Faculty of Law, University of Fort Hare; South African Young Academy of Science, South Africa)**

*Prof Mzukisi Njotini holds an LLB (Vista University), LLM (cum laude) in Information Technology Law (UNISA) and LLD (UNISA). He is a seasoned academic and Dean of the Faculty of Law based at the East London Campus of the University of Fort Hare (UFH). Prior to joining the UFH, he worked as the Vice-Dean: Teaching and Learning, and Associate Professor in the Faculty of Law at the University of Johannesburg (UJ). As Vice-Dean, he devised and introduced teaching and learning frameworks that support education for sustainable development. He also worked as Professor and Director of the School of Law at the University of Limpopo (UL), and Senior Lecturer and Lecturer in the College of Law at the University of South Africa. As Director, he oversaw, inter alia, the re-accreditation of the LLB programme by the Council on Higher Education (CHE). Prof Njotini developed several courses and programmes, the most notable being the Research Methodology in Law and Criminal Justice (UNISA) and the Programme in Law and the Fourth Industrial Revolution (4IR) (UJ). Prof Njotini's areas of specialisation include Information and Communications Technology (ICT) Law, 4IR and the Law, Cybersecurity and the Law, Legal Philosophy, and Law and Ethics. He has contributed extensively to academic knowledge in his chosen area. Furthermore, he has taught multiple courses, for example, Legal Ethics, Corporate Governance and the Law, Law for Social Work, Law of Delict, Cyber Law, and Law and Industry. Prof Njotini did his post-doctoral research with the Centre for Socio-Legal Studies, Faculty of Law,*

Oxford University in the UK.

The Sociology of Intellectuals<sup>12</sup> theory of Max Weber contemplates the ability of intellectuals to engage in public matters, which can also be termed 'the sociology of professionals'. It refutes what was known as 'Methodological Pestilence', which essentially denoted scholarship that was inward-looking; for example, in the incentives provided by universities to academics. This type of scholarship was about self-preservation, without regard for social advancement. Weber recommended 'Methodological Nominalism' as an alternative view that engages substantively in society, by discovering social problems and offering solutions, with a regard for communal progression.

Other theories derived from the Sociology of Intellectuals are that:

- Intellectuals are a 'Class-in-Themselves' (Michels, 1932)
- Intellectuals are 'Class-Less' (Shils, 1968)
- Intellectuals are 'Class-Bound' (Brym, 2001).

The question is where universities are positioned in relation to these theories. As social constructs, universities have the role of determining scientific progress through applying and dispensing knowledge. As an example, research on the pyramids of Egypt and other ancient sites was cited, where researchers came together as a community of scholars. In this case, the roles of universities were to underpin values that guided scientific processes, namely scientific improvement, economic progress and social advancement.

The role of education in a constantly developing society is also important. During the First Industrial Revolution, universities provided solutions on how society could take advantage of the benefits of new technologies, and on how the challenges arising from the Industrial Revolution could be alleviated. In this way, universities adapted to the changing circumstances in order to take advantage of the opportunities offered by the Industrial Revolution.

The question facing scholars today is how universities and academies are responding to the Fourth Industrial Revolution. These institutions need to alleviate the burden of those that are becoming victims of the Revolution; to prepare society to embrace technological developments; and to offer improved ways of adjusting to innovations.

In South Africa, the right to education is entrenched in Section 29 of the Constitution. Universities therefore need to ask themselves how they are addressing injustices in the schooling system.

Throughout the historical evolution of scholarship, universities have tended to take advantage of developmental issues in society and have not detached themselves from these. Universities in general have shared social goals to address injustices, including social injustice, racial injustice, gender injustice and inequality. Universities are inseparable from the *Polis* (meaning 'city' in Greek etymology) and need to engage in the social problems facing society. These were identified by Cohen in 1933<sup>13</sup>, and are still relevant to institutions today. Issues such as legitimacy in the eyes of the students, legitimacy in the eyes of the community, and legitimacy in the eyes of often-powerful donors, are issues that academies and scholars continued to grapple with. Prof Njotini questioned what the future holds for universities in South Africa, and whether they are ready to respond to future consternations facing society.

Scholars are often accused of operating within ivory towers, which implies that they are not in touch with reality. Academies such as ASSAf are tasked with ensuring that this gap is closed as far as possible. If universities are to succeed in responding to human rights issues in scholarship, they need to invoke justice.

<sup>12</sup> Max Weber's Sociology of Intellectuals. Ahmad Sadri. Oxford University Press, 1992. ISBN 0195065565, 9780195065565

<sup>13</sup> Law and the Social Order. Essays in Legal Philosophy by Morris R. Cohen. New York: Harcourt, Brace and Company, 1933. pp 403.

The blindfold in the well-known image of Lady Justice is pertinent, representing impartiality.

The preamble to the Constitution compels the establishment of 'a society based on democratic values, social justice and fundamental human rights'. What is needed are 'Methodological Nominalist' universities where scholarship is just and impartial; where science and knowledge are developed free of influence; where judgement is unbiased and not swayed by riches or poverty, power or weakness, title or privilege; and lastly, where merit prevails over subjectivity.

Ultimately, it was important to ask to whom knowledge belonged. This required a debate on whether knowledge existed to improve students' lives, to accelerate growth and development, or to suit powerful donors. Universities existed because the role of academics was first and foremost to serve students. Once students graduated and left the system, they became part of building the community, and in this way, scholars contributed towards the upliftment of society.

**Facilitating international human rights education: Knowing your audience and objective (Prof Martha Bradley, Associate Professor in the Department of Public Law, University of Johannesburg; Future Professors Programme, South Africa)**

*Prof Martha M Bradley is Associate Professor in the Department of Public Law, Faculty of Law, University of Johannesburg (UJ), where she is the coordinator for the LLM International Law. She specialises in Public International Law and International Humanitarian Law (IHL). Prof Bradley is a Y1 National Research Foundation-rated Scholar. She holds an LLB degree, an LLM in International Air, Space and Telecommunications Law, an LLM in Shipping Law, and an LLD in Public International Law. She has completed five certificate courses at the International Institute for Humanitarian Law in San Remo, which include: 1<sup>st</sup> IHL In-Depth Course (2021); Special Course on the Application of the Handbook of Integrating Gender Perspective into International Operations (2020); 40<sup>th</sup> Advanced Course on IHL (2019); 50<sup>th</sup> Course for Directors of Courses and Training of IHL (2019); and Peace Support Operations Course (2019). Two other significant certificate courses included the Summer School of Public International Law at the Hague Academy of International Law, the Netherlands (2017), and Public International Law and IHL at the Ludwig-Maximilians-Universität München (2015). Prof Bradley was recently selected by the Minister of Higher Education of South Africa to participate in the DHET Future Professors Programme Cohort 1 Phase 2, where 29 promising academics from South African universities are selected to undergo advanced training to develop their capabilities and fill the gaps in the professoriate in South Africa. Prof Bradley has held research positions at two academic institutions, locally and abroad. After completing her doctorate, she joined the Faculty of Law at UJ, where she was appointed as a post-doctoral researcher to the South African Research Chair in International Law. She was also employed as a researcher at the Palacký University Olomouc, Faculty of Law, Department of International and European Law, Czech Republic.*

Prof Bradley's presentation was directed at early-career scholars and the common factor of the teaching and learning aspects of scholarship. It focused on the 'who' and 'why' of education, and the purpose of learning engagement. She chose the topic of facilitating international human rights education, because the role of academics and future professors is not only to do research, but also teaching, supervision and community engagement. Her specific focus was on the teaching of human rights law. In her teaching role, Prof Bradley has engaged with second-year undergraduate students, postgraduate master's students, as well as participants outside formal classrooms who are trained in the workplace. The dilemma of how to teach the same content to such disparate groups was discussed.

Several issues in today's society are at the forefront of impacting human rights, including climate change and its effects, and the persistence of poverty and its impact on human rights law. In the African context, the matter of cyberlaw is currently a priority discussed by the African Union.

The topics on which Prof Bradley chose to base her presentation were juxtaposed and could be perceived as conflicting with one another, namely International Human Rights Law (IHRL) (also

known as the Law of Peace) and International Humanitarian Law (IHL) (the Law of War). On the African continent, the majority of armed conflict has been civil war, which is not of an international nature and does not attract much media attention. These two laws are sometimes perceived to be at odds with each other, as illustrated in the example that killing an enemy in an armed conflict is permissible, but in peace time is considered murder. Human rights law is constrained during times of armed conflict. According to the African Charter, in an armed conflict situation on the African continent, the IHRL co-exists with the IHL, which is often problematic and highly controversial. The approach to engaging different student groups in terms of this paradoxical, yet important, legal matter was explained in the presentation.

Prof Bradley bases her teaching methods on three phases, namely a preparation phase (activities to be completed before the lecture), the contact session (the actual lecture), and the consolidation phase (quizzes and discussions based on the material).

From the outset, it is important to ask who the students are. Most undergraduate students are from Generation Z, and are largely first-generation students. They matriculated during the COVID-19 pandemic and are used to electronic media as a learning platform. To have in-person classes was foreign and daunting to them. This posed a challenge, but also provided opportunities in presenting the subject matter. In Prof Bradley's experience, this generation responds well to various types of media and has better memory retention when information is broken up into chunks, and this needs to be leveraged in teaching methods. For this scenario, tools such as Powtoon<sup>14</sup> are employed to reduce the core message to no more than three minutes—the maximum retention rate of the students. Prof Bradley demonstrated a typical preparatory phase lesson of an undergraduate class, which included text that was presented with background music that the students could identify with.

With master's students, the purpose of the class is to grapple in debate and promote enquiry-based learning to ensure in-depth reflection; contact sessions thus have a different approach. Students are presented with a quotation on the topic and are then given a question or a statement that they need to debate. The aim is to generate an interactive discussion, which will leave the students with a deeper understanding of the practical implications of the subject.

The scenario for training in-service soldiers is very different. In Prof Bradley's experience, these students do not necessarily have much tertiary education and are not interested in academic tutoring. They need practical information and clear instructions. The approach used in this case was the presentation of a simulation of a James Bond-style scenario. In a Powtoon movie, students were given information and instructions to solve a fictional problem. After being split into two groups, they needed to provide solutions by applying the two laws: International Human Rights Law (IHRL) (also the Law of Peace), and International Humanitarian Law (IHL) (the Law of War).

Prof Bradley ended with a quotation by Prof Jonathan Jansen from his 2022 book on Scholarship<sup>15</sup>: 'Scholarly teaching is rich, deep, engaging, transparent, interactive and committed. It references acts of teaching against what is known in the literature, on the one hand, and what can be observed from best practice, on the other hand. It is intellectually intensive in the planning and teaching phases of preparation, but it is also personal and engaging with the students who are present.'

### Wrap-up comments (Prof Catherine Burns)

Prof Burns observed that the four presentations had been very different from one another, yet

<sup>14</sup> An educational software providing a visual communication platform. <https://www.powtoon.com/>

<sup>15</sup> Jansen, J. What Does Scholarly Teaching Look Like? Chapter 8 in: *On Becoming a Scholar: What Every New Academic Needs to Know*. Jansen, Jonathan and Visser, Daniel (eds). 2022. Published by African Minds. DOI: 10.47622/9781928502616. (p. 108)

there were also commonalities between them. They provoked questions about the definition of a scientist; the definition of a university; the definition of scholarship; what constitutes independent and academically-free scholarship; and which aspects of scholarships are driven by particular needs, such as those of donors, industry, imperatives or societal emergencies.

The image of a citadel on a hill came to mind, representing an institution called the university, which claims to hold universal knowledge but is often particularistic and sometimes even nationalist. Historically, most communities of scholars were originally affiliated with different religions, and universities have grown out of this particularist, rather than universalist, soil.

Universities have arisen in many parts of the world, and all of them claim that they are professing universal truths. Yet, it was only in the last hundred years that universities in the West have drawn people from the majorities in their own countries. Slightly longer in lineage are places like Senegal, Ethiopia and Egypt. Not that long ago universities in the USA, the UK and Ireland have only relatively recently admitted people from the majority into their spaces. South Africa only allowed white women to obtain degrees at universities in the 20<sup>th</sup> century, and only very recently welcomed as complete equals people of colour and black South Africans. However, there were some brave and courageous people from these groups as early as the 1920s who pursued tertiary education. For example, Charlotte Maxeke travelled to Columbia University in the USA to study, and she was the first woman south of the Zambezi River to get a university qualification.

Today, universities often have a credo or mission statement that claim they are committed to universal principles of freedom, of enquiry, of testing hypotheses, and of publishing not only successful findings, but also publishing their failures. This is what health science journals are moving towards, as well as open source peer-publishing, pushing scientists towards showing their mistakes and not only their successes.

Many human rights attributes that scholars and universities are striving towards could be mentioned, namely dignity, equality, respect, honouring different points of view, and an understanding that all are looking at the same phenomena, but from different perspectives.

Scholars come from societies with multifaceted histories of exclusion and resulting complexities. On the African continent, universities are very diverse. Some are ancient, whereas others originated in the last 20 years. Some universities are public-based and do not require students to pay fees, because they are covered by the taxpayer, while other universities have annual fees exceeding \$150 000. There is an enormous array of entries into, and barriers to, higher education. There are societies where the Gini coefficient<sup>16</sup> is very flat (for example in Scandinavia, where those with modest means are not very separate from the wealthy citizens), while in some other societies it is difficult for citizens from countries around the world to gain access to that space.

The wealth of rich societies is often based on their exploitation of natural resources and people of the rest of the world. The sale of their commodities (such as petrochemicals) into the market creates distortions and pathologies that the bodies and souls of people living far away have to carry.

Prof Burns posed the question, 'What is a university?' She postulated that it is a marketplace of community-held ideas, where people dialogically persuade one another, and where the movement back and forth between hypothesis and proof results in the most reasonable outcomes to the problems at hand. Everyone present in this meeting is fortunate to have attended a university or centre of higher education where at least some of those principles are flourishing.

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<sup>16</sup> The Gini coefficient measures the extent to which the distribution of income within a country deviates from a perfectly equal distribution. A coefficient of 0 expresses perfect equality where everyone has the same income, while a coefficient of 100 expresses full inequality where only one person has all the income.

Even in the darkest days of apartheid in South Africa, universities were places where people would argue and struggle with one another, to the ultimate benefit of society. The first generations of black intellectuals, educated in the mission schools in the 1920s and 1930s, were to become the leaders eg Nelson Mandela of the African National Congress. These great minds profoundly shaped the 20<sup>th</sup> century, and have left South Africa with very important goals.

As the Second World War came to an end, the world saw the emergence globally of the *Declaration of the Human Rights of Man* (later changed to the *Universal Declaration of Human Rights*), although only one part of the charter addresses academic freedom, knowledge and science. However, during a recent trip to Mexico City, while contemplating academic freedom, scientific integrity and the right to knowledge and truth, it occurred to Prof Burns that human beings are probably confounding the ancestors by cultivating more and more connectedness on this planet. It is no longer a surprise when a professor from the University of Legon in Ghana is working alongside a professor from the United Arab Emirates, a professor from the University of Botswana, and a professor from the Netherlands. This kind of interconnected world of sharing resources has never before been as fundamental or as exciting as it is today. Every single scholar has networks of researchers, teachers and colleagues, sharing curricula, sharing online learning, and participating in conferences. There is an extraordinary array of global projects in which to be involved.

However, the other side, parochialism is still prevalent. Regrettably, South African scholars are still focusing inwards, rather than being open to the African continent. In some sense, the openness and sharing between universities is overestimated, and instead what is evident is a withdrawal. This is globally evident in suspicion about motives, and the lack of legitimacy and openness in science.

The experience of the USA in the last four years is cautionary with respect to not disregarding the enormous pain that society is still going through due to the long and lingering effects of slavery, inequality and hierarchy, which are embedded in the ivory towers of universities and institutions.

Prof Burns asked what role academics have, outside the academic space, in terms of giving testimony and speaking with confidence. She related a short-lived experiment from Zambia in the 1960s. As Zambia was moving towards full independence, one of the commitments of the first academic leaders was to ensure that the first generation of professors would be exposed to doing their doctorates abroad. Those that met the very strict requirements for a funded PhD enrolled at universities around the world and were encouraged to study something other than a Zambian problem. At the end of this massive experiment in learning, the purpose of which was to counter the narrow-mindedness of knowledge and meet people from around the world with confidence in their common humanity, students had been expected to bring the knowledge back to Zambia. However, as a consequence of the structural adjustment problems and the huge economic challenges facing Zambia, most of those Zambian-born academics remained in the global North and are now the retiring or older professoriate, particularly at universities in the USA and Europe. Although it was sad for Zambia that its economy could not receive those intellectuals as they had intended, they have shaped a generation of scientific learning at illustrious universities and have taught many students, some of whom are present at this meeting.

The presentations at this meeting have provided examples of generosity, sharing and communities of scholars, as well as glimpses into the way in which racism, parochialism and absurd hypotheses resulting from prejudice are still clouding the academy. Prof Burns pondered the role of young and mid-career scholars in this project. What will the new generation of professors and rising scholars in the world say about keeping the borders of learning open; removing perverse incentives from research; confronting the power of corporate greed; and insisting on different perspectives being part of the best of science? Will there be more people of colour leading institutions in 20 years, and will women finally take their equal place in science? Will questions of sexual harassment, gender violence and bullying continue to trouble academic institutions, or will scientists and academics have achieved human rights as the basis of scientific

knowledge? There are questions that remain to be answered.

Prof Burns commented that it is painful that science continues to be yoked to military enterprise and violence. In the past, many South African scientists in engineering and pure science faculties received funding from entities attached to the American military complex. Moreover, a large part of South African university life, then and now, is underpinned by the particular needs of national governments and their funding decisions around science. Doubtless, there are no countries where this does not apply. The courage of young colleagues needs to be applauded; for example, Prof Bradley for exposing herself as a human rights lawyer and scholar in places of conflict. These young scientists have the power to make a greater difference in their spaces than those scholars who prefer to hide within the ivory tower of learning. Food for thought around the question around instrumental research.

## DISCUSSION AND QUESTIONS

**Prof Julia Tagüeña (National Autonomous University of Mexico)** posed the question of whether science requires more science communication.

**Dr Martin** responded that the USA has realised that their approach to STEM education has been foundationally wrong. It was aimed entirely at enabling future scientists and workers in STEM. Society has reached a point where an understanding of science and science-related matters impact many decisions that people have to make. It can therefore be seen as negligent to focus science education only on those that will become future scientists.

Another issue is the lack of incentives for scientists to interact with the public; for example, the famous planetary scientist, Carl Sagan, who had a television show called *Cosmos* and who engages very effectively in public outreach, was not elected to the National Academies, in spite of his scientific achievements, in part because the scientific establishment was suspicious of his having a TV show.

In the context of trust, **Prof Julia Tagüeña** asked Dr Mathebula to explain the difference between 'misinformation' and 'disinformation'.

**Dr Mathebula** responded by observing that a plethora of fake news stories had arisen during the COVID-19 pandemic. Similarly, fake news on the electricity crisis was perpetuated by people that considered themselves equal to journalists and posted opinions and statements on various platforms. There are laws aimed at curbing the spread of misinformation, but these are not sufficiently effective. It is up to society and individuals to verify the sources and distinguish between news items in order to curb the dissemination of fake news.

In response to a question by **Prof RoseEmma Entsua-Mensah (University of Ghana)**, **Prof Njotini** explained that adverse statements and arguments have been made in the name of science. Universities and institutions have to be aligned with the constantly evolving society. Scholars have a role to play in ensuring that science is not used to bolster harmful arguments.

**Prof Entsua-Mensah** observed that the South African reality is not necessarily the reality of Africa more generally; for example, some countries in Africa do have cyber-security laws. It is not appropriate to equate Africa with a country. It is a continent, with different countries, different levels of society, and differences in levels of education.

**Prof Bradley** responded, complimenting the high level of female leadership in Ghana. She explained that the law of conflict applies equally to both parties – the aggressor and the defender. Her engagement has not been as a South African lawyer, but as an independent academic, which importantly gives freedom and neutrality.

She was asked to elaborate on the differences in teaching students from Generation Z and

Millennials. She responded that there had been a lecture to participants in the Future Professors Programme on the different generations, which raised awareness that one's thinking is often influenced by the experience of one's parents and the times in which one grew up. To approach these different audiences entails being aware that students learn in different ways and have different influences. Students from different backgrounds learn differently and need different engagements. The same script cannot be used for each class but needs to be delivered differently.

**Prof Chalfie (US National Academies of Sciences, Engineering and Medicine)** suggested that in teaching science it was important to acknowledge the importance of what Abraham Flexner called “useless knowledge,” i.e., basic or fundamental scientific information. As an example, in the past three years, the world experienced a pandemic in which such “useless knowledge” acquired over decades led to the development of mRNA vaccines, which had saved millions of lives. In many science disciplines, there were examples where directly addressing a problem did not solve it. What was needed was underlying information developed by scholars. This need for basic, fundamental information is not easy to sell to funders and decision-makers, but it is essential for progress in the scientific world. Science should not always look for utility.

On the issue of utilitarian ethics, **Prof Njotini** commented that the role of law has started to diminish in recent years, but science can make huge progress by relying on justice. He pondered where the future lies, and argued that in most cases the future exists at the present moment. In mid-2015, most South African universities had to navigate the Fees-Must-Fall crisis. The main mechanisms that the universities used to bridge the gap during the protests were online teaching and learning. Yet, during COVID-19, there were still institutions that needed to grapple with how to deal with the lock-down situation, even though the future solutions already existed in 2015.

There was a question to Prof Bradley on the quality of education and how to ensure empowerment through true education. Education needs to be used to address society's many ills through empowerment tools. **Prof Bradley** explained that she aims to teach her students the methodology of thinking and applying reasoning to problems. In this way, learning never stops, because students have a toolkit to apply in different situations.

There was a question to **Prof Bradley** on how to foster the different strengths of each generation. She responded that scholars sometimes have to do things that are uncomfortable, which contribute to learning.

In closing, **Prof Burns** reflected that this session had asked more questions than it had answered. However, some questions stood out, namely how scholars communicate their scientific knowledge in ways that are respectful and dignified, but still critical and engaged across class, gender, hierarchy and region. ASSAf was acknowledged for bringing scholars and colleagues from learned societies together at this event and addressing current and controversial issues. Science can correct itself only through processes such as this.

#### **CLOSURE (Prof Himla Soodyall, Executive Officer, ASSAf)**

Prof Soodyall thanked the panellists for their presentations and engagement and Prof Burns for her moderation and observations. The panel had ably demonstrated the benefits of speaking from their lived experience. Prof Soodyall proffered a final question on how scholars can intersect their learning and knowledge with how they live their lives as academics in society.



**APPENDIX: LIST OF ACRONYMS**

4IR	Fourth Industrial Revolution
CHE	Council on Higher Education
AIAA	<i>American Institute of Aeronautics and Astronautics</i>
ASME	<i>American Society of Mechanical Engineers</i>
ASSAf	Academy of Science South Africa
DRC	Democratic Republic of the Congo
DHET	Department of Higher Education and Training
IHL	International Humanitarian Law
IHRL	International Human Rights Law
KZN	KwaZulu-Natal
LGBTQ+	Lesbian, gay, bisexual, transgender, queer and questioning
mRNA	Messenger RNA
SAAPhDs	South African Association of PhDs
SANDF	<i>South African National Defence Force</i>
STEM	Science, Technology, Engineering and Mathematics
UJ	University of Johannesburg
UKZN	University of KwaZulu-Natal
UNISA	University of South Africa
US	United States
USA	United States of America
Wits	University of the Witwatersrand
WISER	<i>Wits Institute for Social and Economic Research</i>