

ANNUAL SOUTH AFRICAN YOUNG SCIENTISTS' CONFERENCE 2016

HUMAN RIGHTS



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(1996 - 2016)
in the service of society



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA



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December 2016

ISBN 978-0-9947076-1-1

DOI: <http://dx.doi.org/10.17159/assaf.2016/0007>
Please use the DOI in citation.

Published by:
Academy of Science of South Africa (ASSAf)
PO Box 72135, Lynnwood Ridge, Pretoria, South Africa, 0040
Tel: +27 12 349 6600 • Fax: +27 86 576 9520
E-mail: admin@assaf.org.za

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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 on the basis of 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 (Act 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 the Annual South African Young Scientists' Conference 2016 on Human Rights held on 6 and 7 November 2016 at the Birchwood Hotel & OR Tambo Conference Centre, Boksburg, South Africa. 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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DAY 1

SESSION 1: OPENING CEREMONY

(FACILITATOR: PROF ROSEANNE DIAB, ASSAf)

Welcome

(Prof Roseanne Diab, Executive Officer, ASSAf)

Prof Diab opened the conference and welcomed everyone to the seventh Annual Young Scientists' Conference, the theme of which had been aligned with the 2016 African Union (AU) Year Theme, Year of Human Rights with Special Focus on Rights of Women. Prof Diab acknowledged the conference partners namely the Department of Science and Technology (DST), the Academy of Science of South Africa (ASSAf), Gender in Science, Innovation, Technology and Engineering (GenderInSITE), the Organisation for Women in Science for the Developing World South African National Chapter (OWSD-SANC), South African Young Academy of Science (SAYAS), and the Foundation for Human Rights (FHR).

ASSAf was formed in response to the need for an academy of science congruent with the dawn of democracy in South Africa to promote the use of science for the benefit of society. The mandate of the Academy encompasses all fields of scientific enquiry and includes the full diversity of South Africa's distinguished scientists. ASSAf represents the country in the international community of science academies and has over 500 members, who with the support of the ASSAf Secretariat give evidence-based scientific advice on issues of public interest to government and other stakeholders.

Opening Remarks

(Judge Richard Goldstone)

Judge Goldstone was a judge in South Africa for 23 years, the last nine as a Justice of the Constitutional Court. Since retiring from the bench, he has taught as a Visiting Professor in a number of US Law Schools. Recently he has been teaching at the Central European University in Budapest and at Oxford University. From August 1994 to September 1996, he was the Chief Prosecutor of the UN International Criminal Tribunals for the former Yugoslavia and Rwanda. He is an honorary member of the Association of the Bar of the City of New York and a foreign member of the American Academy of Arts and Sciences. He is an honorary bencher of the Inner Temple, London, and an honorary Fellow of St John's College, Cambridge. He is an honorary life member of the International Bar Association and honorary President of its Human Rights Institute.

Thank you for the invitation to speak at the conference, it is a great pleasure to address you all and in particular, the scientists of tomorrow. Lawyers generally think that the topic of human rights is their domain, but nothing could be further from the truth. I therefore welcome this conference and look forward to your input.

In setting the context of human rights, the history should be considered as important. Modern human rights, particularly the international human rights, began as a result of the heinous and grievous crimes committed during World War II in Europe. They also received a major boost from the Universal Declaration of Human Rights passed in the General Assembly of the United Nations in 1948. The Declaration of Human Rights is a non-binding declaration, as many leading nations would have been vigorously opposed if they were bound in any way. The colonial powers of Europe would have in any event found it unacceptable to commit themselves to human rights during the colonial era. Eight countries abstained from the vote, which included the Soviet Union and the satellite countries that did not respect human rights. Saudi Arabia, particularly due to religious reasons and gender discrimination, and South Africa, which was at the beginning of its apartheid racial oppression.

Today every provision of the Universal Declaration is regarded as customary international law and is binding on all nations. In 1966, the International Convention on Economic, Social and Cultural Rights was approved by the United Nations, followed by the International Convention on Civil and Political Rights. These were followed by the Convention on the Eradication of Discrimination against Women, the Convention on the Rights of the Child and the Convention on the Elimination of All Racial Discrimination. Whilst many nations have signed international human rights conventions in an attempt to ward off human rights organisations such as Human Rights Watch, Amnesty International, and the International Federation of Human Rights Organisation, they do not necessarily carry out their obligations.

It is a misconception that the responsibility to deal with human rights matters lies with lawyers. In recent years, the uses of scientific methods and technology have contributed substantially to the protection of human rights. In 1995, when I was appointed as Chief Prosecutor of the United Nations International

Criminal Tribunal for war crimes, I was required to investigate the largest genocide in Europe since World War II which took place in Srebrenica. Srebrenica was considered to be a United Nations safe haven. Eight thousand men and teenage boys were killed in execution style next to a mass grave, and many women were subjected to torture, rape and other forms of sexual violence. The atrocities committed at Srebrenica are considered to be the worst on European soil since World War II.

A few weeks after the Srebrenica massacre, I was contacted by a reporter who worked at the American Broadcasting Corporation stationed in London. She had been approached by Drazan Erdemovic, a soldier from one of the firing squads in the Bosnia Serb Army, who had requested to tell the truth of what had happened at the massacre. The reporter met with the soldier, who gave a full confession of how he had been forced to join the firing squad, and he identified the location of the mass grave.

Scientists were able to plot the location of the mass grave on the worldwide grid, and the coordinates were sent to Washington. Satellite photographs were provided that showed an open pit with men standing next to it. Another photograph taken the next day showed the pit being covered over. The Physicians for Human Rights in Boston, who had used medical science for the purpose of pursuing human rights and prosecuting war crimes, exhumed the mass grave and confirmed the cause of death as being a single bullet at the back of the head. All were male and they had their hands tied behind their backs.

General Ratko Mladic has since been convicted and sentenced to 40 years in prison by the United Nations International Criminal Tribunal for the former Yugoslavia, and Erdemovic was convicted and sentenced to five years in prison.

This account demonstrates the crucial support and involvement of science in realising criminal justice in Bosnia.

Prof Diab thanked Judge Goldstone for setting the tone of the conference and for providing a historical account of the Bosnian atrocities and emphasising the importance of a multidisciplinary forum such as this conference.

Keynote Address

(Ms Yasmin Sooka, Executive Director, Foundation for Human Rights)

Ms Yasmin Sooka is a leading human rights lawyer. She is currently the Executive Director of the Foundation for Human Rights in South Africa. Ms Sooka served on the South African Truth and Reconciliation Commission from 1996 to 2001 and chaired the committee responsible for the final report from 2001 to 2003. She was appointed by the United Nations to serve on the Truth and Reconciliation Commission of Sierra Leone from 2002 to 2004. Since 2000, she has also been a member of the Advisory Body on the Review of UN Resolution 1325. In July 2010, Ms Sooka was appointed to the three-member Panel of Experts advising the Secretary-General on accountability for war crimes committed during the final stages of the war in Sri Lanka.

Thank you. I am grateful for having been invited to speak at the conference and especially on the topic of whether African cultures have a distinct contribution to make in legitimising respect and the enforcement of universal human rights.

The background and context to the discussion is the resolution passed by the Human Rights Council in 2011 entitled Promoting Human Rights and Fundamental Freedoms through a Better Understanding of Traditional Values of Humankind in Conformity with International Human Rights Law. This was followed by the Human Rights Council establishing an advisory committee to the council to conduct a study on how an understanding and appreciation of the traditional values of dignity, freedom and responsibility could contribute to the promotion and protection of human rights. The study revealed that there were huge divides between traditional values and human rights and that there was no real agreed definition of the term 'traditional values of humankind'. Article 17.3 of the African Charter on Human and Peoples' Rights, also known as the Banjul Charter, states that "the promotion and protection of morals and traditional values recognised by the community shall be the duty of the State". This led to a joint statement by seven mandate holders that cultural diversity could only thrive in an environment that safeguarded the fundamental freedoms and human rights. Cultural diversity cannot be used as an excuse for the infringement of human rights. Africa, and in particular South Africa, views human rights as a Western construct and believes that African problems need African solutions. The justification of impunity and the lack of accountability for human rights violations highlight the importance of unpacking the historical progress of the human rights discourse particularly in the African region.

The Organisation for African Unity was established on the notion of decolonisation and that Africa could not be considered free until the last colony of the region had gained its independence and achieved the right to self-determination, including winning the fight against apartheid. In terms of Article 23 of the African Charter, the South African government relinquished its hold on Namibia and acceded to majority rule in

South Africa. South Africa today is extremely xenophobic and appears to have forgotten the sacrifices made by its neighbouring countries, which were part of the wider pan-African agenda as embodied in Africa's search for human rights, dignity and identity.

Leadership has invoked the notion of human rights, and yet when questions of accountability are raised, the response is that African solutions are required for African problems. It is commonly believed that bodies such as the International Criminal Court are Western constructs and are not relevant to the continent. In addition, Africa's struggle for liberation embodies the struggle for identity and cultural heritage, which involves the adoption of the African Cultural Charter of 1976 to ensure the protection of African cultures.

I was a representative of a Commission in Sierra Leone that was required to negotiate with traditional authorities to obtain permission to engage with women on their testimonies of abduction, rape, sexual violence and sexual slavery. The women reported that their traditional status was very low, and the commission found that many women and girls, as a result of patriarchal traditions and customary law, had suffered forced marriages, female genital mutilation, as well as early child marriages. The women also had no form of legal protection if they were married according to customary law or Islamic law. They were not allowed to own property or inherit from their husbands, and they were not allowed custody of their children if they divorced or separated. The women stated that they sought full protection of the law and constitution irrespective of the kind of system under which they were married. The key issue for the commission was that legislation dictated that it would be necessary to take tradition and custom into account, particularly in the integration of young soldiers and women, including young girls who had been abducted by rebel soldiers, through traditional reconciliation ceremonies back into society.

In South Sudan, where the commission reported on the human rights violations that had arisen out of the recent conflict in that country, approximately 1.2 million people were living in camps and another 1 million in refugee camps in Ethiopia and Uganda. Since South Sudan's independence in 2011, corruption at leadership level has become the order of the day. The challenge is to address traditional laws and customs in order to build synergy between traditional systems and universal human rights, particularly when African leaders decry women's rights as a Western construct. Calls to action by Western feminists and human rights activists have provoked negative reactions amongst African women, who have perceived many of these efforts as condescending and derogatory towards their culture.

Earlier this year, South Africa appeared before the Committee on the Elimination of Racial Discrimination. The country was being questioned on how it was addressing harmful practices such as ukuthwala (the practice of abducting young girls and forcing them into marriage), which often resulted in rape. Of course South Africa was not able to provide an answer. In systems like ukuthwala, the oppressed people are usually women and lesbian, gay, bisexual, trans and/or intersex (LGBTI) people. In 2011, the UN Human Rights Council in Geneva adopted a resolution to appoint an independent expert to investigate the plight of LGBTI people. Earlier this year South Africa, which had led on the resolution since 2011, abstained in the vote for the Latin American countries. Whilst South Africa had supported the principle of eradicating violence against LGBTI people; the country most likely feared alienation from other African countries. South Africa should be held accountable not only to the LGBTI community, but also to other communities for its stance to ensure that this type of unethical behaviour did not recur.

Many African states argue that they are opposed to Western systems of accountability and that there is a need to bond with African models of reconciliation. Following the war in South Sudan, the African Commission established a hybrid court to try those persons responsible for war and other crimes committed against humanity. Whilst many of the diplomats spoke about the need for peace before justice and accountability, the court took a period of three years to set up. With the Malabo Protocol, African leaders voted to give themselves immunity from prosecution for war crimes, crimes against humanity and genocide. This portrayed the message that African law was governed by African traditions and cultures, which were subjective and dependent on societal power structures that in most instances were at odds with human dignity and values.

Ubuntu forms the base of the Constitution in South Africa; however, traditional values need to be incorporated into our systems and they would have to be consistent with human rights standards. The Convention on the Elimination of all Forms of Discrimination against Women (CEDAW) stated that traditional attitudes, where women were regarded as subordinate to men, perpetuated practices involving violence or coercion such as family violence and abuse, forced marriages, dowry debts and female circumcision. Whilst this is supported by Chapter 9 of the Constitution, civil society needs to address issues such as virginity testing and botched circumcisions. Conversely, it has been reported that in countries where indigenous customary law is rooted in local tradition, formal legal systems have found that justice is being handled more effectively. The problem with this system is that traditional custom is not static but changes continuously. Engagement and dialogue are essential to promote a universal set of values, as tradition cannot justify human rights violations. Women should be able to enjoy their rights, and LGBTI communities and indigenous people should not be denied the right to their humanity.

Synergy would need to be found between tradition and custom and the universal human rights system.

We have seen that lawyers, particularly in the investigation of war crimes, are increasingly reaching out to scientists. When I worked in Sri Lanka, satellite imagery was used to identify the number of people in warzone areas who had been denied food and medicine. Whereas forensic testing had proven the existence of grave sites, satellite footage had shown the surrender of people. Carbon testing had confirmed that people were shot in the back as they emerged from bunkers. This is why lawyers must engage with scientists so that various modalities can be used to ensure that people are held accountable. I am sure many of you will have heard of the Satellite Sentinel Project conceived by George Clooney, which had documented violent attacks, large-scale displacement and mass graves in Sudan. It is also able to provide an early warning system to deter mass atrocities. Science should be embraced by lawyers in dealing with such situations, as is currently the scenario in humanitarian workers using satellite footage and science to undertake their work more precisely and efficiently.

I thank you for the opportunity afforded to me in delivering the keynote address and I look forward to successful discussions at the conference.

Prof Diab thanked Ms Sooka for her bold and revealing address.

Discussion

Mr Sidogi (Tshwane University of Technology) queried how the Afrocentric ideas of protecting culture, custom and tradition were a convenient way of averting justice. This was practised by some South African leaders and communities. Whilst one understood its origin from Western discourse and the history of colonisation, the question remained as to how human rights and laws that were appropriate for South Africa could be enforced.

Ms Sooka responded that a nation could not justify not addressing the violation of rights. All AU documents encompass the notion to promote and respect rights and to hold states accountable. While the Malabo Protocol had led to the notion that there could be no questions of accountability, the common theme for almost all member states of the AU was to build peace. The notion of humanity was tied to the humanity of others. The notion of ubuntu was present in almost all of our different traditions. When one looked at the issue of the triple heritage in Africa, it was important to look at how those value systems could be brought into societies without marginalising women and communities on the basis of their being different.

Judge Goldstone responded that indigenous law and the feelings of people who have grown up in that environment deserved respect. The citizens of South Africans and the founding fathers of democracy agreed that the values in the Constitution were supreme; however, clashes in relation to gender equality would always prevail between universal human rights and indigenous customary law. In African countries particularly, women were considered inferior, which was inconsistent with universal human rights values and with South Africa's Constitution. Judge Goldstone commented on a case where the Constitutional Court had awarded a woman the inheritance of a tribal chieftainship. He highlighted that law and science were important in teaching the values of the Constitution in relation to universal human rights, and that scientific endeavours were crucial in substantiating that understanding.

SESSION 2: PANEL DISCUSSION:

(FACILITATOR: PROF ALEX BROADBENT, UNIVERSITY OF JOHANNESBURG AND SAYAS MEMBER)

Theme: Redress of Colonial Heritage in Promoting Human Rights in Africa

Panellists: Judge Richard Goldstone (former South African Constitutional Court), Prof Bongani Majola (former Assistant Secretary-General and Registrar of the International Criminal Tribunal for Rwanda), Adv Mohamed Ameerma (South African Human Rights Commission), Ms Yasmin Sooka (Executive Director, Foundation of Human Rights)

Prof Broadbent introduced the session by noting that in South Africa social inequalities were embedded and reflected in all spheres of social life as a product of the systemic exclusion of blacks and women under colonialism and apartheid. Human rights are integral to modern democratic thinking, in particular to limiting the power of the sovereign majority. Some of the protests in the 'Fees must Fall' movement illustrate the exercise of rights by a minority, since only a tiny proportion of students are involved in the protests. In the African context, urgent open discussion is required to address the many human rights abuses in Africa. However, the modern rights talk is perceived to be of Western origin and could be seen as an imposition. Therefore if the concept of the rights is not linguistically evident in sub-Saharan political philosophy, the content of rights might nonetheless be protected, and vice versa. Some African philosophers regard the liberal democracy model of government as violating human rights, as African political thought places importance on consensus, whereas other African theorists see human rights as compatible with an African framework.

Prof Broadbent commented that rights do not necessarily correspond to duties, and that the panel discussion should not treat Africa differently from other countries.

Judge Richard Goldstone (Former South African Constitutional Court)

Africa was still living with the negative aspects and harms that had arisen from colonialism. Colonialism had left a legacy of colonial powers taking what they wished for their own benefit and leaving little of value behind for the indigenous people. A reminder of evil colonial heritage was the genocide in 1994 of over 800 000 Rwandans when Belgium had forced Rwandan citizens to have ethnic identity documents. The minority Tutsis had been put into leadership positions and had discriminated against the majority Hutu population. In South Africa, the colonial powers, particularly Britain, used the theory of divide and rule which caused ethnic groups to compete for recognition of their own heritage and dignity. Since democracy in South Africa in 1994, the country had successfully overcome the differences imposed by colonialism.

The role that academics and particularly scientists could play in redressing the legacy of colonialism was to explore its inner nature and publicise its worst manifestations, followed by redress.

Prof Bongani Majola (Former Assistant Secretary-General and Registrar of the International Criminal Tribunal for Rwanda)

Prof Majola has an LLB degree from the University of Zululand and an LLM from the Harvard Law School in the USA. He recently returned from Arusha, Tanzania, where he had spent almost 13 years working for the UN International Criminal Tribunal for Rwanda, which was responsible for prosecuting those bearing the highest responsibility for the Rwandan Genocide of 1994. Prof Majola served as national Director of the Legal Resources Centre in Johannesburg from 1996 to 2002. Prior to that he had taught law at the University of Zululand's Institute for Public Service Training, the Law School at the North-West University, Mafikeng, and the University of Limpopo where he was Professor and Head of department as well as Dean of the Law Faculty. His experience includes serving as a Public Prosecutor and a Magistrate in KwaZulu-Natal. Prof Majola currently lectures on a part-time basis at the University of the Witwatersrand Law School.

The universality of human rights is a vast topic and has enjoyed much debate. Countries had ratified international human rights treaties in dealing with the inefficiencies of human rights. The universality of human rights should be scrutinised from two angles, namely the universality of human rights norms that set the standards for all nations to aspire to and implement; and the extent to which states have domesticated the international human rights laws and standards and made them part of their law.

In highlighting the challenges to the universality of human rights, Prof Majola referred to the South African situation. At the conceptual level it would appear that there had been general acceptance of the global standards of human rights laws emanating from key human rights treaties, including the Universal Declaration of Human Rights. It had been globally recognised that remote towns and villages in all parts of the world would need institutions of law, education, organisation and human rights if they were to be part of modern society. Africa had progressively adopted its own norms to reaffirm the universality of human rights in the development of its economies and its people. Over the past five decades the continent had adopted and ratified many treaties dealing with human rights. The continent had established specific institutions both at continental and regional levels, including the African Court on Human and Peoples' Rights and the African Commission on Human and Peoples' Rights. At regional levels there was the Economic Community of West African States Tribunal, the Court of Justice of the Common Market for Eastern and Southern Africa, the East African Court of Justice and the Southern African Development Community Tribunal. Through these courts and tribunals the universality of human rights was well recognised, especially at conceptual level.

It is imperative for human rights to be implemented at both national and regional levels in order to ensure the implementation of globally recognised international human rights norms. Prof Majola commented that in the universal acceptance of the concept of human rights standards, the extent to which states implement the human rights treaties should be among the factors used to gauge the universality of human rights. Unfortunately many states still deny the basic rights and freedom of citizens, especially for women and children and the LGBTI group, and in some states legislation had been passed to criminalise the latter.

South Africa is a signatory to a number of conventions that seek to protect human rights globally and locally, especially the rights of those who are most vulnerable including women and children. The Bill of Rights is a cornerstone of democracy in South Africa; it enshrines the rights of all people in the country and affirms the democratic values of human dignity, equality and freedom. In this way, South Africa has succeeded in not perpetuating the tensions that exist on the continent and beyond. The Constitutional Court has mitigated such tensions by applying various mechanisms within the legal system to accommodate customary laws and practices; however, they may not be contrary to the Constitution. Customary rights and practices that appear to contradict universal human rights, such as genital mutilation and virginity testing, need to be addressed. These practices must also be seen against the dictates of the Bill of Rights.

Adv Mohamed Ameerma (South African Human Rights Commission)

Adv Ameerma is an admitted Advocate of the High Court of South Africa and holds a BA LLB (University of the Witwatersrand), LLM (University of Pretoria), Fellowship in International Law and Arbitrator (Centre of American and International Law, Dallas) and BA (Hons) in Business Administration (University of Limpopo). He is a full-time Commissioner of the South African Human Rights Commission and is tasked with two national programmes: Access to Justice and Access to the Right to Housing. He has oversight responsibilities for the Free State and North West provinces. Adv Ameerma has over ten years of extensive managerial experience on legal and related socio-economic matters.

The principle of dignity is not negotiable in any instance. The populations of both Africa and South Africa comprise 51% women, which highlights the fact that their equal participation in science must be recognised as a contribution to the progress and liberation of our country. The country would need to look at the challenges of overcoming colonialism in the education sector in realising the right to accessible, available, acceptable and affordable education for all. Poor and marginalised societies are still unable to easily access educational institutions. The best facilities are usually only accessible to the wealthier members of society, and the right to education is not fully realised. The special geography of apartheid also played a role in the issue of accessibility and remains a dominant challenge, as educational institutions in some instances are unavailable.

Many learning institutions are of poor quality and do not afford students an ideal learning environment, which negatively impacts their ability to realise their full potential. The education system has in some instances not been adapted to the needs of society (e.g. syllabi were still structured to colonial times). As a result young scientists, for example, might learn things without application to the society in which we live.

The affordability of education is a major setback and has been highlighted in the recent calls for free university education through the 'Fees Must Fall' campaign. Material conditions conducive to an environment for learning and teaching, although identified in the 1955 Freedom Charter, have not been progressively factored into meet the expectations of the poor and marginalised, and have resulted in the cry to revisit the Constitution.

Issues such as bad governance, corruption, lack of commitment to the common good, lack of accountability and transparency have become the order of the day. In South Africa the Constitution was adopted with full awareness of the material conditions of the majority of the population who were poor and marginalised. Since 1994, insufficient effort has been applied in redressing the legacy of apartheid and colonialism. The right to security of person, the right to life, liberty and property and infrastructure need to be addressed in order for the country to progress.

South Africa had aligned to the African Union's Agenda 2063, the National Development Plan and the UN Sustainable Development Goals. In this context, it is important for young South Africans to become trendsetters and not to play the blame game. Society would need to ensure that we question our conduct and the current setup of our society to identify issues that continue to hold large sections of society back from realising their full potential. A positive mindset should be promoted, which would allow the country to break with the past.

Adv Ameerma wished all young scientists well in their endeavours and stressed their importance for the good of South Africa, the continent and the planet.

Ms Yasmin Sooka (Executive Director, Foundation of Human Rights)

Four legacies had been left from colonialism, namely artificial borders, homosexuality laws from colonial powers, patriarchy in terms of women and the dehumanisation of people. 'Redress' in the South African and African context referred to the restitution of individuals or the state to the position they were in before the harm was done. Redressing restitution had always been paid for by states, for example, Germany which paid large sums of money to states affected by World War II. After the war, when Europe had been confronted with the problem of displaced people and refugees, the Treaty of Paris had been established to address individual reparations.

In South Africa the issue of reparation remains unresolved. Whilst the Truth and Reconciliation Commission focused primarily on individual victims and individual perpetrators and whilst it looked thematically at the role of business in South Africa, it had not addressed businesses having to pay for profiteering under both the colonial and apartheid governments. To date, General Motors was the only company in South Africa that had paid reparations. A turning point for the world was when many Jewish groups sued the Swiss banks and a number of German companies under the Aliens Courts Claim Law for reparations for what had transpired during the Holocaust. The result was that the Swiss government and German companies were persuaded to voluntarily enter into an agreement to pay reparations to different Jewish parties.

The German government still continues to pay reparations both to the state of Israel and to individuals around the world in recognition of the harm caused during the Holocaust.

Whilst some transformation has taken place in South Africa, the question of decolonisation continues to be raised. Two beneficiary groups exist in the country, namely the beneficiaries of colonialism and apartheid and the beneficiaries of the transition. The history of native South Africans and socio-economic rights transition had not been included in education curricula. Ms Sooka stressed that South Africans would need to understand the Bill of Rights and the notion of what it means to live with dignity. The country could not afford to lose another generation and therefore should address the challenges related to all aspects of transformation.

Plenary Discussion

Colonial heritage had resulted in the fossilisation of customary interstate law in South Africa and African countries and a deepening of inequalities. Whilst a living customary law should have been developed in terms of what the people wanted, this had not been realised. It had been in the interests of colonialists to fossilise customary law to facilitate divided rule and to justify their domination. In the case mentioned by Judge Goldstone where a woman had been awarded the inheritance of chieftainship, customary law had prevailed in the court's decision. The question remained what would have happened if customary law had been fossilised by colonialism.

The comment was made that the human rights issue continued to be polarised by themes such as colonial heritage. Whilst colonialism was not the sole determinant for some of the human rights challenges, it was generally seen to have altered the course of Africa's destiny and had absolved any form of agency from Africans themselves in how this history found itself today. Africa cannot be viewed as unique and different from the rest of the world. The colonial heritage was not entirely negative; for example, it provided universities for students. Attorney Pixley ka Isaka Seme (founder and President of the African National Congress and the first black South African lawyer) had acknowledged that polarising the past and viewing Western modernity with disfavour were not necessarily the answer in addressing the human rights challenges.

Some African kingdoms had become embroiled in issues of inheritance and non-inheritance. In some instances the kings had not delivered and constantly blamed the state for their problems. A question was raised as to who should have given the kings the power to rule.

Ms Sooka was asked whether the African Union could be trusted when the atrocities committed by its members were considered. In the Democratic Republic of Congo and Rwanda, Burundi and Uganda, many human right activists had been killed, but this was not openly addressed. The challenge was to support leaders who promoted human rights, and a call was made for activists to challenge the AU for the protection of those who advocated human rights.

The Rwanda Tribunal appeared to be a political masquerade, as the Rwandan president's behaviour was questionable. The question was posed to Prof Majola as to whether Rwanda was succeeding in terms of human rights. Colonialism had contributed to the violation of human rights, and neo-colonialism was currently being practised, people were being exploited and human rights violated. The responsibility to promote human rights lay with states. Sovereignty states could ratify certain provisions of international human rights, but the provision of non-binding international human rights instruments could make it easier for a state not to ratify certain provisions. This highlighted the need to domesticate international laws that governed human rights.

States should align their roles with international practice. Most African constitutions had entrenched a bill of rights, but many were choosing which rules they abandoned or retained. Uganda was a Christian country, yet Ugandan law incriminates homosexuality. Further, it was mandatory for a woman's evidence to be corroborated as women were considered liars. States wanting to move forward would need to understand that colonialism could not be blamed in its entirety for current ills and that they would have to take the necessary steps to initiate change.

Comments were made that while the role of colonialism in the country's history would need to be considered, the current role of neo-colonialism could not be ignored. The question of how neo-colonialism had been perpetrated through institutions such as the World Bank, was raised and the role that science and technology had played. The choice to classify people in Rwanda had been a scientific observation, and in South Africa the earlier laws of segregation were related to quarantine and health, which were also scientific observations. The role of science as an instrument of imperialism would need to be critiqued. Ms Sooka responded that colonialism had taken away the agency of people not only on the African continent but in many other places around the world where it had existed. Whilst the legacy of colonialism should not be ignored, it should not be used as an excuse for not dealing with our current problems. Africans,

and especially South Africans, would need to understand where they came from and the challenges that had arisen from colonisation. Human rights boundaries were changing and the human rights community would need to commence looking at socio-economic rights in order to address the challenges ahead and look at the broader contours of human rights. The human rights horizon would need to be expanded to look beyond the narrow focus.

Judge Goldstone responded that it was a mistake to use colonialism as an excuse. There was a tendency to blame many of the country's own faults on colonialism, racism and apartheid. Such concerns were valid, but it would be wrong to keep falling back on them as excuses. The country would need to be positive and forward-looking and would need to build on the best of the past and reject the worst.

With regard to the defossilisation of principles of customary law, Adv Ameeria reported that the Human Rights Commission had recently investigated the plight of the Khoisan people who had complained about the treatment that South Africa had meted out to them post-1994. Although Africa was recognised as the cradle of civilisation, the continent was not tapping into its indigenous resources to find the truth behind the various discourses. In 2015, the Human Rights Commission had invited all 54 states of the African continent to talk about the issues of LGBTI people and to find solutions in line with the universal principles of human rights (which are underpinned by dignity). Regrettably some of the African countries had not supported the resolution. Furthermore, the contributions of some government officials had been made in their personal capacities, and not that of the state, for fear of losing their positions. Discussions offered a free space to voice opinions on human rights issues, including those of lawyers and scientists.

Reference was made to the hijacking of kingship when the Constitutional Court had ruled that in accordance with the community's findings, the kingship would be given to the first-born child, whether this was a boy or a girl. Against the background, that globally the human rights space was shrinking, lawyers, human rights organisations and scientists would need to fight back to entrench the right to discuss, debate and find solutions to address the discourses of the past for the benefit of South Africa, Africa and the rest of the world. Many unresolved issues remained regarding past injustices, and it was incumbent on science and law to find solutions.

Prof Majola responded that whilst South Africa was considered to be one of the most advanced countries on the African continent, citizens still voted according to their loyalties and not according to what they wanted. In order to erase the problems in the country the importance of redressing the colonial past would need to be addressed. As to the question of whether the International Criminal Tribunal for Rwanda (ICTR) had achieved anything, the ICTR had indicted a total of 95 individuals and had reinforced that international crimes could not be hidden behind the impunity of the political elite. Unaccountable governments had been able to hide behind sovereignty to justify mass atrocities, and African citizens had often been the victims with very little recourse. This had proved the need to secure a culture of non-impunity for the leaders of the future. Binding and non-binding international agreements and the role that non-state actors and civil society played remained a challenge and would need continuous advocating for all states to adhere to treaty principles.

Judge Goldstone responded that non-state actors and civil society play a crucial role in binding and non-binding agreements and that 'good' laws would not have been achieved without input from civil society, in particular from women's groups. One of Africa's problems was that many leaders did not want to recognise the power of civil society and did not like the competition that civil society posed. Victims wanted justice and accountability, but leaders were afraid of the consequences. Therefore the role of civil society was imperative to the betterment of South Africa and Africa in moving forward.

Ms Sooka advised that the AU was made up of member states and therefore advocacy at domestic level would need to be applied in order to change the efficacy of the organisation. There had been seminal changes within the AU, as seen by the number of progressive charters. She cited the example of the setting up of the first African Commission of Investigation, chaired by the former president of Nigeria (Olusegun Obasanjo), the court in Senegal set up through a resolution and agreement with the AU that had tried Hissène Habré and the Chad domestic court set up to try and convict Hissan Habré's head of intelligence. South Africa had affirmed its obligations under the Rome Statute, but the legal system still lagged behind, highlighting the need for the input of civil society.

Socio-economic rights had been treated very differently in Africa. The international community had taken 15 years to lose the words 'second generation rights' and to go to the heart of the indivisibility of rights, yet in Africa all charters speak about the socio-economic rights dimensions. The International Covenant on Economic, Social and Cultural Rights was only signed 21 years after President Mandela had signed it. The Human Rights Commission and government had set up a steering committee to ensure that South Africa complied with its obligations. This had been an education for government officials as many of them did not believe that the covenant applied to them. One of the tragedies in South Africa was that the courts had dealt with very few socio-economic cases.

Ms Sooka stressed that socio-economic rights were at the heart of inequality in South Africa and that more lawyers should take on such cases and take them up in court.

Prof Broadbent advised that whilst the forum had discussed the promotion of human rights in Africa, the question of the content of human rights was important. It was noted that it would be necessary to apply pragmatism, shift away from ideology and consider how society could move forward by conceptualising human rights related to gender, race and age in a manner that worked well in interactions. Human rights set a standard. Sexual rights had been ratified by international instruments, but people would need to subscribe to these values.

Ms Sooka reported that many countries did not apply the principles of human rights, especially in relation to sexual disputes and sexual orientation, despite having ratified a number of international covenants and treaties. Ms Sooka referred to the establishment of the first independent expert on protection against violence and discrimination based on sexual orientation and gender identity when South Africa had betrayed its human rights values by abstaining in a landmark vote at the UN Human Rights Council to appoint a global LGBTI watchdog. This highlighted how lobbying for advocacy in a country could change the country's position. Equality and dignity could be taken for granted and would not change the laws and policies of a country. People's basic beliefs in LGBTI issues posed a challenge. Mothers of children in the LGBTI community would need to become part of the advocacy agenda in order to protect and advocate for this group.

Prof Broadbent commented that communities would need to agree on which rights should be recognised for the LGBTI people and that South Africa would need to look at the roles that advocacy and civil society could play in realising these objectives. The decolonisation agenda would need to be aligned with the assertion of human rights, and this should be the subject of further discussion. Reparations were characteristic of the African philosophy of recognising group status. There had been calls for an extension of the rights framework, yet there was a lack of compliance with basic fundamental rights.

SESSION 3A: ORAL PRESENTATIONS

(FACILITATOR: DR NATASHA ROSS, UNIVERSITY OF THE WESTERN CAPE)

Subtheme: Human Rights in Africa: Context and Universality:

Dr Hein Lubbe (North-West University)

Title of Presentation: South Africa's Failure to Arrest and Detain Al-Bashir for Surrender to the ICC: A Human Rights Issue?

In June 2015, South Africa hosted the Summit Meeting of the African Union. The Sudanese President, Omar Al-Bashir, under an arrest warrant of the International Criminal Court (ICC) for, *inter alia*, genocide, attended the summit. As a State Party to the ICC Statute, South Africa was under a duty to arrest Al-Bashir, but South Africa also had a duty under customary international law and treaty law, not to arrest Al-Bashir. The failure of the South African government to arrest Al-Bashir demonstrated that the country had sided with Africa's tyrants, and not their victims. Human rights groups called on the South African government to comply with the ICC arrest warrant for Omar al-Bashir.

A discussion followed Dr Lubbe's presentation.

Dr Lubaale (University of Pretoria) commented that human rights would need to be determined by both the views of the majority and the minority and would need to include the rights of LGBTI people. With regard to the controversy regarding immunity for state officials, South Africa should be bound by the provisions of the ICC Statute, which it had ratified. If the Malabo Protocol were ratified, it would allow immunity to heads of state, which would be in conflict with ICC Article 98 and would underscore the disconnection between international law and the roles of states.

A question was posed regarding the inconsistencies in international statutes and the relativity between the Al-Bashir case and the Julian Assange case. International law had not been able to reach consensus on how the Assange issue should be dealt with. There was very little difference between this case and the case of Al-Bashir. Dr Lubbe responded that situations needed to be considered on their own merit. In his opinion there had been no conflict in the Al-Bashir case as the Security Council had passed a resolution for his arrest. National courts had exploited the scope of international regulations to create the opportunity to allow immunity before national courts. States acted according to their political will and thereafter tended to try to justify it with international law; hence they used jurisprudence and authorities with different viewpoints to create conflict. The Al-Bashir case could thus not be compared with the Julian Assange case.

Dr Lubaale responded that whilst South Africa was party to the ICC Statute, South Africa could choose which obligations it would follow in terms of its domestic law. The UN Charter was therefore in conflict with the ICC Statute.

Dr Lubbe stated that South Africa had ratified the Rome Statute. The Implementation Act provided that South African courts had jurisdiction over crimes not only when they were committed in South Africa but also when they were committed outside the country. The Security Council had referred the Al-Bashir matter to the ICC, and therefore the ICC had jurisdiction. In the case of Al-Bashir, the South African government had caused confusion and conflict by entering into a hosting agreement granting immunity to Al-Bashir for the time that he attended the AU conference. International law and domestic laws were very clear on immunity and therefore there should be no conflict or confusion.

Ms Mudukuti (South African Litigation Centre) commented that it was often forgotten that African nations had been instrumental in the creation of the ICC and that domestic law was the founding principle of the Al-Bashir case. When the South African Implementation Act was adopted, there had been a deliberate decision to adopt Article 27 and not Article 98. The distinguishing factor in the Al-Bashir case was that whilst at the international level there was an arrest warrant issued for Al-Bashir, domestically that dispute did not exist.

Mr Sabelo Ndwandwe (University of Fort Hare)

Title of Presentation: Human Rights in the School System: A Narrative Study of Illegal Immigrant Learners

There is a tendency to distinguish between African and Western conceptions of personhood as a core foundation for human rights. Any attempt to reconcile traditional customs with democratic rights in Africa would depend on the recognition of rights and their relevance to traditional African communities. Dignity and equality apply to both the community and the individual, but the South African Constitution appeared to see dignity differently from the way in which ubuntu regarded it. The question was raised as to how African customary law would be applied if consensus had not been reached through majority rule.

A discussion followed Mr Ndwandwe's presentation.

The comment was made that perhaps dignity should be abandoned in favour of ubuntu. Whilst ubuntu shadowed Western notions of dignity or communitarianism, it provided a distinctly southern African lens through which the provisions of basic laws could be determined. Whilst ubuntu enveloped dignity and other values, it fundamentally denoted humanity and morality. Dr Lubbe responded that ubuntu could not be ignored and that there was a need to adapt current principles to reflect African values. Justice Yacoob responded that there was a relationship between theory and practice and that the question would need to be asked whether the theory was factually correct. Theoreticians claimed that there was conflict in ubuntu's understanding of dignity.

Mr Ndwandwe responded that the reparation systems in South Africa did not relate to equality, which undermined the theory of dignity, and in South Africa, policies were seen to favour people from previously advantaged groups. Whilst the country recognised past injustices, historical dignity was not recognised. Justice Yacoob disagreed and advised that the Constitution was founded on a society built from dignity, equality and freedom and not on the dignity of an individual. Whilst the value of dignity could be qualified and limited by law it was not true that affirmative action was inconsistent with the constitutional value of dignity. The three values of dignity, equality and freedom were grouped as one value and thus the question remained unanswered as to why theorists stated that the Constitution was contradictory to ubuntu.

Dr Nhlanhla Mpofu (Sol Plaatje University)

Title of Presentation: Recognition Theory as an Alternative Approach to Human Rights: An African Perspective

With the end of the apartheid era, South African borders had become porous, which saw the free movement of persons between countries of the SADC region. Children of illegal or refugee immigrants who had entered South Africa were often victims of structural violence that originated from an unequal distribution of power manifested through economic and social inequalities. In interviews with four high-school children of illegal immigrants from Zimbabwe, Malawi and Ethiopia, the study found that while the school system advocates human rights values, these do not seem to be applied to immigrant children. The study recommended that teachers should be required to empower all learners with knowledge of their rights.

A discussion followed Dr Mpofu's presentation.

A comment was made in relation to redressing the colonial heritage around the recent 'black hair' issue at schools. The question was posed whether teachers should be decolonised and whether a new cadre of teachers was required. Older teachers in schools had been trained under the apartheid system, when there were very strict rules on the hair styles of pupils. Dr Mpofu responded that curricula were a reflection of the political landscape of a country and that the predominant national philosophy was infused into the country's education system. Many teachers still subscribed to the old philosophy. Decolonisation

of curricula should be preceded by decolonisation of the mind. It was reiterated that schools were a reproduction of the community and that teachers were only the spokespersons of the community.

SESSION 3B: ORAL PRESENTATIONS

(FACILITATOR: MR JOSEPH MUNDADI, UNIVERSITY OF VENDA)

Subtheme: Redress of Colonial Heritage in Promoting Human Rights in Africa

Mr Marlyn Faure (University of Cape Town)

Title of Presentation: Genomics in the South African Research Context: Human Rights and the Discovery Genomics Initiative

The primary reference to science in the 1948 Universal Declaration of Human Rights is in Article 27, which stipulates the right of people "to share in scientific advancement and its benefits". This right includes the right to freely engage in responsible scientific enquiry. The Discovery Health Genomics Initiative (DHGI) relates to this human right. In 2015, Discovery announced that, in partnership with Human Longevity Inc., it would provide genetic testing to its members.

A discussion followed Mr Faure's presentation.

Prof Soodyall advised that approval would need to be obtained from the Department of Health for a test to be carried out. Over and above the economic issues, a major problem lies with the issue of informed consent. Although South African legislation seems to deal adequately with the issue of informed consent for the removal of human biological material from living and deceased persons for research/study purposes, informed consent relating to the participation in the research/study should be distinguished from specific consent relating to the future use of human biological material. This is an issue that is often overlooked with the man in the street not understanding the consequences of the project. South Africa's framework does not address informed consent for the future use of human biological material, unlike other African countries, such as Nigeria and Kenya. Second, there is a problem of who will communicate the results of a test to the participants as there are only 13 registered genetic counsellors in South Africa, both in the private and the public sector. This highlights the lack of capacity to unpack the information to the participants. How would this be handled in South Africa? For scientists operating in South Africa, most sampling has to be sent overseas to be tested. Research is done on a collaborative basis. The small average size of research grants in South Africa means that, the country cannot afford to support that research and therefore alternative funding has to be sourced. In so doing, the basic principles of researchers wanting to do research to support their careers and aspirations were broken. We do not adhere to corporate rules and principles that would be pronounced within the ethical frameworks. It is imperative that legislation in South Africa relating to the regulation of human tissue be amended to provide a clear and consistent message regarding any proprietary claims in respect of human tissue.

Prof Soodyall continued that the sequencing of the human genome had promised to usher in a new era in health management and intervention, but had raised more questions and provided few definitive answers. It was her understanding that Discovery Health had promised to protect the genomic heritage of the country, however most studies are conducted outside of clinical trials and proper management and are done at a pure population level where the person's genetic information is not correlated to clinical information such as MRI scans, etc.

Proper national oversight on the exportation of biological samples is necessary. Medical insurance companies should not be permitted to exploit South Africa's genetic heritage, yet the existing export permit system provides little in the way of ethical oversight and is more concerned with keeping a register of the movement of samples than ensuring that the system protects the rights of participants. Other than the requirement that the donor consents to the donation of the sample, it appears that there is no requirement for donor consent or Research Ethics Committee (REC) consent for export. The export permit system fails to consider the need for legal and ethical oversight of the preferences of donors on the use of either their sample or the rights arising out of the future use of the sample. Public trust is crucial to the success of bio-bank research, and the removal of biological samples in the absence of any oversight may be an invasion of that trust. Genomic bio-banking research also generates considerable data of enormous commercial value. The project has been the release of data to promote the advancement of science, however the South African regulatory framework fails to address the complex issues involved in data sharing. The current export system offers no ethical oversight of the transfer of the samples and data, and the protection of local researchers is not required by law. International collaborative research raises specific ethical concerns, particularly when collaborators are from high-income countries. Such collaborations should be allowed to flourish and can be of considerable benefit to South African researchers, but they must not be at the expense of the local researcher, and our regulatory framework must protect the rights of both the donor and the researcher.

Dr Natasha Katuta Mwila (Monash University)

Title of Presentation: The Pharmaceutical Trilemma: Profits, Urgency and Human Rights

The question of ethics, or lack thereof, in the pharmaceutical industry continues to be a basis for debate in the progression of science and human welfare. Pharmaceutical companies are under pressure to reduce the cost of medicine, and this can only be done through increased research and development. The core problem is that the current research and development system is dictated by commercial interests without taking the human rights factor into account.

Prof Soodyall commented that companies do not inform test patients that their information will be sold to other pharmaceutical companies. The South African export permit system for tissues currently offers limited protection for tissue donors. Biological samples cannot be exported without a valid export permit, and applications must provide proof in writing that the biological sample will continue to be used once it is exported. The process requires that a register be established of all samples exported to ensure that there is some oversight of the movement of samples out of South Africa. Gaps in the regulations must be addressed to protect the rights of participants and to curb forged international collaborations. The strict legislation has led people to find alternate ways of sourcing material such as physicians who accept company gifts or act as promotional speakers or writers on behalf of companies. Sometimes physicians have a financial interest in a medical company whose products they prescribe, use or recommend. In many instances, physicians are even paid by pharmaceutical companies to provide medical samples.

Miss Phemelo Motseokae (Tshwane University of Technology)

Title of Presentation: The Relationship between Science and Human Rights in Africa

A large part of the rural communities of the world still rely on traditional local knowledge passed on by past generations to be able to cope with their everyday life. Even up to the present time, indigenous knowledge has provided basic knowledge in agriculture and forestry, human and veterinary medicine, natural resource management, nutrition and other activities. Indigenous knowledge is entrenched in community practices and culture. Indigenous knowledge systems have long been undervalued, however, an increasing amount of research on indigenous knowledge systems is now coming to the fore but in these studies the role of gender is often neglected. Around the world both traditional and modern doctors acknowledge their areas of strengths and weaknesses from which they operate. They are genuinely concerned about the current distrust and the perceived paranoia between modern and traditional doctors.

A discussion followed Miss Motseokae's presentation.

Prof Soodyall commented that the issue of identity by group is very controversial and that she had been consulted on many issues by the South African San Council. Indigenous people have a close bond with the Earth and have a vast knowledge of edible plants. There is a rich body of indigenous knowledge embodied in Africa's cultural and ecological diversities, and African people have drawn on this knowledge for hundreds of years. One of the main assets of traditional people lies in the wealth of their ancient medical knowledge, but it is often difficult for them to get any payback from this. She gave an example of a law suit instituted by Roger Chennels who was the solicitor for the Khoisan people against the Council for Scientific and Industrial Research (CSIR) where a student had been eating *Hoodia gordonii* (which is an appetite suppressant). Scientists at the CSIR isolated the chemical ingredient of the plant and identified it as being the particular appetite suppressant property. The San had been giving away their secrets for years without any benefit and had stated that it did not matter as they lived off the land. The CSIR and the San Council have since signed a memorandum of understanding acknowledging the rights of the Bushmen as "custodians of the ancient body of traditional knowledge" and the CSIR's role in developing the technology involved in extracting the plant's anti-obesity properties. Furthermore, the San will benefit financially from commercialisation, which will be shared between all the San communities within southern Africa.

Prof Soodyall advised that whilst fighting for the rights of people, the common good does not always benefit all members of the population. Benefit-sharing is a crucial issue with regard to the freedom and responsibility of individual scientists and in relation to the world scientific community's access to genetic resources and sharing of benefits arising from their use. Funders dictate how scientists should operate; publishers dictate in which journals the information should be published, but the communication does not go to the beginning of the cascade where the interaction between the primary researcher and the community happens. Engagement with the public is needed.

Ms Motseokae reported that Indigenous Knowledge Systems (IKS) need to be protected, documented and studied. IKS should also be widely disseminated to promote development. IKS should be embedded in all university teaching, research and outreach activities. This could be achieved by creating an institutional centre dedicated to IKS. The University of Botswana had recently created a Centre for Scientific Research,

Indigenous Knowledge and Innovation, which links scientific research with IKS. It had undertaken several surveys documenting IKS in the country and promoting IKS among communities. The universities of North-West, Limpopo and Venda in South Africa had also partnered to set up a Centre of Excellence in Indigenous Knowledge Studies. There are centres devoted to IKS in some other universities in Africa as well. Another model for institutionalising IKS is by creating a national centre. The Centre for Indigenous Knowledge Systems in Ghana is an independent, non-profit organisation; its mission being to examine, preserve, adapt and use the local knowledge of various communities in Ghana and the West African region. Similar centres have been created in Burkina Faso, Cameroon, Madagascar and Nigeria.

Mr Mundadi observed that benefit-sharing is applicable to all communities. He gave an example in Limpopo, where communities were hesitant to share their indigenous information with scientists as promises to share their scientific test results had not been realised.

A response from the audience was that Americans would take South African samples for testing without the knowledge of where they actually came from. They then claimed the plant was theirs and in some instances even patented it. The law states that the land belongs to everyone in South Africa and we should publicly announce when other countries possess our indigenous knowledge. Derivatives from an indigenous plants should also be acknowledged and result in benefit-sharing for communities.

Prof Soodyall noted that Americans had also tried to patent Rooibos.

Mr Mundadi commented that in Thohoyandou there are vegetables that help people with asthma; however no research is being undertaken on these vegetables.

Prof Soodyall commented that partnerships play an important role. Good synergy between community personnel and the health sector environment is needed to enable the life-giving properties of indigenous plants to be shared. Scientists and researchers should be going into communities and engaging with them to find out what their problems are and how research can be used as a tool to address those problems. The community would become a partner in the research and have a say in the design, which would give them some ownership of the project. Historically, communities ate a balanced diet based on what was available to them. Changing lifestyles had enticed people to move away from healthy lifestyles. We need to address this through drives and initiatives to educate the community to give people the choice of managing their personal health. The country's budget needs to make provision for the prevention of HIV through the rollout of antiretroviral medication and education. Medical aids often do not pay for preventative medicine. This is the paradox of medical care, and the regulations need to be changed.

Mr Mundadi closed by saying that young scientists need to constantly challenge government and heads of states to invest in research and development in the ongoing endeavour to advocate human rights in African countries.

SESSION 4: POSTER PRESENTATIONS

Delegates had the opportunity to view the poster presentations:

Subtheme: Human Rights in Africa: Context and Universality

The nexus between the 'your' rights and 'my' rights: The conundrum of human rights (Dr Chinedu Thomas Ekwealor).

The violation of human rights in the Democratic Republic of Congo: Is it the responsibility of the head of state or government or complicity with other international bodies? (Mr Joseph Mundadi, University of Venda).

The sustainable development goals as a mechanism for promoting human rights in 21st Century sub-Saharan Africa (Leonard Mbulle-Nziege).

Subtheme: Redress of Colonial Heritage in Promoting Human Rights in Africa

Human rights and science, can the two co-exist? (Ms Tendai Mafuma).

Medical tourism in Africa: Human rights and medical ethics perspectives (Mr John Mogaka, University of KwaZulu-Natal).

Advancing sciences and service of human rights in Africa (Dr Natasha Ross, University of the Western Cape).

SESSION 5: TRANSFORMATION TOWARDS SEX AND GENDER EQUALITY IN AFRICA: WHERE ARE WE?

(FACILITATOR: JUDGE RICHARD GOLDSTONE)

Panellists: Judge Zak Yacoob, Prof Christof Heyns (United Nations Human Rights Council), Ms Janet Love (National Director, Legal Resources Centre), Prof Barney Pitjana (ASSAf Council Member)

Welcome

(Judge Richard Goldstone)

Judge Goldstone welcomed everyone to the round-table conference. Unfortunately Commissioner Shireen Said (Legal Advisor on Human Rights, UNDP) was not able to attend, and Prof Barney Pitjana would be speaking in her stead. Prof Pitjana is a lawyer and theologian and a notable human rights academic and activist. He served as Chairperson of the South African Human Rights Commission from 1995 to 2001. He has contributed to the United Nations human rights and development programmes and also served as Director of the Geneva-based World Council of Churches Programme to Combat Racism for five years.

Gender and sex equality, whilst a global issue, is a very complex issue on the African continent. Transformation had been difficult and slow, but perhaps the most important block emanated from the fact that gender and sex bias, and racial bias were frequently subconscious issues in many people. When I was prosecutor of the Yugoslavia Tribunal in 1994, there had been widespread reports and evidence of systematic mass rape being used as a war crime in Bosnia. However, there was no international law under which people could be charged with systematic mass rape let alone rapes committed as a result of ethnic cleansing in Bosnia and Herzegovina. Whilst the Tribunal had jurisdiction over genocide crimes against humanity, the only reference in any of the laws to sexual crimes was in crimes against humanity. A lack of evidence had prevented the Tribunal from charging people with crimes against humanity. Through the contribution of women judges, prosecutors had been encouraged to be bolder in charging sex crimes such as rape and torture. As a drive from society and in particular feminist organisations, the law had been revolutionised, and through the Rome Statute and the International Criminal Court gender crimes were now comprehensively defined.

It is important to analyse the situation and for scientists in particular to discuss the way forward and to determine what steps could be taken to eradicate gender and sex bias.

Judge Yacoob responded that South Africa was widely viewed as the flagship of both southern Africa and sub-Saharan Africa when it came to transformation; however, the position in South Africa was not much better than in Africa. Transformation meant that a country would need to have the necessary laws and legislation in place and that attitude and thinking of people was driven by ethics. South Africa is experiencing a disconnection between the Constitutional values, the Bill of Rights and the values embraced by the people. For example, when Mr Julius Malema had engaged with a group of white lawyers, he said that in his opinion "White lawyers are more clever". He was accused of being stupid, even though government principals employ white lawyers. When we talk about gender inequality, whilst men generally regard themselves as superior to women, 90 per cent of women can also be accused of being their own suppressors as they generally think they are inferior to men and demonstrate that sense of inferiority in many ways. There is a difference between the public discourse and private views; whilst many people say they believe in sex and gender equality, what people say about the LGBTI community in private and in public differs. The Constitutional Court ruled that gay people could be married, but most people believed that that was a sinful existence.

The first step would be that every person should read the Bill of Rights to understand, embrace and live its values. A social revolution is required to ensure the change in opinion as legal judgements in these matters are not resolving the issue. This is where scientists can play an important role. Psychological, sociological, anthropological and other researchers need to identify where the problem lies and devise a multi-faceted strategy to address the process of bias transformation. Scientists need to provide evidence to explain why people are who they are, as this work cannot be undertaken by lawyers.

Prof Christof Heyns (UN Human Rights Council)

In my investigations of executions, the issues of LGBTI communities have been frequently raised. Five countries still impose the death penalty for same-sex relationships. When looking at the issues around the LGBTI community, it is important to move towards a more tolerant situation. The ideas of non-discrimination, empathy and acceptance are inherent in the human rights project. The ideals of equality and discrimination permeate the project in the recognition of society's rights. The movement towards greater acceptance of sexual orientation, whilst having been recognised, must come from the bottom up. The UN and AU have now commenced moving on this spectrum. The UN has recognised the rights

against discrimination on equality, and it is clear that same-sex relations do not fall within the category of serious crimes. However, there has been a lack of investigation into cases of violence, killings and social-cleansing projects. The activities around forced sterilisation or personal examinations are considered to be under the bracket of torture and the degradation of human beings. The right to privacy has often been invoked, especially in regard to same-sex relations, which has resulted in them not being criminalised in terms of the International Covenant on Civil and Political Rights. With regard to hate speech, laws prohibit the incitement and discrimination of other identities including sexual orientation and gender identity. LGBTI persons are entitled to the same protection against discrimination and incitement as everyone else. In Russia, for example, messages regarding people's sexual orientation are seen as a violation of freedom of expression. The same applies to limitations placed on assemblies and gay parades within the UN system.

In its transformation process, South Africa has formally recognised sexual orientation as a human right. However, there is an uneasy position on this issue within the African continent which had seen South Africa abstaining in a key vote in the UN Human Rights Council to appoint an independent watchdog on sexual orientation earlier this year. This demonstrated that sexual orientation was still one of the cutting-edge issues of today that faced the human rights project in finding its full recognition of common humanity. The acceptance of this right would need to be encompassed into the right to equality in order to accept that it was a logical conclusion of transition within the transformation process.

Commissioner Ms Janet Love (National Director, Legal Resources Centre)

Scientists see everything in life as diverse. Everything in life needs to be tested. The notion that science can be abused to justify the discrimination of people can be seen as a failure of its own discipline. This was highlighted in the despicable behaviour that the international sports community wrought on Caster Semenya. People who had no knowledge and no basic scientific evidence for what constituted the number of hormones to identify a person as a male or female subjected her to scandalous gender tests. She fought for her sport and victory and claimed her dignity in South Africa. This case is a perfect example of the importance of the scientific community in solving the issues of sexual orientation. The President of Uganda in attempting to justify his anti-gay laws stated that scientists had demonstrated that it was not natural for people to be gay. The scientific community needs to rise up and challenge such a statement. Faith-based communities also need to challenge the problems that underpin this discrimination. The LGBTI community has begun to embrace the community of scientists who are researching the understanding of the make-up of a human being. The problem is not about pathologising LGBTI identity issues, but about embracing humanity in its diversity. With regard to people seeking asylum in South Africa, the country has not fulfilled its own legal obligations in the way people are treated. When it comes to gender equality, South Africa still sees forced marriages of children under the guise of a distorted customary practice, and customary leadership has not risen up to address this issue. Scientists need to point to the way people should embrace what is good in custom. Those kinds of abuses should be discarded to ensure the safety of people, particularly women. Similarly, with traditional male circumcisions, scientists have begun to take responsibility for addressing the issues.

Prof Barney Pitso (President of Convocation of the University of Cape Town and ASSAf Council Member)

Science needs to embrace the question of sexuality diversity, particularly gender inequality of women. During my tenure at the AU, the Protocol on the Rights of Women was addressed in an attempt to understand and attend to complaints of serious gender discrimination and address the historical issues of culture and religion. At that time, Boko Haram had kidnapped 200 schoolgirls in northern Nigeria. Young women who attended universities and colleges in Kenya were being targeted and attacked. Human trafficking is still taking place, particularly women and girls for sexual gratification and business. In South Africa, the rape culture is frightening and is still happening. Yet most African states were signatories to the international human rights instruments and to the International Criminal Court. The fundamental issue related to transformation is the reality that legal instruments, constitutions, Bills of Rights, etc. are not transformative. In terms of the ICC, witnesses from Kenya were not able to support their statements. They were terrified for fear of what might happen. Women have been at the forefront of transformation in South Africa, yet their contributions to social change are often under-represented. Women make up 51% of South Africa's estimated population of 50 million people. The country's empowerment of women is about addressing gender oppression, patriarchy, sexism, racism, ageism and structural oppression. South Africa needs to create a favourable environment that will enable women to take control of their lives. South African women face huge challenges such as rape, verbal abuse and human trafficking. Others face the different issues of ensuring that they provide food for their families. Women in the apartheid era paved a way for everyone. They are known as the backbone and pillars of strength for many households, both in rural and urban areas, but transformation still has a long way to go in allowing women to exercise their powers. It is vital that women themselves determine the questions of sexuality and equality of women. Unfortunately many women who want to be like men lack ambition. Africa as a continent needs to recognise the reality of empowerment of women in realising gender equality.

A comment from the audience was that whilst women were perceived as their own oppressors, the legacy that women had inherited was that they should be seen but not heard. Women had been side-lined in most activities and had been taught to address their looks and dress codes in order to impress their women counterparts, and this had become an ongoing culture in women. Many people were trying to help women discover themselves, but this remained a psychological issue in that women had been brought up to believe that they were inferior to men. The suggestion was made that men of all races should also be educated on the value of women in society. Women would need to be taught how to communicate their aspirations to society to ensure the reconciliation of their rights.

Judge Yacoob agreed that whilst men were the root cause of the problem, and the issue should be addressed by both males and females, the issue of it being a psychological problem was definitely understated. Multidisciplinary research would be needed to work out exactly what the problem is and employ the right expertise to solve it. It was generally agreed that culture was used as an excuse by men in general and by women to a lesser extent. The main problem in South Africa was that only a very small population actually believed that women were equal. The process of transformation would require collaboration with every individual to ensure the empowerment of women.

An observation was made that from a science perspective, the mind is a very powerful tool. Much hard work would be required to change the thought rationale around equality and race and to complete 'the long walk to freedom'. Black people tended to believe that because they were black they were underprivileged; yet in many instances they were not taking advantage of the opportunities available. Whilst scientists could address the scientific issues around gender inequality, psychologists would need to sensitise people to see the other side compared to what they had been indoctrinated to think. Despite the Constitution, the Bill of Rights, lawyers and human rights organisations to fight for gender equality, the mind-sets of people would need to change to understand that they were suppressing themselves and being racist towards themselves.

Ms Motseokae (Tshwane University of Technology) advised that she was currently working as a member of the Accelerated School Infrastructure Delivery Initiative (ASIDI) schools project support unit at the Department of Basic Education. She had been subjected to racism during the apartheid era at her first workplace where she had not been provided with toilet facilities and had been forced to take tea and lunch hours with labourers. She later left the company as the issue could not be solved and joined a consulting company where she was required to make tea and answer the phone because she was a woman. Over the last 17 years she had made it her mission to help young people and to show them that they should not allow themselves to be unfairly treated. She stressed that all people had a duty to personally task themselves to make changes within the different environments in which they found themselves.

The comment was made that to a certain extent the Constitution and Bill of Rights had progressively been a 'get out of jail' card. The question was posed whether this pattern should be allowed to continue. The power, pressure and discrimination that were continually being spoken about had originated from insecurities within society; these insecurities would need to be seriously addressed.

Prof Pityana advised that the issue of gender equality was around the empowering of activism in the political sphere. Studies and research undertaken on human rights would be meaningless unless they were accompanied by a transformative mindset and way of viewing the world and that a radical commitment to change the environment was required.

Prof Heyns advised that in terms of the human rights project, creative ways of education would need to be sought such as science competitions. Universities would need to change the role they played to maintain their ability to provide education in society.

Judge Yacoob reported that people's minds were the results of social and structural experiences in society. He condoned the thought that people, especially women, were able to pull themselves out 'by their own bootstraps'. However, concern was expressed that very few women were able to do so. Whilst there were exceptional and strong women in society, the challenge lay with putting measures in place and to execute a strategy in society to realise this.

Ms Love commented that it was not true that aspirations did not have a strong thread throughout the Bill of Rights. Socio-economic rights were related to the economy and getting things right in moving towards aspirations. The idea that one could be accused of wanting to be treated differently was offending. People should impart in their daily lives that the right to be treated with dignity was inherent in humanity. This would change psychologies and create a foundation for people to be strong.

Vote of Thanks (Prof R Diab, ASSAf)

Prof Diab expressed a formal vote of thanks from ASSAf to the panel for sharing their expertise and experiences. Thanks were extended to the Foundation of Human Rights for sponsoring the dinner, the audience for their participation, and to the ASSAf staff members who had organised the event.

DAY 2

SESSION 6: PANEL DISCUSSION

(FACILITATOR: DR DALIA SAAD, RESEARCH ASSOCIATE, INSTITUTE FOR GENDER STUDIES, UNIVERSITY OF SOUTH AFRICA AND OWSD MEMBER)

Theme: The Rights of Career Women in STI

Panellists: Dr Catherine Kegakilwe Koofhethile (University of KwaZulu-Natal), Dr Palesa Sekhejane (Human Sciences Research Council), Ms Esther Ekua Amoako (Rhodes University)

Dr Saad welcomed the panel and audience to the second day of the conference.

Dr Catherine Kegakilwe Koofhethile (Postdoctoral Fellow, HIV Pathogenesis Programme, University of KwaZulu-Natal)

Dr Koofhethile from Botswana, has a Masters degree in immunology from the United Kingdom. She worked at Oxford University as a graduate research student and had made contributions to five publications on HIV research. She had recently obtained her PhD in Immunology from the University of KwaZulu-Natal.

Dr Koofhethile stressed the need to understand why people became infected with HIV and what immune responses they had which is why she worked on HIV during her PhD studies. Whilst some people lived well with HIV, others did not and hence her research on HIV pathogenesis. The majority of the people involved in her study were women. Her research had contributed to a better understanding of the mechanisms of HIV control during the chronic stage of infection and had opened up new research questions relevant to future vaccine design studies. She had presented her data in a number of countries around the world. She had attended the 64th Lindau Nobel Laureate (Medicine and Physiology) meeting where she had met the Prof Françoise Barré-Sinoussi, the recipient of a Nobel Prize for her discovery of HIV. Dr Koofhethile advised the audience that she would be moving to the USA to join a laboratory at Harvard University as a postdoctoral fellow to study HIV evolution using current technologies and bioinformatics tools.

There was a need to create a balance between males and females in the fields of science, technology and innovation. Women need to be provided with the right tools in order to achieve a balance for more women to enter and become leaders in science, engineering and technology. A changed mindset in young girls would need to be encouraged, and they need to be educated about women in science. Leadership programmes for women should be encouraged to motivate and support upcoming scientists to ensure that they become role models for other young girls.

Whilst both men and women had access to the same opportunities for research grants, competition was rife, as was the pressure to deliver and publish in the world of science. Support mechanisms were needed for women having to juggle family responsibilities and academic commitments. Examples of such support could be grants that would cater for the needs of women at different stages of their life or career. Grants for women should be of a longer duration than for males to allow for the possibility of women becoming pregnant and starting a family. In many instances grants ran out before a woman could take her final examination and contracts ended prior to her obtaining her degree. Female remuneration should be investigated as women in science often received lower salaries than men. Incentives should be provided for women to play a mentorship role. Women generally held jobs that were less prestigious and lower paid than men. It was also evident that there was a decrease in the number of women compared to men as people moved up the upper echelons of the system of power and prestige. Research would need to determine the cause of this problem in order to achieve a balance of gender.

Dr Palesa Sekhejane (Human Sciences Research Council)

Dr Palesa Sekhejane is a medical technologist and holds DTech in health sciences from the University of Johannesburg. She specialised in biophotonics and nano-medicine and had published extensively in her field. She is currently a research specialist at the Human Sciences Research Council (HSRC). She was part of the first Gender Summit Africa in 2015 and a member of the Economic, Social and Cultural Council that

served as an advisory body to the AU on the Women and Gender Cluster. She is also a member of the South African National Chapter of OWSD.

It was a well-known fact that the sciences have been dominated by males and that historically women had been excluded from the sector. The 2015 global survey indicated that women were less likely than men to have access to the resources to conduct research in the science field. In the African landscape, women in many instances were still excluded from the sciences. In the apartheid era the challenges in South African were multi-layered and added to the inequalities that people faced, particularly in the case of women, i.e. gender inequity and equality as a further layer. Whilst there had been a noticeable increase in the number of women scientists, particularly in senior positions, the change had been slow, but encouraging. Furthermore, the environment did not sufficiently encourage women to participate in the sciences. In fact, most of the firms are not ready to have women scientists as can be seen by different salary scales and less representation at senior positions. In many instances women were employed purely to meet the quota but are not placed in decision-making positions.

Dr Sekhejane advised that male patriarchy had become a norm and dominated the scientific arena. It appeared that a culture had developed where men were more superior to women; this culture would need to be reversed. Male domination could not be seen in terms of numbers only; it also played a role in the psychological behaviour of both women and men. Studies had found that professional women tended to have biases and leaned onto meritocracy. It was imperative to understand that it was not only men who excluded women but that women were also responsible for the exclusion of other women. Biases generally operated within the adaptive unconsciousness. This could be seen where leadership had fallen short in the promotion of women into the system and in the evaluation of people in absolute terms such as the number of publications a person had produced. People tended to stick to the familiar and thought of males as scientists before women. Human resources personnel tended to be insufficiently trained in the understanding of a selection process which allowed for female scientists to get lost in the system. This had resulted in women scientists searching for opportunities elsewhere across the globe. Mentorship was critical not only for scientists but also for institutions and universities to drive home the message of why women should participate in the sciences.

Sexual harassment is an ongoing occurrence in the workplace and at educational institutions. In many cases sexual harassment led to the end of a woman's career. However, studies had shown that in some instances the male perpetrator had remained in his place or work and that the victim had been forced to move. The practice known as 'passing the trash' was a common term used in academia to indicate that a harassing/abusive teacher ('trash') was passed to another institution following sexual abuse. These injustices would need to be addressed and brought to the surface in order to reduce the number of women leaving their fields of study. With regard to family dynamics and the progression of women in sciences, engagement with families was crucial in order for families to understand and encourage the role of women in science. White people generally enjoyed a support system at both their homes and at their institutions and were not pressured to complete their degrees as black people were. This assumption had led to the belief that some counterparts were favoured by the structures whilst others were not, which contributed to campaigns such as the "Fees Must Fall" issue.

Dr Sekhejane concluded that the thought culture would need to be taken seriously in order to promote and encourage women to participate in scientific careers. Female scientists should strive to transition from mentee to mentor status in order to affirm their capabilities. She cautioned that being a scientist did not translate into being a leader; leadership would need to be incorporated into the various campaigns undertaken to promote the female role in science.

Ms Esther Ekua Amoako (Rhodes University)

Ms Amoako holds a BSc in Agriculture Technology and an MSc in Environmental Resource Management. She is currently a Lecturer at the University for Development Studies, Ghana and a student at Rhodes University where she is undertaking studies towards her PhD in Environmental Science. Ms Amoako is passionate about gender as a cross-cutting subject in a variety of issues including agriculture, environment and water and sanitation.

In general, career women put their career first and pay less attention to marriage and children. In the African context, however, career women attempt to balance their lives around a career and as a wife and mother which becomes more difficult in pursuing career development. Whilst career women are entitled to women's human rights such as the right to information, association or movement, participation and so on, the question however, remained whether they made use of these rights. With regard to the right of association, the OWSD and other programmes provide a networking platform for women scientists through which information and experiences could be shared. Women have the right to movement. In the past, women found it difficult to move out of their homes; nowadays, women were able to move around and interact with other women physically and also through the use of IT. There were still relatively few women full professors in Ghana, South African universities and several other universities in Africa, which

highlighted that women were not doing enough to ensure the right of participation in the country's learning institutions. The right to education had seen much progress in Ghana; however, the access to information was an ongoing problem as some learning institutions did not have adequate library references and internet systems.

Ghana has an affirmative action system (different cut-off points for male and female) for university admissions, which has yielded positive results. However, the increase is more in humanities than in the pure sciences and engineering. Early this year, she was nominated for the Engineers without Borders African Leadership Fellowship also known as Kumvana, where she had the opportunity to visit Women in Science and Engineering at the Memorial University, Newfoundland and Labrador, and Dalhousie University, in Nova Scotia, Canada. They have various programmes in place to get more girls in science, namely, the Summer School Programme where young girls interested in science were identified and mentored by professionals in science and engineering for the duration of the programme. Other programmes were the Big Sister Mentorship and the Speed Mentoring Programme. Such programmes would need to be encouraged in South Africa as it was imperative to make science and engineering attractive for young girls and women and also expose them to leadership programmes that would assist them to know their rights and take advantage of available opportunities in order to progress through their careers.

Dr Saad thanked the speakers for their contributions and recommendations and shared the vision to encourage women to pursue a career in science.

Plenary Discussion

Dr Bulani (ASSAf) agreed that men should be more involved in raising children to balance the burden in the family, but then it could be argued that extended-period grants would need to be designed for both men and women. Black South African men did not seem to have advantages in universities, as the majority of black males employed in these institutions were not South African. It also appeared that white men and women received preference in universities and industry.

Mr Mundadi (University of Venda) expressed the opinion that the OWSD discriminated against women pursuing careers in human and social sciences in that they only promoted women in natural sciences and engineering. This would need to be addressed in order to prevent discrimination.

Judge Yacoob commented that on the issue of reasonable remuneration, women had always received lower salaries than men, but this should not be appropriate for women in science.

Dr Koofhethile reported that with regard to the designing of grants to favour women, the reality was that many women were single mothers without assistance from the fathers of their children. In cases where a woman was unmarried, the mother would have full responsibility of the children which placed a greater burden on her.

Dr Koofhethile advised that the UKZN College of Health Sciences was attempting to increase the number of black South Africans in the college, however, most senior positions were still held by non-South Africans. The university was making every effort to empower more black South Africans. Staff development programmes at the university targeted black South Africans.

Dr Sekhejane responded that in her opinion the system in South Africa was racist and therefore the system employed non-South Africans who were assumed to be voiceless. Generally, members of the white minority occupied the elite positions, followed by black non-South Africans at middle levels. The risk inherent in this situation was that non-South Africans could allege that South Africans were being xenophobic without understanding the historical issues. The question of how many black South Africans in science had been employed in the institutions tended to be avoided. In order to understand and address the cross-sectoral challenges of poverty and inequality in South Africa, it would be necessary for emerging scientists to adopt a multidisciplinary approach. It was the country's duty to ensure that science, engineering and innovation skills were available among its own population. It was also the country's duty to retain people so that they did not look abroad to further their research opportunities.

Ms Amoako said while the issue of affirmative action was debatable, a conscious effort would need to be made to bridge the gap of female enrolments into tertiary institutions. In the northern region of Uganda, one school served numerous communities. Girls were required to wake early to fetch water and to help at home which affected their performance at school. Various programmes had been introduced, such as the provision of bicycles for young girls that would enable them to attend school after their chores at home were completed. A conscious effort would be required from all parties to ensure that more young girls attended school.

Mr Maphosa believed that the view that the fight against patriarchy would have to be fought on the home front was a dangerous topic. Some people who attended conferences and were exposed to the message that they would need to demand their rights were victimised in their homes as the message stirred up conflicts of interest. He cautioned that women in particular should be mindful of being too forceful.

A member of the audience commented that as an African woman she was expected to raise her family before she pursued her passion or career. In Nigeria, many girls wished to pursue a career and thus were not getting married as they did not want to start a family until they had completed their PhD. While grants were available to women, they did not favour older women; the age restrictions on grants for women should therefore be removed.

Mr Faure (University of Cape Town) expressed the view that South African women were generally more disadvantaged than men irrespective of their race.

A member of the audience commented that many women were still marginalised and excluded in science and related disciplines, even though they did not have any ambitions to marry or become pregnant, and suggested that tailor-made grants for postgraduate study should be investigated. The problem remained, however, that very few men took care of their children and that women had to carry the responsibility. Tailor-made grants would thus require careful consideration of the circumstances of the applicant.

A member of the audience commented that the plight of women was constantly being discussed, but the plight of men would also need to be addressed as both genders were required to address the complexities and challenges in the country. Women should not forget about boys and men who in many instances had lost their ambition to provide for their families. Whilst South African women were becoming more empowered and starting to exercise their rights, men were not being heard or acknowledged.

Dr Sekhejane called upon ASSAf to address the rights of men by ensuring that they were placed in prominent roles in science and addressing the injustices to which they were being subjected in education institutions. She acknowledged that whilst it was necessary to address the past inequalities of women who were engaged in fighting both race and gender inequalities, the plight of boys and men should not be forgotten.

Dr Saad commented that it was not possible to generalise about patriarchy, since some women had a supportive husband and family. Women should not look only at their own experiences. As a Sudanese Muslim, she had been raised in a conservative community with strict rules about the rights of women. It was important for society to understand that women could be successful in a career, whilst simultaneously raising a family. Dr Saad was of the opinion that a special grant to single mothers only was not the issue at hand. Women and men had common responsibilities for raising a child, but certain aspects such as breastfeeding could not be undertaken by a man.

SESSION 7: ORAL PRESENTATIONS

(FACILITATOR: MS ERROLYN LONG, UNIVERSITY OF SOUTH AFRICA)

Subtheme: Relationship between Science and Human Rights in Africa

Dr Emma Charlene Lubaale (University of Pretoria)

Title of Presentation: Laws Inherited from Imperial Powers and the Rights of Women in Africa

Many post-independent African countries had endured conflict and atrocities due to the crumbling of the social fabric, especially gang rapes on young girls and women. The ICC had taken steps to prosecute some of the perpetrators, but many of the cases had been referred to the national courts due to the lack of capacity in the ICC. Under the ICC the 'complementarity principle' had been applied to courts at national level; however, national courts were not prosecuting cases, which could lead to impunity in terms of rape. In rape cases, whilst medical evidence was generally sought, corroborative DNA evidence or eyewitness accounts were being applied in order to substantiate the evidence supplied by women. Law and science are cross-cutting and need to be exploited to defend the rights of women.

A discussion followed Dr Lubaale's presentation.

Prof Soodyall commented that as a geneticist she was fully aware of DNA profiling. She asked Dr Lubaale whether her studies of DNA testing had uncovered problems in the testing methodology or in the acquisition of samples for the profiling tests.

Dr Lubaale responded that the gap was in the acquisition of samples, and there had been no problems with the testing.

Prof Soodyall observed that it was important for people to know about the authenticity of DNA profiling. In South Africa, a two-stream system of DNA profiling existed. The Department of Home Affairs uses the National Health Laboratory Service to do DNA profiling for people who apply for residency in South Africa based on heritage, but in criminal cases the South African Police Services' DNA laboratory carries out the DNA testing.

Judge Goldstone observed that systematic mass rape was a very different crime from rape in a domestic or national situation. In Bosnia and Rwanda, systematic mass rape was used as a form of warfare. In the former Yugoslavia, one of the main motives of the genocide was to soil women so as to make them unacceptable as future spouses. In Rwanda, systematic rape had also amounted to an act of genocide. Rape survivors in Rwanda were often willing to give evidence as they saw their rape as part of a continuum which involved the bombing of mosques, separating and murdering men and raping women. The idea of consent as a defence against rape as a war crime was ridiculous. The differences between domestic rape and systematic mass rape needed to be recognised and understood.

Mr Mundadi (University of Venda) referred to the violation of women's rights through mass rape in the Central African Republic. He questioned why in that situation, individuals were charged with rape but not the state and asked how lawyers and human rights activists considered the issue.

Dr Lubaale responded that the ICC prosecutes individuals. States could not be prosecuted for the support they had given to mass rape and other atrocities committed in other countries. However, cases against states could be adjudicated through platforms such as the International Court of Justice. There had been cases of select justice where the ICC had pursued a particular category of individuals such as rebel groups. Most of the proceedings before the ICC had not focused on the national defence forces that had committed atrocities and therefore these forces had not been prosecuted. She emphasised that the ICC depended on states to arrest individuals and members of defence forces. It was also very likely that states would not arrest or execute members of rebel groups as government officials were often cited as the perpetrators. Ultimately the issues had to be addressed at the level of national prosecution.

Mr Pfunzo Sidogi (Tshwane University of Technology)

Title of Presentation: Equality through Design: Promoting the Rights of Township Residents using Architectural Design

Emergent township-based architectural projects should not be geared merely to the singular goal of providing shelter. From its formulation pre-apartheid to its augmentation during apartheid and to its evolution post-apartheid, most township-based architecture and related interior design can be viewed as a continuous violation of people's rights in the polarised socio, political and economic developments in South Africa's history. Terms such as design activism have been used to characterise design initiatives geared towards a more just social environment by promoting social change and raising the awareness of values and beliefs that would promote a better quality of life, poverty alleviation and sustainability for all.

A discussion followed Mr Sidogi's presentation.

Dr Sekhejane commented that improved aesthetics in township areas would not address the inequalities of the past as the issue of spatial transformation would still not be addressed.

A comment from the audience was made that whilst everyone was entitled to an aesthetically pleasing environment, the question remained whether it would be a workable conception of justice. Black people made up the majority of the population and had been deliberately locked into townships so that whites could amass large amounts of land. The question was posed whether improved aesthetics of townships would assist in addressing inequality when the majority of the population had been systematically dispossessed and economically excluded. Black social scientists had been very critical of the apartheid spatial curtains and should be consulted and engaged in such issues.

Mr Sidogi responded that the problem was the very existence of townships and that the spatial arrangement between urban spaces and former homeland spaces would need to be addressed. The country should not blindly continue with the same building systems that were used during the apartheid era. The funds used for the Reconstruction and Development Programme (RDP) and the building of schools should be approached through design aesthetics that would assist communities in feeling more socially acceptable and worthy and give children a good educational experience.

Mr Anthony Chakuwamba (*National Institute for Crime Prevention and the Reintegration of Offenders (NICRO), Eastern Cape*)

Title of Presentation: The Social and Scientific Dimensions of Human Sexual Diversity: Violence against Transgender Women in South Africa

States have a legal obligation to safeguard the human rights of transgender women as established in international human rights law. South Africa is party to several key international and regional treaties to respect, protect and fulfil the human rights of all persons regardless of their sexual orientation or gender identity. South Africa has shown inconsistency through its decision to abstain from voting on a UN resolution to prevent discrimination based on sexual orientation. Research is needed on transgender women and the risk of HIV. Policies and guidelines on transgender victims of violence need to be implemented and monitored. Communities and law enforcers should be trained and educated about transgender persons and their rights.

A discussion followed Mr Chakuwamba's presentation.

A member of the audience commented that administrative problems at the Department of Home Affairs had resulted in the majority of transgender people not being able to change their identity documents. His view was that there were still certain privileges to being male, which was possibly a reason why men did not change their legal status.

Mr Chakuwamba responded that social identity was very important to transgender people. Studies had shown that transgender people are often sidelined through attitudes and labelling, which poses a critical human rights issue in South Africa. People may want to change their identities, but they do not want to be labelled gay, lesbian, etc. The Department of Home Affairs would need to understand that this was an issue of transformation and not an issue of sexual orientation.

Mr Chakuwamba noted that 100 individuals had been sampled in the study. Prof Soodyall asked how the sample had been selected. Mr Chakuwamba responded that stakeholders had been involved with transgender women of organisations such as NGOs and government departments, and that random interviews had been conducted.

Ms Long thanked the presenters and audience for their participation.

SESSION 8: CAPACITY ENHANCEMENT (1)

(FACILITATOR: MR STANLEY MAPHOSA, INTERNATIONAL LIAISON MANAGER, ASSAf)

Lindau Nobel Laureate: Ethics in Research (Mr Kossi Amouzouvi, University of the Witwatersrand)

Mr Amouzouvi is a PhD student at the University of Witwatersrand specialising in theoretical and computational condensed matter in physics. He is also an alumnus of the Lindau Nobel Laureate Meetings (Physics).

The word 'ethics' denotes a set of moral principles established throughout their lifetime by a group of people. When ethics involves scientific research, it is important to act cautiously since any misunderstanding may seriously affect either the progress of science or the welfare or preservation of humanity.

Scientific researchers had contributed enormously to new technologies to understand the metabolism of the human body, but it should be remembered that science could be impacted by other scientific researchers and government strategies. An effective solution would need to be sought to redefine the way in which we control scientific research in our society, and guidelines should be put in place on the ethical issues related to new mind sets and beliefs, the freedom of science and its unintended impacts.

Integrity in science is crucial. Plagiarism in science is the practice of taking someone else's words, work or ideas and passing them off as one's own. It is probably the most common form of scientific dishonesty found in research articles today, and awareness would need to be raised about how to cope with this growing problem of research misconduct. Research integrity requires data to be available to colleagues in research, and hence students should not keep their findings confidential but share those findings with other groups.

Many new students strive to comply with their university's rules, but this could lead to self-neglect. The student could lose track of his/her autonomy and rights and feel powerless through issues such as exploitation, abuse and in many instances, discrimination. Students should be trained in ethical issues in order to appreciate the relationship between their scientific research and the survival of communities and the environment. Ethics committees should be established at all universities and research institutions. The study of ethics should be an integral part of the education and training of all scientists with the purpose of increasing future scientists' ethical competence.

ASSAf has been an academic partner of the Lindau Foundation and Council for five years. The Department of Science and Technology (DST) and the Lindau Foundation had asked ASSAf to raise awareness of the Lindau Nobel Laureate's meetings in order to increase in the quantity and quality of South African and African participants in these prestigious meetings. The Lindau Nobel Laureate programme aligns with ASSAf's mandate of promoting excellence. ASSAf has a dual mandate: to honour distinguished scientists and promote excellence, and to provide scientific-based evidence to government.

Lindau Nobel Laureate Meetings have been held annually in Lindau, Germany since 1951. Their aim is to bring together Nobel laureates and young scientists to foster scientific exchange between different generations and cultures. The organisers also consider the opportunity for participants to form international networks of scientists to be a prime objective. The meetings focus alternately on physiology and medicine, physics and chemistry – the three natural science Nobel Prize disciplines. An interdisciplinary meeting revolving around all three natural sciences is held every five years. In addition, the Lindau Meeting on Economic Sciences is held every three years. The meetings assume a unique position amongst international scientific conferences and are the largest congregation of Nobel laureates in the world (apart from the Nobel Prize Award Ceremonies). The Lindau Nobel Laureate Meetings also host several social functions such as dinners, barbeques and cultural events, which are all excellent platforms for dialogue.

The scientific programme of each Lindau Meeting is based on the principle of dialogue and is designed to activate the exchange of knowledge, ideas and experience between and among Nobel laureates and young scientists and offers a superb 'equality opportunity' for all South African and African scientists.

ASSAf, in partnership with the DST, would be nominating chemistry candidates to participate in the 2017 Lindau Nobel Laureates Meeting from 25 – 30 June 2017 in Lindau, Germany.

Responsible Science: Poisoned Past Exhibition (Dr Chandre Gould, Senior Researcher, Crime and Justice Programme, Institute of Security Studies, Prof Brian Rappert, Exeter University and Ms Kathryn Smith, Liverpool John Moores)

In this session the three speakers provided an overview of the apartheid-era chemical and biological warfare programme, code-named Project Coast, and spoke about the challenges of representing this past. They are the curators of an exhibition titled Poisoned Past that is hosted by the Nelson Mandela Foundation and is on display until March 2017. The exhibition seeks to stimulate discussion about the individual and collective responsibilities of scientists to prevent their work being used for harmful purposes.

Gould said that South Africa is facing extremely difficult times, in part as a result of not having dealt effectively with the harms of the past. Although the country had gone through the process of the Truth and Reconciliation Commission, problems had not been resolved and social justice had not been realised.

Project Coast was a top-secret chemical and biological weapons programme instituted by the South African government during the apartheid era. In 1976, Black South Africans had asserted visible resistance to the apartheid government sparked by student protests in Soweto, which turned violent when the police fired at students with live ammunition. At the same time, South Africa was waging war in Angola against the Soviet-backed SWAPO, Cuban and Angolan troops. In early 1981, the Minister of Defence, Magnus Malan, and the Chief of the South Africa Defence Force, General Constand Viljoen were convinced that Soviet-backed forces in Angola had access to chemical weapons and could use them. The internal and external threats faced by the South African Defence Force (SADF) convinced the leaders to establish a chemical and biological warfare programme. Dr Wouter Basson was ordered to covertly collect information about chemical and biological warfare programmes; this information would be used to create a blueprint for a South African programme. In 1983, Project Coast was formed with Dr Basson at its Head.

Delta G Scientific Company and Roodeplaat Research Laboratories were two of the many front companies established in order to, amongst other things, find substances that could kill people without leaving post-mortem traces. Devices were designed that looked like ordinary objects but had the capabilities to poison those targeted for assassination. Examples included umbrellas and walking sticks that fired pellets containing poison, syringes disguised as screwdrivers, and poisoned beer cans, envelopes and creams. Large quantities of teargas, ecstasy and mandrax were also produced, notionally for 'crowd control'. These are represented in the exhibition by indicative or reconstructed objects, which are designed to prompt questions regarding what constitutes 'evidence', and therefore 'objective truth'.

In the early 1990s, with the end of apartheid, South Africa's various weapons of mass destruction programmes were stopped. Basson is the only military person who has been brought to task for his involvement in Project Coast. Whilst he has been tried and was found not guilty of criminal charges, he has been found guilty of professional misconduct.

The Poisoned Past exhibition seeks to contribute towards stimulating questioning and discussion about the harms of the past, how they have been accounted for or not, and what we would need to do to prevent scientists from being involved in programmes like this in the future.

Discussion

Mr Sigodi (Tshwane University of Technology) thanked the speakers for the fascinating presentation. He asked about the production of the images to be used at the exhibition and which artists had collaborated.

Ms Smith responded that the team had access to many of the images that had been used in media reports and to archive images published in the book entitled *Secrets and Lies* by Dr Chandre Gould and Ms Marlene Burger. The services of an artist and graphic designer had been engaged in an attempt to translate text into texture. Panels were made of printed cloth and stretched into frames and could be used by other institutions. Project Coast's contact with other countries was illustrated through an animated film produced by a digital arts student at Wits University.

SESSION 9: POSTER PRESENTATIONS

Delegates had the opportunity to view the poster presentations:

Subtheme: Relationship between Science and Human Rights in Africa

Moving the centre: Shifting African ideas from the periphery to the forefront (Ms Nolwandle Lembethe, North-West University).

Gender representation in the workplace (Ms Errolyn Long, University of Cape Town).

'I want to be yellow boned' – skin lightening in the South African context (Miss Meagan Jacobs, University of Cape Town).

SESSION 10: CAPACITY ENHANCEMENT (2)

(FACILITATOR: MR STANLEY MAPHOSA, INTERNATIONAL LIAISON MANAGER, ASSAf)

In introducing the session, Mr Maphosa quoted Prof Regina Maphanga from the University of Limpopo: "If your science is not clear enough such that your grandmother or others cannot understand what you are saying, you are wasting your time".

Responsible Science: Context and Implications (Ms Joanne Riley, South African Agency for Science and Technology Advancement)

The South African Agency for Science and Technology Advancement (SAASTA) is a business unit of the National Research Foundation (NRF) with the mandate to advance public awareness, appreciation and engagement of science, engineering, innovation and technology in South Africa. SAASTA's contribution to the NRF's vision was to grow the pool of quality learners who would become the scientists and innovators of tomorrow. All science promotion or awareness programmes within the NRF reside under three key strategic areas that combine to form an integrated and seamless approach, namely through education, communication and awareness. Science through exploration, exhibitions and actual experience instils in people an enthusiasm about the wonder and application of the subject, while encouraging greater public engagement in science, engineering, technology and innovation issues.

SAASTA was the appointed coordinating agency of the DST Science Engagement Framework. The vision of the framework was to generate a stimulated and engaged South African society that would be inspired by scientific endeavours and participate in an innovative science and technology workforce to develop improved scientific literacy. The framework comprises four strategic aims, namely to popularise science, engineering, technology and innovation in order to enhance scientific literacy and awaken the interest in relevant careers; to develop a critical public for active engagement; to enhance science engagement in South Africa; and to profile South African science and achievements domestically and internationally by highlighting South Africa's quality of science and being 'proudly South African' about South African science.

Among the foreseen roles for SAASTA as the national coordinating agency of the DST Science Engagement Framework are to develop a grant system for public engagement, design engagement programmes to support the strategic aims of the framework. SAASTA would also be responsible for monitoring and evaluation of the system, collecting data and information on various science engagement activities within the sector and coordinating activities on behalf of the DST. An example of initiatives to popularise science, DST's Mzansi for Science Campaign was created to raise awareness around the role of science,

technology and innovation in South Africa. The aim was to not only to celebrate unsung South African heroes, but to encourage South Africans to create better tomorrows by studying, supporting and investing in science, technology and innovation.

Science communication refers to making the existing scientific knowledge and new scientific outcomes accessible, relevant and meaningful to a wide range of public and policy. Public engagement is not about the promotion of institutions or glorification of science, nor is it a one-way flow of information. It is about dialogue, conversation and engagement and the opportunity for critique. This has resulted in an appropriation of knowledge in that the public were taking a more active role in the pursuit of knowledge. In the example of citizen science, the public are involved in the collection of data for scientific research. Crowd-sourcing provided the public with an opportunity to decide what research was to be funded through private funding. Science communication was also a growing area of practice and research.

The development and evolution of science engagement acknowledge values such as equality, diversity and other values of democracy. Within a democracy, science should be responsive to society's needs and interests. It requires active public participation and citizenship and provides opportunities for society to voice their opinion on what research should be undertaken best to meet its needs. Within discussions and dialogue about science, scientists are key role players in the conversations.

To encourage dialogue and discussions about science and issues relating to science, SAASTA runs the School Debate Programme which invites high-school learners from grades 9 to 11 to debate on a given topic. Four different perspectives are given to the learners that need to be addressed in the debate, namely the application (and benefits or risks), economic perspectives, socio-cultural issues and political perspectives. These debates create confidence to start to think about science technology.

Scientists who want to become involved in science communication need to understand their responsibilities. The ethical considerations in the communication of science are of ever-increasing importance. We live in a world that is highly dependent on science and technology. Whilst science communication has vastly progressed the ethical considerations underlying the communication process have been overlooked. The ethics of responsible communication include honesty, precision, audience relevance, process transparency and specification of uncertainty about conclusions.

Communication is ethically acceptable only when it aims to be accessible and assessable. Scientists would need to determine their communication platforms for relevancy of the subject matter and consider the difference their research and findings could make. Scientists must remember that there is a lack of understanding of scientific methods and processes in the public domain. Scientists should keep their messages simple and use easy language to convey the key message. The use of imagery, stories, videos and graphics is recommended for presentations and ease of communication.

SAASTA offers workshops to those interested in becoming involved in science communication and holds three competitions, namely:

- The Young Science Communicator's Competition, which specifically challenges young scientists and researchers between the ages of 18 and 35 to communicate their world to a larger audience beyond their scientific community.
- The South African Science Lens Competition, which awards the use of photography as a mode of communicating with and engaging audiences on science and technology.
- The FameLab competition, which awards science communication through the art of public speaking.

In conclusion, Ms Riley advised that SAASTA also works closely with community media in South Africa in order to make science accessible and communicable in indigenous languages. The Youth Journalism Programme places interns at different community outlets across the country.

Plenary Discussion

Dr Mpofu (Sol Plaatje University) asked where the pool of students came from. Ms Riley responded that invitations were made through various forums such as the Department of Higher Education and Training, through service providers that work with debating teams, and advertising through science clubs and magazines. To date, entries for the SAASTA National Schools Debates Competition had been through schools submitting an essay or video that answered a particular question. There was a selection process for participation in which ten schools are selected from each province to attend workshops on the debates.

Dr Mpofu asked how disadvantaged schools could compete if they did not have access to a video recorder. He suggested that SAASTA should run a parallel programme for disadvantaged schools.

Ms Riley responded that the issue was being addressed and that a different approach would be taken in the near future to cater for such schools. She conceded that whilst some of the disadvantaged schools did well in the competition, schools with better resources were generally more successful.

Ms Wagener (ASSAf) asked whether photographs could be made available for use by agencies, government and other institutions, for example in the many ASSAf publications. Ms Riley responded that the copyrights reside with the photographer, but the competition rules permit SAASTA to use the photographs in promoting the competitions. Photographs have been used in various institutions' annual reports and other media such as *National Geographic*.

Dr Lubaale asked which scientific journals publish science communication articles. Ms Riley responded that a number of scientific publications are produced annually, but the need had been identified to look at how the information could be repackaged in order to ensure accessibility to the public.

Dr Bulani (ASSAf) enquired whether cartoons were used in order to communicate science to young children. Ms Riley responded that cartoons had been successfully used in the past. Cartoons, whilst not targeted specifically for young children, gave a clear message and were well received. A recent cartoon series undertaken for a nano-technology programme had resulted in requests for international re-use.

Communication Research beyond Academia (Ms Natasha Joseph, Science and Technology Editor, *The Conversation*)

Since the Australian website's launch in March 2011, *The Conversation* had expanded into a further four editions namely the United Kingdom, USA, Africa and France. The website for the Africa edition shared research from and about Africa with a global audience and was not only aimed at academics. The online publication was read from all corners of the world. The African head office was located in Johannesburg. There was currently an office in Nairobi and other offices were envisaged for Lagos and eventually North Africa. *The Conversation* uses a custom publishing and content management system that enables contributors to collaborate on articles in real time. Articles are linked to author profiles, including disclosure statements, and personal dashboards show authors' engagement with the public. Everything published on the site can be republished at no cost anywhere in the world. To date, 95 per cent of the editorial articles had been published elsewhere.

Currently *The Conversation* is donor-funded by the Bill and Melinda Gates Foundation, Barclays Africa, National Research Foundation of South Africa and several smaller funders. The counterparts elsewhere in the world are funded by universities.

Academics who publish in *The Conversation* must be affiliated to a university or approved research institution and must have either a PhD or be a recognised expert in their subject. Early PhD candidates may submit an article that is supported by a supervisor. *The Conversation* only publishes an article once it has been approved by the researcher.

It is crucial that scientists increase the impact of their research through monographs, books, academic journal publications, presentations and conferences. Public engagement has been gaining popularity and provides opportunities not only for interviews with other scientific bodies but involves a wide range of interested stakeholders who can connect seemingly unrelated viewpoints with potentially far-reaching effects. Through public engagement, scientists are able to expand the reach of their work, and make it more relevant to society. The writing of articles also assists young scientists in promotion. Ms Joseph gave an example of a young scientist from the University of Queensland who had written about the way in which philosophy is taught to schoolchildren. The young man was on a tour with Thinking Schools South Africa and had just been promoted to head of department partly based on the impact of his article published by *The Conversation*.

In writing an article, scientists must bear in mind that the audience is intelligent, educated and curious but not interested in wading through heavy prose. The 'inverted pyramid' is a metaphor used by journalists and other writers to illustrate how information should be prioritised and structured in a text, commencing with the conclusion or the researcher's findings. This sets the scene and explains how the work fits into the bigger picture. In writing an article, one would need to get to the point, give the introduction and provide a conclusion. Other recommendations in writing an article include:

- Plain, simple language should be used so that the intended audience can read and understand it.
- It is crucial to minimise the use of jargon, technical terms and acronyms. If this is unavoidable, provide explanations.
- Aim for an average sentence length of no more than seventeen to twenty words – short sentences will make the research easier to digest.
- Do not adopt a didactic tone.

- Do not use an initial statement followed by a question.
- Do not use rhetorical questions.
- Do not use bulleted lists.
- Do not use mangled metaphors, leave out verbs or use the wrong one.
- Do not be afraid of using humour.
- Do not assume the reader's knowledge.
- Use simple words and cut out unnecessary words.
- Be realistic – don't overstate the value of the research finding.
- Use headings to break up long blocks of text.
- Use non-scientific analogies to explain complex ideas.
- People like to read about what is current; keep abreast of what is happening in the world that is relative to your research.
- Back up opinions with facts.
- Answer questions such as who, when, where, how, what and why to give a clear reading.
- Ask at least one non-scientist to review your piece.

As thought leaders of society, scientists should 'be good, be giving and be game' for the final article.

Ms Joseph cited an interesting article recently published by Professor Brenda Wingfield, University of Pretoria, on the topic of what would happen if universities were shut down and scientific programmes were not able to run.

Discussion

In response to a query by Prof Soodyall, Ms Joseph replied that the average turnaround time from article to publication was approximately three days.

Judge Yacoob commented that over the last 100 years there had been a slow, careful, but decisive movement from the complicated to the simplified and queried whether a similar tendency had been observed in scientific writing. Ms Joseph responded that there had been a drive towards simplification, although science writing in its purest form remained complex. Popular media such as National Geographic contained easy scientific writing.

Prof Soodyall added that over the last few years the *modus operandi* appeared to be to keep an article short with the detail being posted electronically as supplementary information.

Ms Manyeli (ASSAf) commented that some scientists in their early careers might have to write with supervisors and queried whether this could cause conflict? Ms Joseph responded that young scientists should approach their supervisor prior to starting with an article, but the scientist would be the lead author.

Vote of Thanks (Prof Himla Soodyall, General Secretary, ASSAf)

Prof Soodyall commented that the conference had been fascinating in re-invigorating debates around the law, science and society. The conference did not resolve the question of the legal aspects of human rights as opposed to the entitlement to human rights. She posed the question of why the word 'redress' should be used. The audience had heard the concepts of evidence-based science, law and society; however, the question remained how this ideology could be encapsulated to address issues such as sexual diversity, gender concerns, sexuality, sexual preferences and the rights of people. ASSAf's approach was to communicate evidence-based research and science excellence to society. Within the academy and in society in general, there is a cultural divide between the social sciences and humanities, and the natural sciences. It is essential to move beyond this, as in reality each issue resonates with input from both sides.

Prof Soodyall emphasised the importance of dialogue. Dialogue embraces multi-faceted ways in order to make a difference. South Africa has a rich history. The only way to recognise and separate the good from the bad would be to revisit the issues and talk about them. The presentation of the Wouter Basson story illustrated the way in which a story can be told by using the right visuals in order to put the story together.

Apart from the integrated approach of science in society, the respect for diversity was emphasised in most of the presentations and discussions. Diversity is an evolutionary fact; were it not for diversity, the human evolutionary trajectory could have reached a cul-de-sac. However, because of diversity the fittest that adapted to changing environments were the survivors. Human beings are fortunate to be where we are because of this diversity. Yet this same diversity had brought about emotive and powerful issues within society. Whilst science must move forward, respect must be paid to the issues that make us human and build our humanity. The concept of respect was the ideal to which everyone should aspire.

On behalf of the ASSAf Council, Prof Soodyall thanked the ASSAf Secretariat who had put the programme together and the presenters for their inputs. It had been a privilege to listen to the presentations and to see young people communicate their passion about their topics.

SESSION 11: OFFICIAL CONFERENCE DINNER

Angela Mudukuti (Southern Africa Litigation Centre)

The Southern Africa Litigation Centre is a Johannesburg-based human rights organisation that focuses on strategic litigation on human rights issues in southern Africa. We work in the following areas: international criminal justice, women's land and property rights, sexual and reproductive health rights, freedom of expression, health rights in general, LGBTI and sex workers, regional advocacy, disability rights and the rule of law.

You may know us for an issue that was close to my heart – the attempt to arrest Sudanese President Omar Al-Bashir was a Southern Africa Litigation Centre case, but as you can see we have a range of other areas we work in.

When I was asked to provide this keynote address, I thought to myself, “What on Earth am I going to say to a room full of talented scientists?” However, having spent two inspiring and enriching days with you, I know exactly what I would like to share.

Tonight I stand before you as a member of civil society, a lawyer, a human rights activist and an admirer of science and its invaluable contribution to the promotion and protection of human rights. In my address tonight, I will highlight science's contribution to the protection of human rights, draw from my own experience and reflect on the very interesting discussions held over the last two days.

2016 has been a testing and trying year for mankind. The war in Syria rages on; migrants and refugees from our continent continue to drown in the Mediterranean as they flee persecution and seek a better life; millions have died in the Democratic Republic of the Congo (DRC) as the Congo war continues; over 300 000 people have died in Darfur since the beginning of the insurgency in 2003; and in South Sudan millions of people live in internally displaced camps.

I could go on. Human rights are being violated everywhere you look. Vulnerable groups and key populations – women and children, LGBTI persons and immigrants – are particularly exposed to these violations.

2016 is also the African Year of Human Rights with Particular Focus on the Rights of Women. It is the 20th anniversary of the beginning of the hearings at the South African Truth and Reconciliation Commission, and it is also the 20th anniversary of the Constitution of South Africa, which was promulgated by President Nelson Mandela on 18 December 1996. And so I ask: “What better year than this to reflect on where we stand on the promotion and protection of human rights domestically, regionally, continentally, globally?”

What better year to reflect on how science and law have contributed to that, and what better year to ask: “What else can we do to protect human rights?”

Justice Richard Goldstone opened this important conference by reminding us that promoting and protecting human rights is about more than just lawyers and the use of law, but it is a goal that has been bolstered and legitimised by scientific development.

I could not agree more and I cannot overemphasise the importance of a multidisciplinary forum such as the one that has brought us all together over the last two days. Human rights protection truly requires efforts from all of us, lawyers, scientists, activists and law enforcement officers. It is through forums such as this that we are reminded of how much we can achieve when we combine our various efforts to reach our united goal.

From a litigation perspective, which is the background from which I come, criminal cases in defence of human rights would fall flat were it not for scientific evidence, DNA testing, forensic examination, the use of satellites, mass grave exhumation, carbon testing – the list is long. Clearly science has made an important contribution to the protection of human rights.

Crucial satellite imagery was used to record hard evidence of controversial and illegal house demolitions in Zimbabwe and Chad. Other human rights violations have been uncovered in Sri Lanka, and Eritrea using satellite imagery, and satellites have also been used to identify the infamous Lord's Resistance Army camps in Uganda and neighbouring African countries.

Leveraging technological and scientific progress is vital for human rights litigation, advocacy, and campaigning and conflict prevention.

Science has also been crucial in the provision of humanitarian aid in war zones: doctors, pathologists, food security experts, engineers and other scientists have saved millions of lives, alleviated suffering and helped maintain human dignity.

Understanding human rights broadly reveals that we all have a role to play. At last night's round table on Transformation towards Sex and Gender Equality in Africa, a brave lady shared her story from the floor about gender-based discrimination in the workplace, including failing to provide a toilet for her as the only woman working on the construction site, and she now dedicates her time to informing and educating people about their rights. As she so rightly pointed out, no matter how big or small, we can all play a part.

In my life, seeking criminal accountability is an integral part of human rights defence, and without the work of dedicated and committed scientists this would be significantly more difficult.

I have been privileged to engage and interact with victims who have suffered unimaginable violations. Their stories, desire for justice and closure have been a source of great inspiration for me. In seeking to defend their rights, we sit furiously and research, prepare the docket, and of course at the end of the day it is all about evidence and the scientists who are able to provide it. In my interaction with survivors of human rights violations, many of them have shared the fact that they have received support from psychologists and psychiatrists, which is another important contribution that scientists make.

When you listen to the horrific experiences endured by victims of human rights abuse, at first degree you feel outrage, then immense sadness, and somewhere between those two emotions, the resolve and determination to seek justice sets in. There is one story in particular that sticks in my mind. This case is colloquially known as the Zimbabwe Torture Case and it deals with torture perpetrated in Zimbabwe, by Zimbabweans, against Zimbabweans, but due to the presence of the victims and witnesses and the fact that the suspected perpetrators frequently travel to South Africa, in terms of South African law, these crimes perpetrated as crimes against humanity can be investigated and possibly tried in South Africa.

The facts of this case dealt with the 2007/2008 civil and political unrest in Zimbabwe. The victims in our case were arrested on the basis of their assumed or actual political affiliation, and brutally tortured by the state police. Given the context at the time, this torture constituted a crime against humanity as it was widespread and systematic. Acts of torture included water boarding, severe beatings, electrocution, sleep deprivation and sexual assault.

The prospects of justice at this time in Zimbabwe were slim, given the politically charged environment. Left with no other option, the victims fled to South Africa. We compiled dossiers with statements from victims and witnesses and evidence revealing widespread and systematic torture and presented it to the South African authorities. We informed them that in terms of South African domestic law and universal jurisdiction, they were obligated to investigate. They unfortunately declined and we were forced to take that refusal to court. We won in the High Court, the Supreme Court of Appeal and the highest court in the country, the Constitutional Court. All courts ruled that in terms of the law, the South African authorities were required to investigate within the bounds of South Africa.

It has taken several years of litigation, but I am happy to finally say that investigations are underway. One of the victims said that although it had been years since he was tortured, just to tell someone who would listen and would potentially do something about it meant more than he could ever express. Although investigations do not guarantee a prosecution, and although the wheels of justice turn slowly, it is the smallest things like telling one's story to a lawyer or investigator who can potentially do something about it that can make all the difference to survivors of human rights abuses.

It is working with brave survivors like this that spurs me on in my pursuit of justice and the protection of human rights, and it is the reminder that we can all do something. This brings me to why we are here this evening.

In contextualising this conference, the organisers provided a note that said: "This multilateral conference will provide a platform for scientific exchange among senior and young scientists, scholars and policymakers who can contribute to the realisation of human rights that will lead to an improved quality of life on the African continent", and that is precisely what I have witnessed over the last two days. In line with ASSAf's motto, "Applying scientific thinking in the service of society", I have truly engaged with scientists in service of society over the last two days.

We have discussed the social and scientific dimensions of human sexual diversity, the legacy of colonialism and how it has affected human rights today, alternative philosophical approaches to human rights, issues of transformation and also the responsibility to use science ethically. As we saw this afternoon with the presentation on apartheid's Project Coast, the use of science to create chemical and biological weapons to kill people is an example of how science presents opportunities to do good, but also a responsibility to guard against using science destructively. In all of these sessions, there has been robust engagement with the subject matter, and it has been a fascinating conference.

Being with all of you at this event has given me hope that the continent has bright young minds that have passion, energy, dedication and skills. The talent in this room is what will help our continent and our people. In my conversation with some of you during dinner and over tea, I have met people in the medical profession, agriculturalists, programmers, and many more. Because of all of you, I leave tonight with more hope for a brighter and better future for our continent.

It has been mentioned over the course of the last two days, and I would like to take this opportunity to highlight the role played by civil society. It has been civil society voices that have pushed for change, given victims a voice and challenged the state to act in accordance with accepted human rights standards.

I know many of you in this room come from civil society or NGO backgrounds and that you intend to return to these places after your studies. I know that many of you have done research for civil society organisations and will continue to do so throughout your careers.

Civil society organisations across the continent continue to devise new strategies to support victims and prevent further violations. Civil society has been at the forefront of litigation, advocacy, law reform, humanitarian aid, scientific development and much more.

Given the powerful role played by these actors, it would be remiss of me not to say that the civil society space is under threat and we must all work to protect it.

All of us, as human beings and citizens of this continent, need to be steadfast and resolute in the protection of civil society space and human rights.

It was the current UN High Commissioner for Human Rights who said: "When the fundamental principles of human rights are not protected, the centre of our institution no longer holds. It is human rights that promote development that is sustainable, peace that is secure, and lives that are lived with dignity".

In conclusion, I would like to say thank you for sharing your talent, thank you for the work you do. May you continue to promote and protect human rights, grow in your relative disciplines, and safeguard the future of our beautiful continent.

Mr Joel Modiri, University of Pretoria

Title: *The Time and Space of Human Rights*

I should begin by noting that I have revised the remarks I had initially prepared in order to respond to some of what was left unsaid and unheard after yesterday's round table. I want to pick up on some of the issues that were raised concerning the escalation of inequality in South Africa, the intractable legacy of colonialism and the failing promises of human rights and constitutionalism.

Since this is the last night, and I won't have to answer any questions, I will try to be deliberately provocative. Having said that, I should begin with two disclaimers:

- First, consensus is not a virtue – disagreeing is a healthy, normal and necessary part of academic/ scholarly life.
- Second, critique is not a call for the rejection or the abolition of its object. At its best, critique interrupts common sense and opens up alternative ways of thinking.

It has been said that "Thinking is a dangerous activity".

We are convened here in Boksburg, which is not insignificant. Boksburg is named after one Mr W Eduard Bok, a colonialist politician and State Secretary of the Transvaal Boer Republic. In a sense, therefore, we are right at the centre of an unresolved colonial legacy. Names and naming is of paramount importance in African culture; the names we give to certain spaces and places affirm our identities, our community relations and deep historical ties. Names also signify belonging, but in the case of South Africa, with its history of white settler-colonial domination, many of the names we encounter in public spaces entrench a deep sense of alienation and are a reminder of how Africans were 'un-homed' and dispossessed in this part of the world. Even the name 'South Africa' itself was produced in the colonialist imagination – first named the 'South African Republic' after the Dutch defeated the British in the First Boer War and then later named the 'Union of South Africa'. 'South Africa' is the name given to this place by its colonial conquerors and not by its indigenous conquered peoples. Some commentators have suggested that together with the Central African Republic, South Africa is a nameless place that it is uncomfortable with its 'situatedness'; a place that in many ways views itself as a station/province of Europe. We note that when many African states gained independence in the late 20th century, many of them renamed their territories to resonate with their indigenous cultures: Gold Coast became Ghana; Northern and Southern Rhodesia became Zambia and Zimbabwe respectively; Portuguese East Africa became Mozambique, and so forth, but South Africa – after 1994, when it ostensibly became free and democratic – remained

South Africa. I want to suggest that it was not only the name of South Africa that remained the same in the transition, but the organising principles of colonial domination and racial inequality also remained part of the consciousness and foundation of our society.

This will be my vantage point for reflecting on the rule of law, human rights and constitutionalism in at least the South African context. It is hard to deny that South Africa is beset by many contradictions, but the most fundamental of these for me would be precisely the gap between the promises of human rights and the lived reality of so many of our people living in escalating inequality, poverty and social misery. This is a country that claims to have the best Constitution in the world and yet is the most unequal country in the world; it is seen as the poster child for human rights and constitutionalism in Africa and yet is also the 'protest capital' of the world; it declares its founding values as freedom, dignity and equality, and yet we see blacks being called "monkeys" on social media, and university students being shot at and arrested for calling attention to massive inequality in the higher education sector.

Indeed it would seem that the basic project of colonialism and apartheid, which was to consolidate white domination in South Africa, has in many ways been perfected through the ascendancy of liberal democracy and neoliberal capitalism.

For the most part, blacks continue to live in this country as foreigners and as a cultural and racial minority:

- English language and European culture form the primary mode of being (communicating) in society.
- Legal, political and economic institutions (courts, parliament, government administration, the workplace) are ordered according to Western paradigms of statecraft, political economy and jurisprudence.
- Entry into middle-class life for blacks not only involves incurring massive debt but also leaves many psychologically traumatised by the pressure to assimilate into white social culture.
- Mainstream society uncritically glorifies 'white weddings', and the mastery of European languages, cuisine and aesthetics is highly prized. This reiterates the colonial conceit that Europe is the apex of civilisation.
- Religion, education and morality themselves conform largely to Eurocentric, capitalist and Christian value systems imposed through the conquest of African peoples, with African spirituality considered 'backward' and African customs 'barbaric'.
- Manual unskilled/servile and exploited labour continues to be occupied almost exclusively by blacks who guard cars they do not own, clean homes they do not live in, take care of children who are not theirs, drive people to places they do not live in, and serve people in places where they themselves cannot afford to be serviced.
- Spatial segregation continues to persist, with overcrowded townships and rural villages being reserved for blacks who continue to experience massive violence, squalor, poor social mobility, pollution, exposure to drug and alcohol abuse and other deprivations, pathologies and violations.

The economic historian Sampie Terblanche has described South Africa as a country "lost in transformation", where the old socio-economic order has persisted into the new South Africa. Most alarmingly, Terblanche illustrates that it is not that past inequalities are staying the same, but that they are getting worse for the majority of black and poor South Africans. Despite volumes upon volumes of scholarly and political interventions for ending poverty and inequality in South Africa, the most fundamental injury of colonial apartheid – the violent estrangement of Africans from the land of their birth and being through socio-economic subjugation and cultural and psychic disorientation – remains unaddressed, and even unnoticed. In many cases, protests against inhumane conditions of existence result in state repression and, as we saw with Andries Tatane and Marikana, the brutal police murder of black protesters exercising their democratic rights.

Some might say that these are the bitter grumblings of a young academic drunk on Black Consciousness, and others might retort that I fail to recognise the many important changes and human rights gains that have taken place since 1994. To be clear, I am not saying in an unqualified way that nothing at all has changed nor that the post-1994 reconstruction of South Africa did not affect any visible or inspirational changes. South Africa is certainly a different place from what it was 30 years ago. Rather, what I am arguing is that the constitutional transformation of South Africa effected change in every area of society except where it really matters most.

Names of streets and buildings were changed, new faces occupied the seat of government power, official publications were published in a plethora of African languages, a new national flag was designed and a new national anthem composed, a number of old apartheid-era laws were repealed, and the ubiquitous "whites only" signs were taken down. But consider that in contrast to these spectacular 'changes', actual arrangements of economic power, land and property ownership, spatial segregation, Western imperialism, psychic violence and labour exploitation were all left untouched and now enjoy legal affirmation and protection in the new constitutional dispensation.

The reference to South Africa as 'post-apartheid' is not altogether appropriate. We are in many ways still entangled in the legacies of colonialism and apartheid; their ravages continue to define the South African landscape. But more than that, a system of 'global coloniality' – the amalgam of capitalism colonialism and imperialism – continues to define the modern world; its definitions of who is human and who is not still correlates to who has power and who does not. What this means in simple terms is that the struggle continues; that we have not yet fully confronted the oppressive powers of our past and therefore have not realised the vision of a truly equal and just society.

From this perspective, the demands for 'decolonisation' – for the remnants of colonial apartheid 'to fall' – and the return of radical black politics in South Africa could not be more timely. What we see in #FeesMustFall and social movements such as the Shack Dwellers movement is a demand for dignity and a refusal to be made invisible in the land of their birth. They are challenging the normalisation of black suffering in a society that celebrates itself as 'non-racial'. It is very hard to refute this demand for decolonisation, especially if one recalls the recent incident in a number of high schools in which black teenage schoolgirls were racially humiliated into straightening their hair and conforming to Western/white aesthetic norms (Afros and certain types of dreadlocks being banned, and even worse the speaking of indigenous languages apparently prohibited). But these events, as many noted, are a microcosm of a larger problem in South Africa: the fact that an indigenous majority is still subject to the standards and norms of white South Africans who continue to wield immense social, cultural and economic power. It was only a matter of time before these feelings of powerlessness and dehumanisation turned into rage and even into fire.

So where does human rights fit into all of this? It seems to me that the problem of being overly fixated on the discourse of human rights and our overwhelming faith in technical legal solutions has prevented us from grappling with the deeper political and ethical complexities of our time. This is another way of saying, as many scholars have noted, that liberal human rights have the tendency to engender passivity and complacency, making us believe that all our problems can be solved by the Constitution and the courts. But as I hope we know, "you can't eat a Constitution". In this regard, the origins of human rights as a concept are important: human rights not only developed in Western Europe, but also developed alongside and in a context in which certain groups were denied humanity (this was the height of European expansion, slavery and colonialism). That is, human rights developed in a context where the only real 'human' was European and male. Moreover, human rights emerged not only as a tool of emancipation from disenfranchisement and exploitation, but also more powerfully as a vehicle for protecting and securing the interests of the dominant class – the wealthy and propertied slave-owning male Europeans. Rights generally serve to mitigate or lessen the impact of oppression and inequality, and not necessarily to end it. In other words, human rights very rarely help to tackle inequality at the structural level. These paradoxes considerably weaken the ability of human rights to realise the demand for historical justice.

On a historical note, it is instructive that the Africanist and Black Consciousness tradition, from Anton Lembede, to Robert Sobukwe, and from AP Mda to Steve Biko, never framed their struggle as a struggle for human rights (the right to vote, and equal citizenship with whites). They framed it instead as a struggle for liberation and decolonisation, to dismantle white supremacy not only at the legal level but also the cultural, social and economic levels, and most importantly to demand the return of the land to the indigenous people of South Africa. They did not seek inclusion and recognition from their oppressors, but insisted on reclaiming power and creating a new liberated future. Perhaps we need to return to this tradition of anti-colonial struggle for a different and more ambitious language, and a different version of justice and freedom in our time.

In conclusion: I think we have a responsibility as young scholars and scientists not to ignore the cracks in the wall of our society. Rather than rehearse fixed orthodoxies or playing it safe, we should be breaking new ground in seeking to respond to our present historical and social condition. Rather than relying solely on paradigms and approaches developed in Europe and the United States, we need to revisit the archive of knowledge in the Global South – and particularly Africa – for ways of thinking that are more in line with our reality. If we do not do this, I am afraid we will remain haunted by injustice and inequality. As Mamphela Ramphele wrote: "The only way to lay ghosts to rest is to name them".

APPENDIX 1: LIST OF PARTICIPANTS

Mr Butjwana Seokome	
Dr Linda Fick	Academy of Science of South Africa
Mr Kholani Mbiza	Academy of Science of South Africa
Dr Siyavuya Bulani	Academy of Science of South Africa
Mr Stanley Maphosa	Academy of Science of South Africa
Mrs Phyllis Kalele	Academy of Science of South Africa
Mrs Renate Venier	Academy of Science of South Africa
Ms Constance Manyeli	Academy of Science of South Africa
Ms Didi Rambau	Academy of Science of South Africa
Ms Edith Shikumo	Academy of Science of South Africa
Ms Henriette Wagener	Academy of Science of South Africa
Ms Nozuko Hlwatika	Academy of Science of South Africa
Ms Marvin Mandiwana	Academy of Science of South Africa
Prof Roseanne Diab	Academy of Science of South Africa
Prof Barney Pityana	Academy of Science of South Africa (Council member)
Prof Himla Soodyall	Academy of Science of South Africa (Council member)
Dr Thobela Nkukwana	Agricultural Research Council, SAYAS Member
Mr Hlengiwe Kunene	AIDS Foundation
Mr Kevin Roussel	Catholic Welfare & Development
Ms Patience Mungwari Mpani	Centre for Human Rights, University of Pretoria
Ms Mabetoa Pusetso	Engineering Council of South Africa
Prof Bongani Majola	Former Assistant Secretary-General and Registrar of the International Criminal Tribunal for Rwanda
Mr Mangaliso Ntshwaqela	Foundation for Human Rights
Ms Lisa Ruwodo	Foundation for Human Rights
Ms Yasmin Sooka	Foundation for Human Rights
Mr Stanley Nkosi	Gauteng Provincial Government
Mr Zita Mawethu	Department of Higher Education and Training
Ms Olga Bialostocka	Human Science Research Council
Dr Palesa Sekhejane	Human Sciences Research Council
Dr Chandre Gould	Institute of Security Studies
Ms Kathryn Smith	Institute of Security Studies
Ms Juliet Sackey	iThemba LABS
Commissioner Janet Love	Legal Resource Centre
Prof Christof Heyns	Member, United Nations Human Rights Committee
Dr Natasha Katuta Mwila	Monash University
Ms Dorothy Ngila	National Research Foundation
Mr Anthony Chakuwamba	Nicro, Eastern Cape
Dr Hein Lubbe	North-West University
Ms Nolwandle Lembethe	North-West University
Ms Onipede Gbemisola	North-West University
Judge Richard Goldstone	Retired Judge
Judge Zak Yacoob (accompanied by Mrs Anuradha Yacoob)	Retired Judge
Ms Esther Ekuamoako	Rhodes University
Ms Tina Power	Section27
Dr Nhlanhla Mpofo	Sol Plaatje University

Mrs Joanne Riley	South African Agency for Science and Technology Advancement
Ms Muthise Bulani	South African Agency for Science and Technology Advancement
Commissioner Mohamed Ameerma	South African Human Rights Commission
Ms Angela Mudukuti	Southern Africa Litigation Centre
Ms Newayemedhin Abera	Stellenbosch University
Ms Rumbidzai Muvunzi	Stellenbosch University
Ms Somialo Azote	Stellenbosch University
Ms Joy Green	Student
Ms Marvin Mandiwana	The Academy of Science of South Africa
Ms Natasha Joseph	The Conversation
Ms Pfungwa Nyamukachi	The Conversation
Miss Phemelo Motseokae	Tshwane University of Technology
Mr Pfunzo Sidogi	Tshwane University of Technology
Miss Meagan Jacobs	University of Cape Town
Mr Marlyn Faure	University of Cape Town
Ms Jade Gesare Abuga	University of Cape Town
Ms Samar Elsheikh	University of Cape Town
Prof Brian Rappert	University of Exeter
Mr Sabelo Ndwandwe	University of Fort Hare
Mr Stephen Akinlabi	University of Johannesburg
Ms Ifemwa Olotu	University of Johannesburg
Ms Maria Onditi	University of Johannesburg
Ms Marie Chantal Cyulinyana	University of Johannesburg
Ms Momodu Foluke Olorunfemi	University of Johannesburg
Ms Zviregei Jiri	University of Johannesburg
Prof Alex Broadbent	University of Johannesburg, SAYAS Member
Prof Esther Akinlabi	University of Johannesburg, SAYAS Member
Dr Catherine Kegakilwe Koofhethile	University of KwaZulu-Natal
Mr John Mogaka	University of KwaZulu-Natal
Ms Bernice Bancole	University of KwaZulu-Natal
Ms Cathrine Kazunga	University of KwaZulu-Natal
Ms Edith Pascale	University of KwaZulu-Natal
Ms Hirut Getachew Feleke	University of KwaZulu-Natal
Ms Lucia Mapura	University of KwaZulu-Natal
Ms Nneka Akwu	University of KwaZulu-Natal
Dr Emma Charlene Lubaale	University of Pretoria
Mr Joel Modiri	University of Pretoria
Ms Danielle Roodt	University of Pretoria
Ms Joyce Agyei-Amponsah	University of Pretoria
Ms Martha Okumu	University of Pretoria
Ms Ndeye Maty Ndiaye	University of Pretoria
Ms Nthope Mapefane	University of Pretoria
Ms Tigist Shonte	University of Pretoria
Dr Dalia Saad	University of South Africa
Mrs Mateboho Green	University of South Africa
Ms Errolyn Long	University of South Africa
Ms Tiyapo Mongwaketse	University of the Free State
Dr Natasha Ross	University of the Western Cape

Ms Sangodele Olayemi	University of the Western Cape
Mr Kossi Amouzouvi	University of the Witwatersrand
Ms Mildred Airo	University of the Witwatersrand
Miss Nhlamulo Mkansi	University of Venda
Mr Joseph Mundadi	University of Venda
Ms Luicer Anne Olubayo	University of the Witwatersrand
Ms Marilyn Collins	Write Connection

APPENDIX 2: LIST OF ACRONYMS

ASIDI	Accelerated School Infrastructure Delivery Initiative
ASSAf	Academy of Science of South Africa
AU	African Union
AWARD	African Women in Agricultural Research & Development
BA (Hons)	Bachelor of Arts (Honours)
BA	Bachelor of Arts
BSc	Bachelor of Science
CEDAW	Convention on the Elimination of all Forms of Discrimination against Women
CEO	Chief Executive Officer
DHET	Department of Higher Education and Training
DGHI	Discovery Health Genomics Initiative
DRC	Democratic Republic of Congo
DST	Department of Science and Technology
DTech	Doctor of Technology
EU	European Union
GenderInSITE	Gender in Science, Innovation, Technology and Engineering
HIV	Human immunovirus
HSRC	Human Sciences Research Council
ICC	International Criminal Court
ICT	Information and Communication Technology
ICTR	International Criminal Tribunal for Rwanda
IKS	Indigenous Knowledge Systems
LGBTI	Lesbian, gay, bisexual, trans, and/or intersex
LLB	Bachelor of Laws
LLM	Master of Laws
MSc	Master of Science
NGO	Non-governmental Organisation
NICRO	National Institute for Crime Prevention and the Reintegration of Offenders
NRF	National Research Foundation
OWSD	Organisation for Women in Science for the Developing World
OWSD SANC	OWSD South African National Chapter
RDP	Reconstruction and Development Programme
REC	Research Ethics Committee
S&T	Science and technology
SAASTA	South African Agency for Science and Technology Advancement
SADC	Southern African Development Community
SAYAS	South African Young Academy of Science
STI	Science, technology and innovation
SWAPO	South West Africa People's Organisation
UKZN	University of KwaZulu-Natal
UN	United Nations
US	United States

