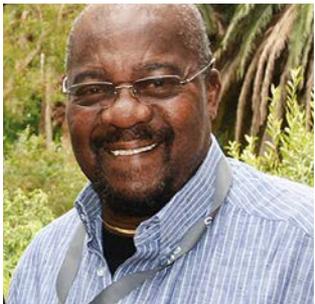
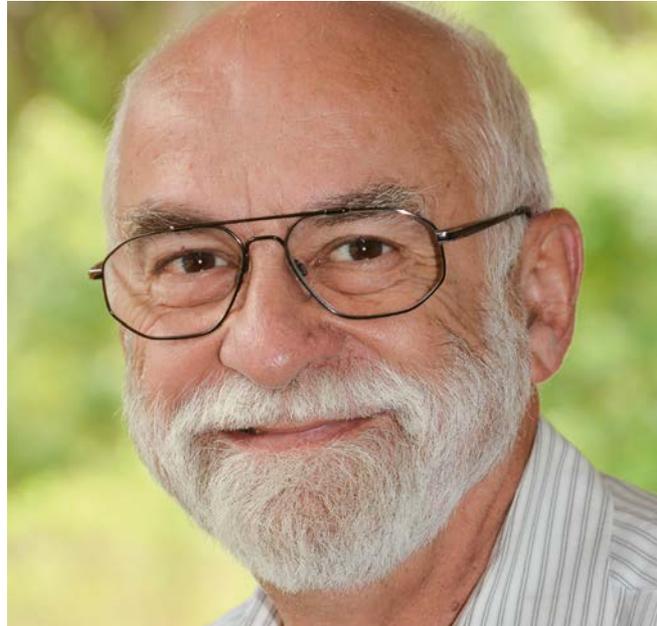
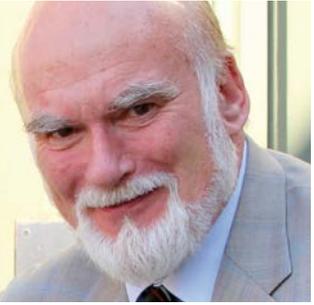
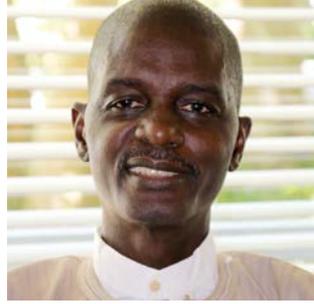
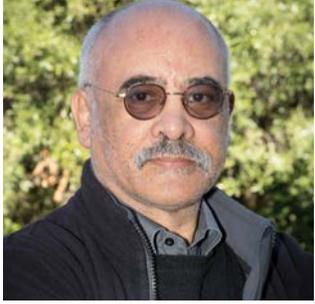


STIAS ANNUAL REPORT 2017



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STELLENBOSCH INSTITUTE FOR ADVANCED STUDY
STELLENBOSSE INSTITUUT VIR GEVORDERDE NAVORSING



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1. Barney Pityana 2. Crain Soudien 3. Louise du Toit 4. Olayemi Akinwumi 5. Michelle le Baron 6. Andrew Macnab 7. Hans Lindahl
8. Njabulo Ndebele 9. Victor Tchida 10. Abdallah Daar 11. Lucie Laflamme 12. Charles Fombad 13. Janos Bogardi
14. Christian van den Broeck 15. Richard Sikora 16. Eugene Terry 17. Kim Berman 18. Nina Jablonski

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CHAIRMAN'S FOREWORD



During 2017, STIAS was able to continue building on a strong foundation which combines a focus on excellence with a sustained engagement of contemporary challenges, in particular as they manifest in Africa. The STIAS fellowship programme, with its regular seminar series and ongoing public lectures, flourished and achieved record occupancy rates, and the longer-term theme projects grew from strength to strength. The five *Iso Lomso* fellows selected from the first call for applications in 2016 were in residence for the first time in 2017, as were four (of six) other strong applicants whose experimental or fieldwork-oriented projects could not be supported by STIAS over the period of time envisaged for *Iso Lomso* fellows. Other activities, the STIAS-Wallenberg Round Table, the Seminar on Constitutionalism in Africa, workshops, summer schools, meetings and book launches took place at regular intervals during the two 2017 semesters.

A clear highlight of the 2017 STIAS programme was the residency in November of Joseph E. Stiglitz, recipient of the Nobel Memorial Prize in Economic Sciences in 2001, who accepted a Donald Gordon STIAS fellowship invitation and presented a public lecture with the title *The revolution of information economics: the past and the future*. Not only is hosting someone with an international profile of the calibre of Joseph E. Stiglitz a tremendous honour for STIAS, but it is also an indication of the growing reputation of STIAS.

The success of STIAS is underpinned by two strong pillars – its supporters and benefactors, and the people who make up the STIAS family. Support during 2017 by its major long-term funders, the Wallenberg Foundations and Stellenbosch University is acknowledged with deep appreciation. Towards the end of 2017 STIAS was informed of renewed and substantial support from the Wallenberg Foundations commencing in 2018. Funding will be for five years, renewed for a further five years subject to satisfactory

progress. We are hugely indebted to the Wallenberg Foundations and Göran Sandberg. Early in 2018 STIAS was informed that Stellenbosch University will match the support pledged by the Wallenberg Foundations. May I assure our benefactors that we will do our utmost to justify their confidence and faith in STIAS. Other generous support in 2017 which we would like to gratefully acknowledge was received from the Riksbankens Jubileumsfond, the Trellis Charitable Trust, the Donald Gordon Foundation and a personal donation from Dr Edwin Hertzog.

Lastly it is my pleasure to thank the ever-growing STIAS family, which comprises its fellows (past and present); Stellenbosch University management; Swedish experts drawn from various backgrounds to assist in a number of STIAS activities; members of the STIAS Board, the STIAS Academic Advisory Board, and the Fellowship and Programme Committee; STIAS staff and, in particular the STIAS Director, Hendrik Geyer. I salute you all and thank you for your sterling contributions and your success in developing STIAS into a world-class institute for advanced study.

Desmond Smith
Chairman of the Board

DIRECTOR'S OVERVIEW

STIAS remained true to its guiding quest: to advance the cause of science and scholarship across all disciplines. Projects which draw on an interdisciplinary basis, feed into this discourse, and are considered topical and relevant to the (South) African context, continued to provide the backbone of the STIAS programme. A sizeable component represented activities within the existing longer-term theme projects, and a new one, *University and society*, was added to the portfolio. A highlight of the year was the full deployment of the *Iso Lomso* Programme – nine young and early career African scholars (five *Iso Lomso* fellows and four *Iso Lomso* visiting scholars) were resident at STIAS during 2017.

In numbers: 77 fellows and 16 visiting scholars participated in the 2017 programme for a total of 170 fellowship months. Fifty-one seminars in the fellows' seminar series and eight public STIAS lectures were presented, the latter on the campus of Stellenbosch University. Fellows and visiting scholars also presented and participated in numerous colloquia and lectures at academic departments of universities of the Western Cape and also lectured at the universities of Johannesburg and Pretoria.

Nineteen books were published relating to work carried out at STIAS; two of these (including the tenth volume) appeared in the STIAS series published by AFRICAN SUN MeDIA. Seven chapters in books were published and 58 journal publications appeared with the STIAS affiliation. Web of Science indicates 1 028 citations for STIAS papers published in the five-year period 2013 to 2017 with an h-index of 19; a good indication of considerable impact.

For the period November 2016 to November 2017, 66 applications were received via the direct application route. Of these, 27 were turned down because they were not suited to the STIAS programme or because they were not of a sufficiently high standard.

Some activities on the 2017 research agenda include:

- The fifth STIAS-Wallenberg Round Table (*Mobile technology in health care: promises and perils*) was held in February. STIAS fellow Guy Dumont organised an international workshop on *Technology for maternal, newborn and child health* back-to-back with the Round Table.
- A workshop on *Participatory realism* funded by a grant from the Trellis Charitable Trust and addressing issues at the interface of the foundations of quantum mechanics and philosophy was held in June.
- During September STIAS hosted the fifth *Stellenbosch Annual Seminar on Constitutionalism in Africa* (SASCA) with the theme *Corruption and constitutionalism in Africa*.
- STIAS maintained and extended its ties with the African Academy of Sciences (AAS), notably through residencies at STIAS of Berhanu Abegaz, former AAS executive director, and Kevin Marsh, senior adviser to the AAS. In addition STIAS hosted a second summer school (*Developmental origins of health and disease translational science: from cell to society*) for young African scientists in November, co-organised with and co-funded by the AAS.
- STIAS co-hosted two public events on the Stellenbosch University campus: a conversation (*Dialogue, writing, and humanity in troubled times*) between Homi Bhabha (Director of the Mahindra Humanities Center at Harvard University) and STIAS permanent visiting fellow Njabulo Ndebele (with the Historical Trauma and Transformation Research Initiative) and a public lecture (*Science, the Square Kilometre Array telescope and big data: can Africa lead?*) by Bernie Fanaroff, former SKA director (with the Cosmopolitan Karoo project).
- A number of books relating to work carried out at STIAS, were launched at STIAS: *Dancing the death drill* (Fred Khumalo); *Purpose and desire. What makes something "alive" and why modern Darwinism has failed to explain it* (Scott Turner); and *National Park science – a century of research in South Africa* (Jane Carruthers). Göran Therborn's book *Cities of power: the urban, the national, the popular, the global* was launched during a

conference at STIAS jointly hosted with the African Centre for Cities.

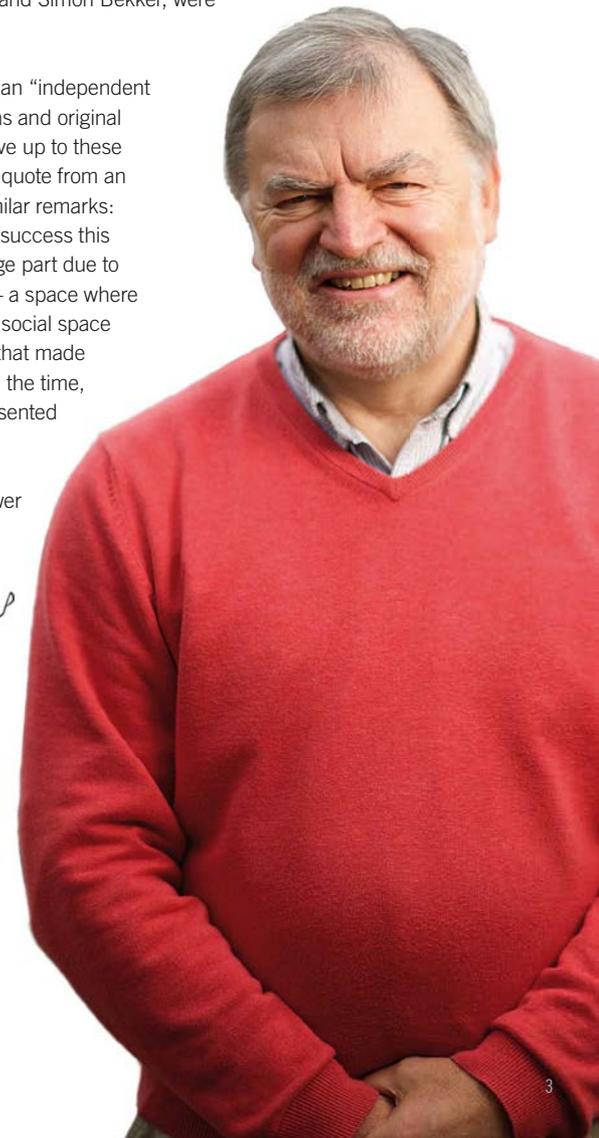
- As part of its participation in the Point Sud programme, STIAS hosted and funded a summer school in December on *New forms of political participation in Africa* at the Centre for Research on Local Knowledge, Point Sud, Bamako. Two STIAS fellows, Charles Fombad and Simon Bekker, were among the lecturers.

STIAS prides itself as being an “independent space where innovative ideas and original thinking can thrive”. Did it live up to these expectations? The following quote from an exit report echoes many similar remarks: “There is no doubt that any success this book will have, will be in large part due to the total STIAS experience – a space where I could work, a professional social space where I could learn, a staff that made everything work perfectly all the time, and the creative array represented by the fellows.”

I will conclude that the answer is an unqualified “yes”.



Hendrik Geyer
Director of STIAS



2017 AT A GLANCE

MNCH Tech, a workshop on technology for maternal, newborn and child health is hosted by STIAS from 22 to 24 February. It is co-sponsored by the Peter Wall Institute for Advanced Studies, the Centre for International Child Health and STIAS.

The *Workshop on participatory realism*, organised by STIAS fellows Chris Fuchs and Rüdiger Schack is held at STIAS.



FEBRUARY The fifth STIAS-Wallenberg Round Table focusing on image-based mobile technologies to improve health care is held at STIAS on 20 and 21 February. It brings together over 60 representatives from the clinical, research, policy, business and social sectors from 16 countries to discuss the possibilities of image-based mobile health for improving health care particularly in remote and resource-poor settings.

APRIL Fred Khumalo's novel *Dancing the death drill* is launched at STIAS. The novel was written in part while Khumalo was in residence at STIAS in 2014. An isiZulu translation is due for publication in 2018.

JULY/AUGUST STIAS and the African Centre for Cities jointly host a conference on *Refractions of the national, the popular, and the global in African cities* at the Wallenberg Research Centre on 31 July and 1 August. Göran Therborn's book, *Cities of power: the urban, the national, the popular, the global* is launched at this occasion.

The book *Purpose and desire. What makes something "alive" and why modern Darwinism has failed to explain it* by Scott Turner, is launched at STIAS.

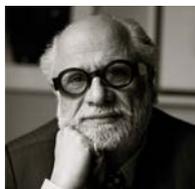
STIAS holds a function to mark the publication of *National Park Science: a century of research in South Africa* by Jane Carruthers. Much of the book was written during her 2015 STIAS fellowship.

OCTOBER

STIAS launches a new long-term theme project entitled *University and society: disruption, discourse and new directions*.

NOVEMBER

The African Academy of Sciences, the Medical Research Council Developmental Pathways for Health Research Unit at the University of the Witwatersrand, the DOHaD (Developmental origins of health and disease) African Chapter, STIAS and other partners host a summer school at STIAS entitled *Developmental origins of health and disease translational science: from cell to society*.



AUGUST

STIAS co-hosts two public events with Stellenbosch University: a conversation (*Dialogue, writing, and humanity in troubled times*) between the Director of the Mahindra Humanities Center at Harvard University, Homi Bhabha, and STIAS permanent visiting fellow, Njabulo Ndebele (with the Historical Trauma and Transformation Research Initiative) and a public lecture (*Science, the Square Kilometre Array telescope and big data: can Africa lead?*) by Bernie Fanaroff, former SKA director (with the Cosmopolitan Karoo project)

SEPTEMBER

The fifth Stellenbosch Annual Seminar on Constitutionalism in Africa entitled *Corruption and constitutionalism in Africa: revisiting control measures and containment strategies*, takes place at STIAS from 19 to 22 September.

STIAS opens a second call for its *Iso Lomso* ("the eye of tomorrow") fellowships; up to seven candidates will be awarded a three-year fellowship.

NOVEMBER

A special concert by jazz musician and STIAS fellow Darius Brubeck, *Iso Lomso* fellow Malebogo Ngoepe and saxophonist Mike Rossi is held in the STIAS Manor House.

Joseph E. Stiglitz (Columbia University), recipient of the Nobel Memorial Prize in Economic Sciences in 2001 and STIAS fellow, presents a public lecture entitled *The revolution of information economics: the past and the future*.

DECEMBER

STIAS hosts and funds a summer school *New forms of political participation in Africa* at the Centre for Research on Local Knowledge, Point Sud, Bamako, as part of its participation in the Point Sud Programme. STIAS fellows Charles Fombad and Simon Bekker are among the lecturers.

“THERE IS NO SUCH THING AS AUTOPILOT”

Hendrik Geyer reflecting on leading and leaving STIAS

By Le Roux Schoeman

On the menu today: barley risotto, fine beans, asparagus and mushroom. And the range of topics at one of the noisy corner tables: state capture, the future of electricity generation and the history of the *Broederbond*... It's lunchtime at Mostertsdrift, the well-known Stellenbosch farm that dates back to 1683 and has been repurposed into the home of the Stellenbosch Institute for Advanced Study (STIAS), now in its 18th year.

Even before four Nobel Prize winners counted among the STIAS fellows and visiting scholars, Chris Brink, a former rector and vice-chancellor of Stellenbosch University, described this setting as “a kind of neutral territory, a thinking space where we would like to invite other people, other universities, and other countries to join us in this very beautiful place and help us think about what is good for the country, what is good for science, what is good for intellectual life.” And, 12 years later, on a rainy winter day, it is the outgoing STIAS director, Hendrik Geyer, who recalls these words with pride.

Geyer, an internationally recognised scientist and researcher who brings the careful and deliberate thought of a physics professor to almost any interaction he has, has been in the saddle here for a decade. When jokingly asked if he thinks the “patient” is stable enough for him to move on, he quips that STIAS is in rude health and its life expectancy has greatly improved thanks to tenacious fundraising efforts and deep thought about its purpose.

“The development of the research programme has been a challenge but also incredibly enriching,” Geyer says when asked to summarise his experience at the helm. By “shopping” for models he saw working overseas and matching them to the mandate here at Mostertsdrift, Geyer also helped to create added opportunities such as the new fellowship and early career support programme that invites

the “brightest young minds in African academia”. Called *Iso Lomso*, meaning the Eye of Tomorrow in isiXhosa, Geyer lists this initiative as a key legacy of his term. “It has always been on our agenda to have a visible African profile and we’ve had varying success with that. *Iso Lomso* is the highlight (of that ideal) to establish stronger links in Africa.”

The first five *Iso Lomso* candidates were announced in 2016. In doing so STIAS made room for the study of not only topics such as disability and reproduction in Africa and the emergence of 3D-printing of houses, but also for a young South African academic's aim of developing a thrombosis model which can be applied in both cerebral aneurysms and abdominal aortic aneurysms.

The broader challenge that the Institute faces is this: Finding ways to expand its African profile to underpin what Geyer describes as (a hand-gesture intensive!) STIAS's role at the “North-South East-West nexus”. For fear that the listener does not grasp that model of explanation, the 64-year-old Geyer reverts to a metaphor reinforced by the fynbos garden that surrounds this studious space: cross-pollination of motivated minds.

For years now Geyer's leadership team and the board of directors have worked to improve and adjust the selection process which in turn determines the potential contributions of the roughly 80 annual fellows who will get to dish up on the risotto and enjoy a brand of research that combines solitude and fellowship in a way that reminds one of the theologian Richard Rohr's line about something being “so simple it's hard to teach”. But here is how Geyer explains the approach: “We don't want to compete with universities. We want interdisciplinary conversation that develops naturally. It boils down to something this simple: If you have people under one roof, for long enough, things happen.”

The fellows are requested not to use their time here in the scenic Boland region of the Western Cape for travel or tourism. The father of two grownup daughters, both

of whom studied physics (to master's and doctoral level, respectively) suddenly looks almost stern when he adds that the regular seminars are mandatory in order to encourage fellows to take interest beyond their own projects.

Geyer's own research has seen him rewarded for excellence on the highest level at Stellenbosch University on three occasions (2001, 2006 and 2015). So, he is something of a prophet accepted in his hometown. He has lived in Stellenbosch for 34 years and apart from being a veteran networker and effective fundraiser, he strikes one as the researcher's researcher. He is at pains to explain the breadth of disciplines and topics brought under one roof here at STIAS. From rabies to race relations, from string theory to spider web silk and, of course, state capture. The latter is discussed one afternoon as Geyer casually joins fellows and his guest for a quick lunch at the venue that has been teasingly referred to as the Institute for Advanced Salads, due to the attention to detail on all things related to catering and coffee.

Geyer settles in across from journalist, analyst and writer John Matisson and next to Michael Thackeray from Argonne National Laboratory in the USA who has brought a young guest with him. In STIAS lore, these lunches are something between platonic speed dating and TED Talks. But when the break is over work resumes, in valued privacy. And it's all about projects. Matisson's project: *APOCALYPSE 2016-2019: Decline of Jacob Zuma, Rise of South Africa?* And Thackeray's *Lithium-ion batteries and the commercialisation of science – a narrative*. Even a casual visitor would know this because all names and project titles are writ large on a central wall in this gracefully designed building that houses 20 individual offices. This is, literally, the pillar upon which STIAS stands. The work of top researchers and intellectual leaders invited to travel to Stellenbosch and to “find innovative and sustainable solutions to issues facing the world and in particular the country and the continent of Africa”.

As the second of only two directors in the Institute's existence, Geyer has done as much as anyone to steer this ship. "What you realise is that if you have managed to bring something into existence, it depends to a great degree on your sustained involvement. You can't just put things on autopilot. But I knew that when I got involved (at STIAS)," Geyer says.

Although he discloses no fixed plans for the next chapter in his own life, the transitioning of leadership at the Institute clearly rests heavily on his mind and heart. When asked for a personal highlight during his time at STIAS, Geyer doesn't reference a publication in a leading journal or a standing ovation at some seminar. He pages to an entry in the visitor's book, where a man from Nieu Bethesda wrote the following words: "A defining moment. I've waited 80 years to discover where I belonged. Now I know," wrote one-time STIAS fellow, Athol Fugard.



DATA IN BRIEF 2017

STIAS remained true to its guiding quest: to advance the cause of science and scholarship across all disciplines. Projects which draw on an interdisciplinary basis, feed into this discourse, and are considered topical and relevant to the (South) African context continued to provide the backbone of the STIAS programme. A sizeable component represented activities within the existing longer-term theme projects, and a new one, *University and society*, was added to the portfolio. A highlight of the year was the full deployment of the *Iso Lomso* Programme. Nine young and early career African scholars (five *Iso Lomso* fellows and four *Iso Lomso* visiting scholars) were resident at STIAS during 2017.

77

fellows hosted

16

visiting scholars

participated in the
2017 programme

170

fellowship months

51

seminars

in the fellows'
seminar series

08

public STIAS lectures

were presented on the campus
of Stellenbosch University

19

books

were published
relating to work
carried out at STIAS

07

chapters in books

58

journal articles

appeared with the
STIAS affiliation

66

applications for 2018

were received via the
direct application route

39

successful applicants

EARLY CAREER STIAS SUPPORT FOR AFRICAN RESEARCHERS

The *Iso Lomso* Programme

2017 saw the first year of the full deployment of the *Iso Lomso* programme (meaning the Eye of Tomorrow in IsiXhosa), an early career support programme to boost the careers of a number of the brightest young researchers in academia in Africa. This programme, funded in 2016 through a grant to STIAS by the Swedish Riksbankens Jubileumsfond, gives *Iso Lomso* fellows the opportunity to spend periods of residency at STIAS over the course of three years in which they can focus on their research. In addition to the STIAS residency, STIAS also endeavours to facilitate an opportunity for *Iso Lomso* fellows to pursue part of their research at another institute for advanced study abroad. At the end of 2017, STIAS received the excellent news that the Wallenberg Foundations would be supporting this programme for the next five years, with a possible extension for a further five years thereafter.

Following the first call for applications in 2016, five applicants were selected for *Iso Lomso* fellowships to be taken up during the period 2017 to 2020 (referred to as the 2017 cohort of *Iso Lomso* fellows). The 2017 cohort of *Iso Lomso* fellows completed their first year of STIAS residence during 2017 and will be undertaking residencies abroad in 2018.

Six further applicants were awarded *Iso Lomso* visiting scholarships to undertake a residency at STIAS during 2017 and 2018 to assist them with the initiation of their proposed research projects.

A second call for applications for *Iso Lomso* fellowships was opened in September 2017. Responding to the overwhelming number of applications received after the first call, some changes to the call requirements were introduced, in particular that candidates should have established a research programme and have completed a postdoctoral fellowship or equivalent post-PhD programme. An age restriction was also added

and an explanation on the suitability of STIAS vis-à-vis research projects with a predominantly experimental methodology. Eighty-one eligible applications were received following the second call.

2017 cohort of *Iso Lomso* fellows



John Ganle (University of Ghana)

Disability and reproduction in Africa: a multi-methods investigation to identify, describe and determine the sexual, reproductive and maternal healthcare needs and challenges of women with disability in Ghana

Persons with disabilities (PWDs) constitute 15% of the world's population. Across the world, and especially in many low-income settings of Africa including Ghana, PWDs are however one of the most marginalised and socially excluded groups. This disadvantage transcends several spheres: PWDs have generally poorer health, lower education achievements, fewer economic opportunities and higher rates of poverty than people without disabilities. Women with disability particularly are more likely to be poorer and have lower social and economic status than their abled-bodied counterparts. In the context of sexual, reproductive and maternal health, PWDs have largely been ignored in health programming and policy-making in many African contexts. This neglect often results from assumptions about the asexuality or rather expected asexuality of PWDs. Such neglect has however resulted in both poor theorisation of disability and reproduction, and a missed

opportunity to understand the sexual, reproductive and maternal healthcare needs, healthcare-seeking behaviours and challenges of women with disability in many African settings including Ghana.

Ganle's project proposes to use ethnographic-style qualitative research methodology alongside quantitative survey to enquire (empirically and theoretically) the reproductive, sexual and maternal healthcare needs and challenges of women with disabilities in Ghana, challenge assumptions about disability and asexuality, and ask how the issue of disability in contexts such as Ghana could be better theorised and studied. Such a study is urgently needed to better understand disability and reproduction in Africa, and to develop more inclusive sexual, reproductive and maternal health services that have the potential to propel progress with the United Nations' sustainable development goals of universal access to skilled comprehensive sexual, reproductive and maternal health services.

While at STIAS, Ganle undertook a systematic literature review that provided initial information on the barriers persons with disabilities face in accessing sexual and reproductive health services in sub-Saharan Africa. Together with the empirical research that Ganle will be conducting in Ghana, this will hopefully address the evidence gap that his project seeks to address. Work on the review has progressed steadily. The review protocol was completed and has been approved and registered by the PROSPERO International Prospective Register of Systematic Reviews under the National Institute for Health Research, United Kingdom. Literature searches using relevant standard strategies were also completed and the information synthesised into evidence tables. Quality assessments of relevant studies and their respective evidence were also done. A full draft of the manuscript was submitted to *BMC Pregnancy and Child Birth* in November 2017. A first phase of peer-review was completed by May 2018, and comments

from the reviewers are currently being addressed in a revised manuscript.

Ganle also had the opportunity to network and explore opportunities for collaborations with two STIAS fellows, Uchenna Okeja and Gabeba Baderoon, and with Leslie Swartz and his team at Stellenbosch University. Discussions with Okeja centred on a paper on *Disability and personhood in Africa*. Potential collaboration with Gabeba Baderoon is about the possibility of using memoirs, poetry and biographical narratives as a way to both overcome the problem of invisibility of persons with disability in research, and collect data. Swartz and Ganle explored potential collaboration to organise a capacity building workshop in Ghana on *The use of photo voice in disability research*. In addition, Ganle worked on a number of manuscripts while at STIAS which are under consideration for publication.

Ganle has commenced some theoretical thinking and work around theorising disability and sexuality in Africa. In particular, he hopes to draw on Kleinman's (1995) concept of social suffering to problematise the current seemingly ableist fetishism about disability, which mocks the person with disability in sexual relationships. In doing this, Ganle is asking: how do individuals whose sexuality is often depicted in popular understanding as somewhere around the extremes of the non-sexual and hypersexual, constitute their sexual subjectivity? How do people with disabilities conceptualise, experience and engage with themselves as sexual and reproductive beings? How can disability theory make connections with able-bodied people, rather than presenting disabled and able-bodied people as in continuous and unchanging opposition? In the long term, Ganle aims to use this theoretical work to explore the significance of sexuality in individual self-identity and psychosocial welfare among women with disabilities, and to highlight the way in which the denial of sexual identity may be a significant feature

of power relations, and the fact that social groups that lack power, also lack the ability to define and regulate their own sexuality – as may be the case when it comes to the sexuality and reproductive capacities of PWDs.



Uchenna Okeja (Rhodes University)

The public sphere in African political thought

The project Okeja worked on during the first residency period of his *Iso Lomso* fellowship broadly focuses on developing a modern African political philosophy. In order to achieve the aim of this project, a historically embedded study and an analysis of the practice of deliberation in African societies are undertaken. The analytical frame of reference Okeja employs is the concept of African arenas for deliberation. Thus, he asks if African arenas for deliberation can be imagined in a way that enables one to articulate a form of political philosophy that is instructive for democratic theory and practice. He considers the development of a modern African political philosophy important for two reasons.

The first reason is the need to point out the misunderstandings of indigenous African norms and practices in the works of political philosophers. The second reason is the need for a reconstructive analysis that could serve as the basis for understanding Africa-specific experiences. It is certainly true that many papers and books have been written on the so-called African political condition. From these works, many

insights can be gleaned. The major challenge, however, is that Africa is still in search of a model of self-rule that is premised on a plausibly argued political philosophy. This is the goal Okeja is aiming to achieve and to contribute to in his research.

During his residency at STIAS between July and October 2017, Okeja was able to conclude some projects he had begun before his selection as *Iso Lomso* fellow. This involved writing and revising journal articles and book manuscripts. Two journal articles were published in 2017 and a number of journal articles, book chapters, and an edited book under Okeja's authorship/co-authorship have been accepted for publication.

In addition, Okeja spent time identifying and tracking down relevant literature for his *Iso Lomso* project on African political philosophy. This enabled him to develop a feasible timeline for completion of the project.

With the support of STIAS and the University of Frankfurt (Exzellenzcluster HNO), Okeja was able to spend a three-month residency at the Forschungskolleg Humanwissenschaften in Bad Homburg, Germany. His central focus during this residency was to sharpen the central questions of his project and to develop a framework he can employ in laying the foundation for the answers he seeks to provide. Justitia Amplificata, a Centre for Advanced Studies in Frankfurt, offered him a fellowship in their senior fellowship programme. Thus, Okeja was able to spend more time working on the fundamental problems of his *Iso Lomso* project. He shared his findings in two lectures which he delivered at the Forschungskolleg Humanwissenschaften in Bad Homburg.

Okeja will be developing the project on African political philosophy further during a fellowship at the University of Chicago and at Harvard University.

“I remain eternally grateful to STIAS for conceiving the *Iso Lomso* programme. I can hardly imagine a luck greater than the award of an *Iso Lomso* fellowship.”

Uchenna Okeja

Tolullah Oni

Having already spent one month of her sabbatical leave in New York and meeting with collaborators, the residency period at STIAS gave Oni the time to process these conversations, and set out a clear course on how to advance her collaborations. Following her residency at STIAS, Oni was invited for a period of six months at the New York Academy of Medicine from September 2017 to March 2018. Here she was able to engage with colleagues at the Academy, City University of New York and Columbia University.



He hopes to publish most of his findings in the form of articles and as a book before the end of 2019.

Okeja says: “I remain eternally grateful to STIAS for conceiving the *Iso Lomso* programme. I can hardly imagine a luck greater than the award of an *Iso Lomso* fellowship.”

Tolullah Oni (University of Cape Town)

Health in all policies: healthy housing policies to address the risk and burden of infectious and non-communicable diseases

Informal settlements are becoming more entrenched within the fabric of African cities as the urban population continues to grow and the demand for formal housing exceeds the supply. Characterised by poor housing conditions and inadequate services, informal settlements are associated with an increased risk of disease and ill-health. The current high burden of infectious diseases in South Africa and the growing prevalence of chronic non-infectious multimorbidities indicate an urgent need to rethink housing and human settlement strategies to measurably improve living conditions and, subsequently, the health of the population, particularly the urban poor.

This study explores intersectoral health and human settlement policies, governance structures and existing human settlements and health data systems to determine barriers and facilitators of incorporating health objectives into human settlements policies for supporting equitable development for sustainable, resilient and healthy human settlements through intersectoral collaboration. Using a mixed-methods cross-sectional study design, the study has involved extensive desktop analysis; semi-structured interviews with 24 government policymakers and implementers from the Western Cape Government and the City of Cape Town; and an exploration of existing quantitative data on a population’s baseline health and the interoperability with human settlements data

for an area identified for future informal settlement upgrading in the Western Cape. The findings highlight several challenges and opportunities for effective collaboration between the health and human settlements sectors within government that can largely be rooted in differences in schools of thought, the use of language, government mandates, and the availability of data. As informal settlements are becoming embedded features within sub-Saharan African cities, intersectoral approaches to developing sustainable human settlements are essential if South Africa is to contribute progress towards achieving the international sustainable development goals and the so-called new urban agenda.

During Oni’s residency at STIAS the following was achieved:

- a policy brief on urban health in Africa, *A systems approach to urban health and wellbeing has come of age*, as part of a series of policy briefs commissioned for China, Asia-Pacific, Latin-America and the Caribbean, and Africa. This will be circulated to key policymakers across these regions
- further work on a commentary piece on global public health from an African perspective for subsequent publication
- an expanded curriculum content of a global public health curriculum
- a STIAS public lecture on *Re-conceptualising health in cities: challenges and opportunities*
- a clear course on the post-STIAS sabbatical period at the New York Academy of Medicine

Having already spent one month of her sabbatical leave in New York and meeting with collaborators, the residency period at STIAS gave her the time to process these conversations, and set out a clear course on how to advance her collaborations. Following her residency at STIAS, Oni was invited for a period of six months at the New York Academy of Medicine from September 2017 to March 2018. Here she was able to engage with

colleagues at the Academy, City University of New York and Columbia University.

Oni has completed and submitted a number of ongoing papers, written and submitted funding proposals, presented her work at international conferences and will return to STIAS for her next residency at STIAS in October 2018.

She remembers her 2017 residency at STIAS as:

“Serene. Totally delicious. Invigorating.

Accommodating. Stimulating (STIAS).

Serene: the setting and set up makes the experience thoroughly tranquil, making it easier than it has ever been for me to hush the white noise of the day-to-day.

Totally delicious: this is self-explanatory. The healthy and delicious lunches were a real winner. I would love to have souvenir recipe cards for some of the dishes sampled during my residency!

Invigorating: feeling renewed from the experience.

I particularly enjoyed giving the public lecture.

Accommodating: the flexibility of the residency.

From flexible, easy access to the building at all hours, and accommodating guests for lunch, to considerate accommodation of partners; this approach was appreciated. I made it a personal mission to expose as many early and mid-career researchers I work with to the space, from PhD students to collaborators and friends, all of whom found it inspiring. This accommodating approach made this possible, and undoubtedly planted seeds in other bright minds who are not fellows. Not yet...

Stimulating: the conversations with other fellows in residence will stay with me for a long time. This was a real highlight.”



Aretha Phiri (Rhodes University)

Interrogating blackness, locating “Africanness”: call-and-response in the works of Toni Morrison and Zoë Wicomb, NoViolet Bulawayo, Chimamanda Ngozi Adichie and Taiye Selasi

This project offers a fresh, comparative, transatlantic and transnational analysis of the work of leading African-American author Toni Morrison, on blackness through the lens of contemporary female writers of the African diaspora: Zoë Wicomb, NoViolet Bulawayo, Chimamanda Ngozi Adichie, and Taiye Selasi.

The project explores how a selection of their texts speak (back) to, in order to rewrite, Morrison’s claims on race through an “Africanness” that takes into account cultural- and context-specific, complexly globalised configurations of contemporary black subjectivities.

Showing how their literature signifies upon an African-American metanarrative of blackness through an intertextual relation with and formal revision of her work, this project deploys the literary and culturally specific dialogic call-and-response mode as its structural premise to suggest the stimulating ways that Morrison’s concerns around blackness are being critiqued to reflect nuanced and sophisticated, mediated and mutable, versions of African subjectivity, especially with regard to (intersectional) black female subjectivities. In this way, the project aims to offer a fresh perspective on Morrison’s work while significantly realigning contemporary African ideologies and materialities for more inclusive and expansive global visions of blackness.

While in residence at STIAS from October to December 2017, Phiri presented a paper entitled *Trespassing borders, transgressing boundaries: (re)imagining Africa(ns) in the world* in the STIAS seminar series which will form part of a collection of essays entitled *African philosophical and literary possibilities: re-reading the Canon*, edited by Phiri and scheduled for publication by Lexington Books in 2020. Three academic papers were also written and completed while at STIAS: *Black, white and everything in-between: unravelling the times with Zoë Wicomb*, was accepted for publication in the *English in Africa* journal (2018); *The race for reparation(s), the impossibility of repair in Toni Morrison’s Beloved and Antjie Krog’s Country of my skull*, has been accepted for publication in *Safundi* (2019); and *Fingering the jagged grain: reading the blues in Taiye Selasi’s Ghana must go*, is currently under peer review for the book project entitled, *Afropolitan literature as world literature*, edited by James Hodapp for Bloomsbury publishing (2019/2020).

The global focus of Phiri’s project has enabled research collaborations with the Institute for Black Atlantic Research in Lancaster (UK) and the Centre for the Study of International Slavery in Liverpool (UK), where she will be a visiting fellow

from June to July 2018. A Leverhulme Centre for the Study of the Black Atlantic bid has been put forward by the Institute for Black Atlantic Research for funding for a ten-year project which, if successful, will see Phiri working in collaboration with international scholars under the key research themes of: *Black Atlantic culture and modernity* (2019-2020), and *contemporary black artists in the African diaspora and their relation to issues of historical and contemporary slavery and to Black Lives Matter* (2021-2022).

Phiri will also be a visiting fellow at the National Humanities Center, North Carolina, from September to December 2018, where she will further develop the African American component of her research project and in addition to the resources available at the Centre, will access the archived Toni Morrison papers as well as the Department of Rare Books and Special Collections housed at Princeton University. She will present a paper as part of her residency and conduct further interviews with the authors under study.

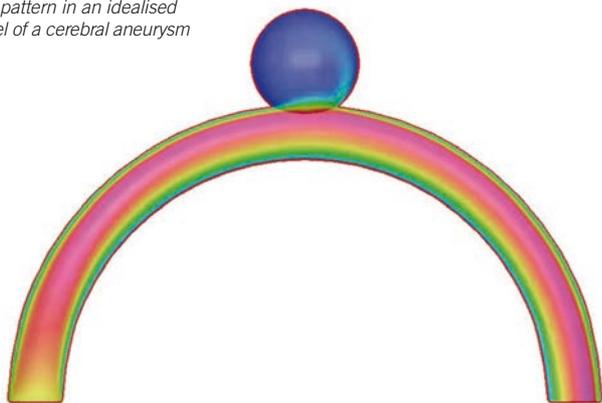


Malebogo Ngoepe (University of Cape Town)

Comparative computational study of thrombosis in cerebral and abdominal aortic aneurysms

Aneurysms are balloon-like sacs that develop on blood vessels as a result of the weakening of the vessel wall layers. Aneurysms occur most commonly on blood vessels of the brain or on the aorta and

Flow pattern in an idealised model of a cerebral aneurysm



are at risk of rupture, with subsequent morbidity or mortality. Various computational tools have been developed in an effort to understand the origin and progression of the disease. Thrombosis (clotting) is a condition which is closely linked to aneurysms and has a significant influence on aneurysm progression. Some clots have been observed to stabilise aneurysms, by preventing complex flow conditions within the sac. Other clots have been seen to accelerate the time to rupture, by further degrading the already weakened wall. In an effort to better distinguish between desirable and undesirable clots, computational methods capable of predicting clot growth have been developed.

Owing to the differences in flow conditions and disease progression, cerebral aneurysms and abdominal aortic aneurysms are often studied separately. The study of clot development in aneurysms has therefore followed a similar trajectory. The aim of the current project is to apply an existing computational model developed for cerebral aneurysms to abdominal aortic aneurysms. It is hoped that the similarities and differences in clotting outcomes will give strong clues about the key factors at play in clot initiation and progression. The study will also begin to establish the limits of the computational framework and test its applicability to a wider range of vascular diseases.

While at STIAS, Ngoepe completed a paper titled *Thrombosis in cerebral aneurysms and the computational modelling thereof: a review*, published in *Frontiers in Physiology*. She also prepared a submission titled *Comparison of blood clot growth in idealised geometries of cerebral aneurysms and abdominal aortic aneurysms* for the 55th Annual Technical Meeting of the Society of Engineering Science (SES2018) to be held in Madrid in October 2018. Ngoepe was pleased to be introduced to Resia Pretorius, Department of Physiology, Stellenbosch University, whose work

focuses on a broad range of experimental techniques for understanding thrombosis. They are currently in the process of establishing a collaboration framework where her experimental techniques can be combined with experimental fluid mechanics platforms to complement the computational work.

2017 Iso Lomso visiting scholars

Eunice Githae (Chuka University)

Assessment of social-economic impacts of invasive cactus (*Opuntia engelmannii*) to rural livelihoods and their environment in the drylands of Kenya

During her residency at STIAS, Githae focused on developing her research proposal on the socioeconomic impacts of the *Opuntia* species (cactus pear) to rural livelihoods and their environment in Kenya. These plants are invasive alien species (IAS) that have spread rapidly and invaded the arid and semi-arid areas. Specifically, she assessed global literature on the study context especially in South Africa where a lot has been done on IAS. During this time, she worked with colleagues at the South African Centre of Excellence for Invasion Biology and the Department of Conservation Ecology and Entomology at Stellenbosch University on developing the proposal. Courtesy of the South African National Biodiversity Institute's invasive species programme, Githae visited the Prince Albert field sites where heavy invasions of *Opuntia* are being bio-controlled. She also assessed various books and secondary data sources from the Stellenbosch University library.

After her visit to STIAS, Githae was able to assess the socio-ecological impacts of invasive *Opuntia* in the rangelands of Narok County, Kenya, a part of her research funded by Chuka University. The findings are in the process of publication. Resulting from the assessed literature review and in consultation with key informants, she was able to complete a review on the

current status and management of invasive *Opuntia* species in Kenya, which *CAB Reviews* has accepted for publication. Currently, she is working with AgriFose and the International Livestock Research Institute in disseminating her research findings to the policy-making community in support of agriculture and food security in Kenya.



Patrick Gobbinah (Kwame Nkrumah University of Science and Technology)

Print a house for development (3D-H-4D): prototyping climate change adaptation in African urban planning

The news that a Chinese company has successfully 3D-printed ten houses, cheaply, with a bare-bones workforce and within 24 hours, offers a window for future sustainable development in Africa's urban planning. On top of cost, time and labour benefits, there are other benefits in the 3D printing of houses that are applicable to climate change adaptation in Africa: resource efficiency, customisation of the architecture to the environment, novel structural design sensibilities, waste management and recycling. There are now plans to 3D print houses in resource-constrained environments beyond earth, on Mars, using in situ materials. While not on the same scale as other planets, African cities are resource-constrained environments with high levels of poverty, environmental degradation and pollution, and unchecked urban migration and expansion. Beyond coping with the current conditions, Africa's



Eunice Githae

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urban citizens are vulnerable to the projected impacts of climate change in the not-so-distant future. In response to a pending catastrophe of planetary scale, this project inquires: what if 3D printers could be harnessed to retrofit Africa's urban spaces to be more climate resilient?

During the six weeks at STIAS, Cobbinah had fruitful discussions and interactions with other fellows and academics at the Centre for Complex Systems in Transition at Stellenbosch University and at the African Centre for Cities, University of Cape Town. These interactions, he says, greatly assisted him to conceptualise the focus of his project. Cobbinah's work at STIAS entailed a literature review and strengthening the argument and content of his project proposal. Delivering a seminar at STIAS towards the end of his stay helped considerably in this regard. He describes his experience at STIAS as a redefinition of his research career in an environment of mutual respect and harmonious co-habitation, characterised by an immense sense of belonging. Cobbinah cherished the paradox of concentrating on his research project while at the same time socially engaging others through seminars and lunch-time conversations. He described the genuine willingness of fellows – irrespective of their fields of interest – to get to know and share their experiences regarding another fellow's project as amazing; the encouragement and mutual support he received as indescribable; and the social network established through the regular lunch breaks as invaluable. These experiences resulted in a paper reflecting on the changing emphasis of urban planning in Ghana, published in 2017. Cobbinah is currently working on a journal article, *Thinking about 3D printing of houses to make sense of climate change adaptation in African urban planning*, to be submitted to *Progress in Human Geography*.



Beira Hailu Meressa (Jimma University)

Prevalence of phytoparasitic nematodes and damage levels on vegetable crops in southwest Ethiopia: an approach towards development of a sustainable nematode management

Horticulture is one of the sectors that has received attention in Ethiopia, as is evidenced by its rapid growth in the last few years. Large to medium-scale production that comprised cut flowers, vegetables, fruits and herbs are being grown by both local and foreign-owned farms. However, one of the serious challenges to the sector is plant-parasitic nematodes leading to a decline in yield and quality of horticultural produce. The problem of nematodes is not well appreciated due to the nature of the damage and the limited awareness of the nematode problem. However, the extent of the problem was recently revealed through the work of nematologists elsewhere in the country. In the southwest, regardless of the severe impact of the nematode pests, no management method is yet available. Because the control method depends on the nematode species, the identification and characterisation of their damage level require investigation. Furthermore, to limit the use of chemicals, studying natural antagonistic microorganisms is of paramount importance. Isolation of efficient microorganisms to control plant parasitic nematodes will lead to an environmentally sustainable approach for nematode management.

The aim of this project is to detect plant-parasitic nematodes associated with various economically

important horticultural crops, amongst others coffee, cut roses, hypericum, snap beans, landscape ornamentals, bananas, peppers, onions, enset, and carrots; to identify these nematodes at species level; to determine the host-parasite relationships for selected crops and nematodes; and to investigate natural enemies of the nematodes for use as a biocontrol.

During the six-week fellowship at STIAS, Meressa developed and improved methodological approaches to the project. Two manuscripts were written, one has already been published and the other has been submitted.

Meressa was able to carry out molecular analysis in collaboration with colleagues in the entomology and nematology laboratory at Stellenbosch University. This resulted in the identification of the species *Meloidogyne javanica*. A master's student is now involved in a study of this nematode to investigate its impact on a carrot variety that is widely grown in Ethiopia. Ongoing research of another master's student on coffee has resulted in the identification of a new nematode genus and this has opened a new topic for future study. In addition, a doctoral student has started his research dealing on pepper nematodes. Meressa says: "In my opinion STIAS has an excellent vision and should be accorded every opportunity to expand its capacity to take in and invite more young scholars."

STIAS postdoctoral fellowship module (SPFM)

Lizabé Lambrechts became the first postdoctoral fellow to be awarded a STIAS fellowship module following an agreement with the Volkswagen Foundation whereby STIAS makes its facilities available to postdoctoral fellows in the Volkswagen Foundation's *Knowledge for Tomorrow* programme. The module enables fellowship holders to pursue research and scholarship in their field of study



Lizabé Lambrechts

During her time at STIAS, Lambrechts wrote a paper, *Singing to the 'Free Peoples': music and (white) resistance in apartheid South Africa*, that she presented at a conference on *Ruptures and Revolutions* at the Central European University in Budapest. STIAS also hosted an international workshop of her project entitled *Record | Memory | Archive* in collaboration with the Africa Open Institute from 5 to 7 September 2017.

at STIAS for periods normally between three and four months. Lambrechts, a postdoctoral fellow for the period June 2015 to June 2018, spent three months at STIAS from the beginning of August to the end of October.

Lizabé Lambrechts (Stellenbosch University)

The Free Peoples Festivals: exploring alternative music communities in South Africa

As the curator for the Hidden Years music archive, Lambrechts's work is concerned with academic approaches to the archive that allow historical narratives to emerge while respecting individual memory and agency. This engagement recognises that archival work could replicate existing historical antimonies and categories, but that it could also be directed towards smaller, particular, exceptional narratives of individuals, activities, concerts and creative endeavours that could contradict larger historical assumptions and patterns.

Her current research project explores these ideas through the Free Peoples Concerts, an annual multi-racial festival in South Africa, held from 1970 to 1991 in Johannesburg and intermittently in Durban. Conceptualised within the counter-culture and hippie movements of the 1970s, these concerts provided a platform for local musicians of all races to play before a multi-racial audience during a time when such interactions were highly restricted by the apartheid government. Through engaging with what is understood as "alternative" culture in repressive political environments as well as the resilience, courage and aspiration of musicians during South Africa's tumultuous past, it is hoped that this project will be able to mark historical beacons through which we may rethink and reflect upon the post-apartheid condition, and find ways to move through the impasse created by categories of racial, gender and class identity constructions.

This three-year project is the first major research project based on the content of the Hidden Years music archive. This archive, collected by David Marks, documents diverse musical styles, concerts, festivals and political events in South Africa from 1957 to 2005. The collection includes sound recordings, photographs, posters, programmes, documents, press cuttings, notebooks and diaries, and it is one of the biggest popular music archives in South Africa (<http://aoinstitute.ac.za/hidden-years>).

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STIAS scholarship programme for doctoral study

The five-year programme for PhD scholarship funded by the Alice and Knut Wallenberg Foundation entered its fourth year in 2017. Scholarships were awarded to full-time PhD students nominated by the executive within the Stellenbosch University faculties of Arts and Social Sciences, Economic and Management Sciences, and Science, aiming for excellent ability, gender parity and a significant number of students from sub-Saharan Africa. The overall target of the programme was to qualify 30 doctoral students with leadership qualities over five years, while at the same

time familiarising them with STIAS through exposure to its aims and activities.

In 2014, nine scholarships were awarded, while in 2015 and 2016 a further ten and 11 were awarded respectively bringing the total to 30. Fourteen scholarships were awarded to female students and 16 to male students. Seven of the doctoral students were from South Africa, followed by six from Zimbabwe, four from Ghana and three from Uganda, while two doctoral scholarships each were awarded to citizens of Kenya, Malawi and Tanzania and one each to citizens of Cameroon, Madagascar, Mauritius and Rwanda.

Scholarship holders, their supervisors and relevant executive faculty staff are invited to STIAS twice per year; once in the first semester for a welcoming function and once towards the end of the second semester for a progress-reporting function. At the second meeting speakers are invited to address the students on a topic of interest, contributing to their development as academic leaders. Where possible such speakers are drawn from the STIAS fellowship cohort or from other persons involved in the activities of STIAS.

The topic discussed at the end-of-year function on 6 November 2017 was *Combating corruption*. Invited speakers were Tinashe Chigwata of the Dullah Omar Institute, University of the Western Cape and Paul Hoffman of Accountability Now. They attracted an audience of students from all over Africa as well as STIAS fellows.

The goal of this programme was that scholarship awardees would graduate after three years of full-time study. Of the nine students who started in 2014, eight completed their studies on time, and of the ten who started in 2015, eight graduated after three years. Progress reports of students who have not yet graduated indicate that they will all graduate at the end of the 2018 academic year.

STIAS LONGER-TERM THEME PROJECTS

A sizeable component of the STIAS programme represented activities within the existing longer-term theme projects. A new one, *University and society*, was added to the portfolio in 2017. The existing seven longer-term theme projects, which are projected to be concluded or re-conceptualised in the next two years, are at various stages of development. Individual STIAS fellows and/or groups of fellows worked on projects related to sub-themes of the longer-term theme projects as identified in the concept notes posted on the STIAS website.

Details on most projects listed below can be found in the ensuing section on STIAS fellows and projects.

Being human today

Effects of race

Members of the *Effects of race* (EoR) core group (Zimitri Erasmus, Nina Jablonski, Gerhard Maré, Njabulo Ndebele, Barney Pityana, Crain Soudien and Göran Therborn) convened by Nina Jablonski and Gerhard Maré, met for their final residency at STIAS in July and August. Their discussion theme for 2017 consisted of three questions: What do you wish to change with regard to race, racism, and racialism?; Why?; How would you bring this about?

Three salient themes emerged from the group's presentations and discussions. These were: 1) the South African Constitution and specifically, how contemporary politics and social values failed to fulfil the promises of social equality enshrined in the document; 2) the biological and social understandings of race, and how new information from both the biological and social sciences is changing perspectives on the nature of the human condition, including the association of biological and social phenomena with

race; 3) the importance of time in understanding and envisioning changes in modes of race-thinking.

The first of the book publications relating broadly to the core group's discussions is currently in the final editing phase and will be published in 2018. Two further book publications focusing on contributions in 2016 (turning points) and 2017 (three questions) are now being assembled. The core group is also collectively writing a synthesis paper for the international social science journal *Sociology of Race and Ethnicity*.

Representatives from each of the five EoR project groups came to STIAS during the core group session and presented their project work:

- Vivienne Bozalek (University of the Western Cape) and Michalinos Zembylas (Open University of Cyprus), *Participatory parity and socially just pedagogies in South African higher education*
- Janet Condy, Lena Green and Daniela Gachago (Cape Peninsula University of Technology), *Exploring being human with final year pre-service teachers: designing a teaching intervention to engage with difference in a critical, anti-racist and reconciliatory way*
- Kira Erwin (Durban University of Technology) and Kathryn Pillay (University of KwaZulu-Natal), *The power of dreams: young people's imaginings of non-racialism*
- Premesh Lalu, Maurits van Bever Donker and Ross Truscott (University of the Western Cape), *Desiring the post-apartheid*
- Handri Walters (Stellenbosch University), *Race and culture in human classification: the role of volkekunde and social anthropology at Stellenbosch University*

Jablonski reports that the final presentations of the project groups were thorough and engaging, and the discussions were enthralling. Each project dealt with a circumscribed and mostly practical topic, but the

discussions of the projects ranged far and wide. Of particular importance were discussions about the importance of designing and implementing pro-active educational interventions about race-thinking for children and youth. The book-length STIAS publication containing the scholarly results of four of the project group efforts is currently being assembled and edited.

The theory and practice of social transformation through the arts

Michelle LeBaron (University of British Columbia) convened the group on the theory and practice of social transformation through the arts and was in residence at STIAS from mid-January to early May 2017. Group members Kim Berman, Kitche Magak, Frank Meintjies and Janis Sarra joined her for shorter periods of a few weeks each. They worked on the forthcoming book in the STIAS series, planned for publication in June 2018, during a final meeting sponsored as a Wall Colloquium Abroad.

The following *Being human today* projects were also pursued at STIAS during 2017:

- **Sex and sexuality in Africa: a brief history**
Sarah Emily Duff (University of the Witwatersrand)
- **Many modernities – religious freedom in South Africa and Sweden**
Elisabeth Gerlè (Lund University) and Göran Gunner (Stockholm School of Theology)
- **Sealing the female body before marriage: cultural debates about hymeneal signs**
Margaret Ferguson (University of California, Davis)
- **Faith and fabric**
Hans Joas (Humboldt University of Berlin) and Wolfgang Huber (Humboldt University of Berlin)
- **Global citizenship and the practice of being human. South African visions and the legacy of Enlightenment**
John Noyes (University of Toronto)
- **Symbolic classification**
Boike Rehbein (Humboldt University of Berlin)

Michelle LeBaron (University of British Columbia)

Kim Berman (Visiting scholar, University of Johannesburg)

Kitche Magak (Visiting scholar, Maseno University)

Frank Meintjies (Visiting scholar, Independent consultant, Livingstone)

Janis Sarra (University of British Columbia)

The theory and practice of social transformation through the arts

STIAS fellow Michelle LeBaron along with Kim Berman, Kitche Magak, Frank Meintjies and Janis Sarra have been working on a book on transformative arts practices since the first time this group met at STIAS in 2015. The manuscript will be submitted to AFRICAN SUN MeDIA in February 2018. The book will be the first to focus on African scholarship and practice of transformative arts approaches, and includes chapters on core theories and values supporting the work illustrated by a wide range of examples showcasing diverse art forms. It also features important contributions on evaluation approaches to transformative arts practices and ethics. Designing and implementing socially transformative arts practices is an emergent field, and the work has been enriched by innovative contributions from many African and international participants in the December 2015 Wall Colloquium Abroad co-hosted by STIAS.

The group has stayed in touch with Gerhard Maré and his colleagues in the STIAS project on the *Effects of race*, as well as with several other fellows with whom they were in residence. The group will be at STIAS again in April 2018 for their third and final residency in this series to co-host a follow-up Wall Colloquium Abroad, supported by the Peter Wall Institute for Advanced Studies and STIAS.

“STIAS has been a uniquely generative place for sparking and sharing ideas, and we appreciate the opportunity to deepen and reflect on our work and complete our manuscript titled *Changing our Worlds: Arts as Transformative Practice*, which we hope to launch at the Hermanus FynArts festival in June 2018,” says LeBaron.

Crossing borders

Manuel Castells (University of Southern California) postponed his 2017 residency at STIAS to 2018 when he will continue to work on *The construction of identity in the information age*.

Hans Lindahl (Tilburg University)

Louise du Toit (Stellenbosch University)

Marcelo Neves (University of Brasília)

Sundhya Pahuja (University of Melbourne)

Kaarlo Tuori (University of Helsinki)

Boundaries and legal authority in a global context

There is widespread agreement that the enormous growth of cross-border human activities increasingly calls into question the regulatory capacities of the territorial state. Yet the broader conceptual and normative significance of these developments remains the object of protracted debate. One of the central conceptual problems consists in establishing how (spatial) boundaries and boundary contestation continue to play a decisive role in making sense of legal orders in a global context, where processes of inclusion and exclusion are no longer exclusively linked to the forms of closure proper to the territorial state. This decentering of boundaries and boundary contestation from the territorial state raises important conceptual normative questions concerning legal authority. What renders authoritative the acts of setting legal boundaries in a global context?

Moreover, what are appropriate and effective institutional mechanisms by which such authority can be contested?

Hans Lindahl, convenor of this project, was in residence at STIAS working on his project contribution *Law and World*. As part of this project Kaarlo Tuori worked on *Contemporary law: the dialectic of unity and plurality* during his residence at STIAS; Louise du Toit was in residence to work on *Self, autonomy, authority and law: the challenge of 'leaky bodies'* and Marcelo Neves further developed his project *Asymmetric (trans) constitutionalism beyond eurocentrism and post-colonialism*. Sundhya Pahuja was also resident at STIAS and dealt with *Jurisdictional rivalries between company and state*.

The above set of issues is the horizon for a range of seminars convened by the organisers as the second phase of the research project, *Boundaries and legal authority in a global context*. After an initial seminar led by Sofia Näsström (Uppsala) in 2016, the year of 2017 witnessed lively scholarly debate in response to papers submitted by five academics. Pahuja introduced the 2017 cycle of seminars with a paper titled *Public debt, the peace of Utrecht and the rivalry between company and state*. She argues, in a nutshell, that international law constitutes but one parochial law of encounter among others, and moreover one born out of the specific history of jurisdictional rivalry between the European State and Company in a contest over the bases of the global trade routes. She is interested in tracing through a historically inflected jurisprudence the collection of practices by means of which authority is exercised and materialised. Tuori followed up with a paper on *The dialectic of unity and plurality in postnational law*. In his paper, Tuori is concerned to show that inter-relations between the instances making up the postnational plurality of law are not only boundary-asserting but also boundary-crossing; not only conflictual but also

consensual and dialogical, manifesting interlegality rather than simple diversity or radical pluralism. Lindahl led the third seminar, with a paper titled *From reciprocal to asymmetrical recognition*. In his paper, Lindahl outlines a concept of legal authority that could do justice to the insight that no legal order, global or otherwise, can include without also excluding, hence that authority always has to deal with a situation in which humanity is both inside and outside global law. The fourth seminar was led by Neves; in his paper, *From transconstitutionalism to transdemocracy*, Neves takes issue with both the idea of a global constitution and constitutional fragmentation, arguing for an interpretation of global legal pluralism in which transconstitutionalism finds its complement in transdemocracy. Whereas transconstitutionalism concerns the fact that multiple legal orders of the same or different kind are simultaneously involved with the same constitutional issue or case, transdemocracy is concerned with incorporating “the others, the peoples” into a democratic polity’s self-understanding. The seminar cycle of 2017 closed with a presentation by Du Toit, *Living boundaries: an ethics of the interval*. Du Toit holds that a more fundamental analysis of the different levels of existence where the constant creation, performance and disruption of permeable boundaries is indispensable for enduring existence and identity, may shed important new light on the discussion of legal boundaries and authority. Her materialist phenomenological analysis shows that acknowledgement of the indispensability of preferential, interested and asymmetrical boundary living may result in an ethics of the interval focused on the width of boundaries.

As it was not possible to organise the project in a way that would have all participants simultaneously *in situ*, several of the researchers participated via skype or videoconferencing facilities made available by STIAS. The seminars also counted on the participation of South African scholars interested in the general

topic of the project. All papers of the 2017 seminar cycle have been posted on the project blog, and will be published in appropriate academic venues in due course, with explicit reference to the STIAS fellowships in the framework of the project for which the papers were written. Neves’ paper was published in 2017 in the *European Law Journal*. Lindahl’s contribution to the project has materialised in the form of an extended manuscript, *Authority and the globalisation of inclusion and exclusion*, submitted in its definitive form to Cambridge University Press at the end of 2017, and due to appear in the second half of 2018. The opening paragraph of the book’s acknowledgment reads as follows:

“My first words of thanks go to Hendrik Geyer, director of STIAS. The first drafts of Chapters 1, 2 and 7 of the book were written at STIAS during two fellowships I enjoyed at that wonderfully stimulating research centre. It is the second book I write under the auspices of STIAS research fellowships, and once again I am extremely grateful for having had the opportunity to exchange ideas with and learn from colleagues from across a wide range of disciplines I would not normally encounter in the still largely monodisciplinary character of university research. I hope that something of the intellectual curiosity and enthusiasm I encountered at STIAS resonates in this book. In particular, and although his work is not mentioned in this book, André van der Walt’s pioneering and critical work on property law has been a source of constant inspiration to me. His death deprives South Africa and his friends and colleagues of a brilliant scholar committed to the transformation of his country.”

The project concludes in 2018 with seminar papers by Neha Jain (Minnesota) and Balakrishnan Rajagopal (MIT).

The future of democracy

Stellenbosch Annual Seminar on Constitutionalism in Africa (SASCA)

The fifth seminar in the SASCA series was held at STIAS in September 2017 on the theme *Corruption and constitutionalism in Africa: revising control measures and containment strategies*. The planning and organisation of the seminar was done at STIAS with the support of its partners, the Institute for International and Comparative Law in Africa (University of Pretoria), the Chair in Multilevel Government, Dullah Omar Institute (University of the Western Cape) and the Konrad Adenauer Stiftung Rule of Law Programme for sub-Saharan Africa.

Because of the importance of the theme, the seminar attracted more than 140 abstracts. It brought together more than 35 participants consisting of legal scholars, legal practitioners, activists and doctoral students from all over Africa, as well as participants from the United States of America and the United Kingdom. Papers delivered at this seminar will appear in the fourth volume of the Oxford University Press series *Stellenbosch handbooks on African constitutional law*. The first volume, based on the 2014 SASCA on *Separation of powers in African constitutionalism*, was published in August 2016, and the second on *Constitutional adjudication in Africa* was published in September 2017. Volume 3 is currently in press.

Other projects in this longer-term theme which were pursued at STIAS during 2017 were:

- **Opposition in African politics: the case of Nigeria, Ghana, South Africa and Kenya**
Olayemi Akinwumi (Nasarawa State University)
- **PostAfricanism vs Fanonism**
Denis Ekpo (University of Port Harcourt)
- **Comparative regionalism: the political economy of regional security organisations**
Ulf Engel (University of Leipzig)



SASCA 2017

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- **Comparative rebel governance in Uganda: the influence of rebel objectives on rebel government structure – comparing takeover to secession**
Nelson Kasfir (Dartmouth College)
- **The public sphere in African political thought**
Uchenna Okeja (Rhodes University)
- **Ubuntu: a meta-norm for the West?**
Bo Stråth (University of Helsinki)

Sustainable agro-ecosystems

Impact of sustainable intensification of food production on environment and human well-being

Members of the core group working on the project *Impact of sustainable intensification of food production on environment and human well-being*, Richard Sikora (convenor), Eugene Terry and Paul Vlek, met for their final residency at STIAS in October and November. The group also benefitted from a brief interaction with STIAS visiting scholar Joyce Chitja. Meetings were set up with co-editors of the planned open-access book scheduled for publication in late 2018. Sample chapters were written and distributed to authors invited to write individual short chapters for the book. These will be characterised by a uniformity in posing specific questions, analysing the current state (of technology), future options, political underpinning and possible outcomes.

Other *Sustainable agro-ecosystems* projects pursued at STIAS during 2017 included:

- **Assessing the potential impact of agriculture on the biogeochemistry of a pristine wetland, the Okavango Delta**
Daniel Conley (Lund University)
- **African leapfrogging index to sustainability**
Desta Mebratu (Lund University)
- **The challenges and options in relation to water security for groundwater-dependent urban settlements located in fragile regions of Kenya**
Daniel Olago (University of Nairobi)

- **Springer handbook of water resources management**
Janos Bogardi (University of Bonn)

Health in transition divided into health prevention and health care

Health transition and injury care and prevention

Lucie Laflamme and Marie Hasselberg (Karolinska Institute) concluded the project *Health transition and injury care and prevention* in February with the fifth STIAS-Wallenberg Round Table on the theme *Mobile technology in health care: promises and perils*. A special issue of *Global Health Action* contains contributions to this Round Table and a foreword by former Swedish Prime Minister, Carl Bildt. Back to back with the Round Table, STIAS fellow Guy Dumont organised an international workshop at STIAS on *Technology for maternal, newborn and child health*.

Developmental origins of health and disease (DOHaD) and sustainable development goals (SDGs): moving towards early implementation in Africa

A core group of four STIAS fellows (Peter Byass, Abdallah Daar, Andrew Macnab, Shane Norris) and four visiting scholars (Yajnik Chittaranjan, Elizabeth Kimani-Murage, Atul Singhal, Eugene Sobngwi), convened by Abdallah Daar, were resident at STIAS during November 2017 to continue working on this topic. They were also involved in the joint STIAS and African Academy of Sciences (AAS) summer school during November on the theme *Developmental origins of health and disease (DOHaD) translational science: from cell to society*.

In the past year the DOHaD core group achieved the following:

- Organising and participating in the aforementioned STIAS-AAS summer school

- Publishing a call to action on DOHaD/Africa in *Global Health Action*
- Submitting six papers to an Africa-themed issue of the *Journal of Developmental Origins of Health and Disease* that will appear in February 2018
- Work on DOHaD messaging in Uganda and elsewhere led by Andrew Macnab (some of it together with Ronald Mukisa) based on the WHO healthy schools programme
- Creating an Africa Chapter of the International DOHaD Society under the leadership of Shane Norris. This was formally announced at the DOHaD Summit in Rotterdam in October 2017
- Planning a 12-chapter STIAS series book on DOHaD/Africa; some chapters have already been written and submitted, and others have been commissioned
- Finalising a response to a publication in *The Lancet Endocrinology and Diabetes* on the subject of diabetes in sub-Saharan Africa

Other *Health in transition* projects pursued at STIAS during 2017 were:

- **Disability and reproduction in Africa: a multi-methods investigation to identify, describe and determine the sexual, reproductive and maternal healthcare needs and challenges of women with disability in Ghana**
John Ganle (University of Ghana)
- **Dementia: a growing problem in South Africa and the world**
Carlos Ibanez (Karolinska Institute)
- **Health in all policies: healthy housing policies to address the risk and burden of infectious and non-communicable diseases**
Tolu Oni (University of Cape Town)
- **Addressing the need for a rapid diagnostic for childhood tuberculosis**
Nicole Sampson (SUNY Stony Brook)

- **Systematic generation of an update of the ongoing studies on the new BTK inhibitors**
Edvard Smith (Karolinska Institute)
- **Low cost nudges to patients to improve treatment adherence: do they work?**
Eddy van Doorslaer (Erasmus University Rotterdam)

Summer school on DOHaD translational science: from cell to society

STIAS, AAS, the MRC Developmental Pathways for Health Research Unit at the University of the Witwatersrand (DPHRU), the DOHaD African Chapter, and other partners, hosted a summer school at STIAS in November 2017 entitled *Developmental origins of health and disease translational science: from cell to society*.

The focus of the summer school is to build research capacity and a network of young scientists working on the shared and interconnected fields of cell biology

and DOHaD. It is the culmination of two separate but related projects on cell biology and regenerative medicine that was initiated by the AAS in a series of workshops between 2013 and 2016, and a long-term research project under the STIAS *Health in transition* theme on the *Developmental origins of health and disease and the sustainable development goals: towards early implementation*.

The National Research Foundation made funding available via the DPHRU to support ten South African registered PhD students, and via STIAS and AAS to support a further 15 African young scientists to attend the summer school. In addition, 15 presenters shared their insights and guided training and evaluation during the four-day school. They included STIAS fellows who are members of the longer-term STIAS theme project *DOHaD and SDGs: moving towards early implementation*. Some 40 persons participated representing many countries from Africa and elsewhere.

Understanding complexity

Roberto Poli (University of Trento) will again convene his group at STIAS in 2019. David Ellerman (University of California Riverside and University of Ljubljana) has accepted an invitation to work on this topic at STIAS for three months in 2019.

University and society

In October 2017, STIAS launched a new longer-term theme project entitled *University and society: disruption, discourse and new directions*. The project seeks to understand and unpack the deep complexities of the South African university against the background of global discussions on the changing role of the university.

Participants of the summer school of DOHaD translational science: from cell to society, STIAS, November 2017



STIAS-WALLENBERG ROUND TABLE ON mHEALTH

Looking at the possibilities of image-based mobile technologies for improved health care

The fifth STIAS-Wallenberg Round Table was held in February with the theme *Image-based mobile technology for diagnostics and treatment to improve access and equity in health care*. The aim was to provide a forum for stakeholders to discuss the possibilities that current developments in image-based mobile health offer for timely, accurate and equitable healthcare delivery, as well the challenges that their development and implementation may entail. The emphasis was on the need to find solutions and to sketch a roadmap for the implementation, expansion and up-scaling of image-based mHealth to improve health care particularly in resource-constrained settings.

The Round Table attracted over 60 participants from 16 countries and provided an opportunity for cross-sectoral and cross-disciplinary discussions and networking. The clinical, research, policy, business, media and social sectors were represented.

Sessions ranged from overviews of the landscape to unpacking case studies of using mHealth in clinical settings; understanding barriers and facilitators in implementation; and the need for leadership and change agents. The aim was to facilitate cross-pollination and to inform the wider community, in particular policymakers, about the possibilities in mHealth.

Technology in health care has obvious benefits like improving patient management, as well as secondary potential benefits like less referrals, reduced costs and saving time. It can also assist in diminishing professional isolation and promoting recruitment and retention in rural areas. This, in turn, can contribute to more equitable systems in global health care in resource-poor settings in high-income as well as low- and middle-income countries.

However, with many mHealth projects, the challenge seems to be facilitating adoption and implementation in the health system; lack of consideration for the user perspective; and that the technologies are not used to their full potential.

The emphasis therefore throughout the Round Table was on the need for a patient-centred or end-user focus; the need to move away from pilot studies and to scale up successful interventions; the need for appropriate policy and regulation including data safety, ethical issues and patient protection; and the need to ensure equity and that issues of cost and access (particularly connectivity) do not further divide the world.

Mohammed Dalwai, co-founder and Chief Operations Officer of Essential EMGuidance and President of the Board of Médecins sans Frontières, South Africa, focused on the need to move away from pilot studies and to start studying the clinical impact and the practicalities of scaling up successful interventions. He pointed out that often projects do not reach scale-up due to regulatory issues. He stressed the need for a government mHealth body and a national eHealth strategy in South Africa.

Lessons from case studies

Among the case studies presented was one on the use of mobile technology in the recent Ebola crisis. Ousmane Ly, Director General for eHealth in the Mali Ministry of Health, pointed out that ICT had played a substantial role in the emergency response but he also noted that many of the tools developed are not used anymore.

A detailed presentation was given on an image-based app to assist in diagnosing burn injuries which brings together a multidisciplinary team from the Karolinska Institute, Sweden, the Western Cape government, and the universities of Cape Town and Stellenbosch.

The project uses a smartphone-based app to transmit images and other data from burn injuries for diagnostic, treatment and referral advice. In its most recent version, the burns component has been added to an existing app (the Vula app) which is used for other disease conditions. It is being tested in sites in the Western Cape (to be expanded to include sites in Durban, Tanzania and eventually Ethiopia). Besides using images, the app is frontloaded with drop-down questions which aid in diagnosis and treatment decisions. This triggers an inbuilt management protocol consisting of general care advice, and a link to an expert to provide case-specific advice.

South Africa suffers from a quadruple burden of disease with injuries, interpersonal violence and traffic-related deaths ranking alongside HIV/Aids and tuberculosis, infectious diseases and a rising epidemic of non-communicable disease. The problem of burns injuries is big and rising. Burns are often connected to shack fires as well as scalding during household chores with the winter months regarded as the so-called burn season for the emergency services.

The project had to overcome initial challenges in comparing images from different phones and also ensuring that images of darker and lighter skin tones were equally good. However, current results show that the app is easy to use, doesn't require extensive training, and that the resulting diagnoses are as good as those based on bedside diagnosis.

Studies on the acceptability of the app as well as comparing treatment outcomes with and without the app are being undertaken. The possibility of machine-learning burn diagnostics and the creation of algorithms to offer an automated diagnosis and treatment response are also being investigated although this remains a long way off.



Involve users in development

A recurring theme was the need to ensure early involvement of healthcare personnel and, where possible, patients, in app development with the aim of overcoming practical, on-the-ground challenges and ensuring that technology is guided by needs. Presentations by nurses Halima Adam and John Bosco Kamugisha from Uganda highlighted some of these challenges – including cost, internet accessibility and airtime; power outages; lack of training; use of personal phones and safety issues around phones; data accuracy and security.

mHealth as the new normal

The need for mHealth to become the new normal was emphasised by various presenters. Speaking of the future possibilities Jan Gulliksen of KTH Royal Institute of Technology Sweden emphasised the need for societal digitisation – not just developing technologies for context but changing the context, and increasing skills for a digital society.

Johan Lundin of the University of Helsinki added to this theme by pointing out that up to 80 percent of communication in future will be image-based and that adding artificial intelligence will change the face of mobile diagnostics.

The need to focus on apps that can go viral was emphasised by Stefan Fölster, Head: Reform Institute, Stockholm. He outlined four criteria that make this possible – there should be no extra cost for the end user; the adopting agency should be able to recoup the costs; mHealth should not raise costs by raising demand more than the cost savings allow; and there should not be duplication of other mHealth investments. He also emphasised the need to look for technology leaps, for example, artificial intelligence and self-learning systems.

Isaac Bogosh of the University of Toronto cautioned about the need for quality. He pointed out that the goal of mobile microscopy must be to deliver equitable health care by bringing quality laboratory diagnosis to low-resource settings. He encouraged

more validation research in real-world settings but also emphasised the need to resist the urge to build the cheapest microscopes that sacrifice image quality. He called for robust devices with sufficient optics designed for efficient throughput.

The Round Table resulted in a special issue of the journal *Global Health Action* dedicated to image-based mHealth as a tool for diagnostic support and treatment advice. This includes ten contributions including one which outlines the process of development of a roadmap for the implementation of mHealth solutions for diagnostic assistance at the point-of-care and also what the main components of a roadmap should be.

The special issue is available at:
www.tandfonline.com/toc/zgha20/10/sup3?nav=tocList

In-depth interviews were also conducted with participants during the Round Table and can be found at: www.youtube.com/channel/UCNCAcXCv1Qjp08q30pIQ5w

Participants of the 2017 STIAS-Wallenberg Round Table on mHealth

STIAS FELLOWS AND PROJECTS

In 2017, STIAS achieved the highest occupancy rate to date. Seventy-seven fellows and 16 visiting scholars participated in the 2017 STIAS programmes for a total of 170 fellowship months. The *Iso Lomso* programme was in its first year of full deployment. Five *Iso Lomso* fellows and four *Iso Lomso* visiting scholars were resident at STIAS during 2017. Activities in the seven longer-term theme projects continued and a new longer-term theme project, *University and society*, was announced.

Selected activities of fellows

Joseph E. Stiglitz

STIAS was honoured to host Joseph E. Stiglitz (Columbia University), recipient of the 2001 Nobel Memorial Prize in Economic Sciences, as Donald Gordon STIAS fellow during November 2017. Stiglitz is a former senior vice president and chief economist of the World Bank and a former member and chairman

of the (USA president's) Council of Economic Advisers. In 2011 he was named by *Time* magazine as one of the 100 most influential people in the world.

During his visit to STIAS, Stiglitz gave a public lecture entitled *The revolution of information economics: the past and the future*. Stiglitz pointed out that the economics of information had constituted a revolution in economics, providing explanations of phenomena that previously had been unexplained and upsetting longstanding presumptions, including that of market efficiency, with profound implications for economic policy. Information failures were associated with numerous other market failures, including incomplete risk markets, imperfect capital markets, and imperfections in competition, enhancing opportunities for rent seeking and exploitation. The talk put into perspective nearly a half century of research, including recent advances in understanding the implications of imperfect information for financial market regulation, macro-stability, inequality and public and corporate governance; and in recognising the endogeneity of information imperfections. It explored the consequences of recent advances in technology and the policy challenges and opportunities they present for competition policy and policies regarding privacy and transparency.

Information economics played a role in stimulating other advances in economics, including contract theory and behavioural economics. It reinvigorated institutional economics, showing how institutions mattered, in some cases explaining institutional features that could not be well-understood in the conventional paradigm, and in others showing how institutional responses to market failures might or might not be welfare enhancing. Stiglitz argued that the new paradigm provided a markedly different, and better, lens for looking at the economy than the older perfect markets competitive paradigm. The presentation drew on a recent working paper for the National Bureau of Economic Research.



Christopher Fuchs and Rüdiger Schack

Participatory realism

A workshop on participatory realism organised by STIAS fellows Christopher Fuchs and Rüdiger Schack, and addressing issues at the interface of the foundations of quantum mechanics and philosophy, was held at the STIAS Wallenberg Centre from 6 to 8 June and attracted more than 20 participants. Recently Cabello (arXiv:1509.04711) introduced a taxonomy of quantum interpretations with regard to what they attempt to say of reality. Fuchs contributed the term participatory realism for those interpretations which imply there is more to reality than any God's eye (third-person) view on the universe can capture. These interpretations include Zeilinger and Brukner's informational view, Rovelli's relationalism, Wheeler's law-without-law, and in the most extreme, the QBism of Fuchs, Mermin and Schack, where human agency is woven into the very fabric of physics. The importance of this effort is that it uncovers an overlooked element common to these interpretations and makes clear its positive nature: it recognises first-person physics as not taking away from reality but adding to it, opening a vista on the quantum that indicates the universe is unfinished in a very deep sense.

A framework for a possible long-term project at STIAS on this topic is being developed. These activities were funded by a grant from the Trellis Charitable Trust.





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Selected project profiles



Marcelo Neves (University of Brasília)

Asymmetric (trans) constitutionalism beyond eurocentrism and postcolonialism

The research deals with the asymmetrical political relations in the world society and their impact on transconstitutional entanglements between legal orders. It moves away from both the eurocentric and the postcolonial approach to constitutionalism. On one hand, it goes beyond Western and simplistic cosmopolitan global constitutionalism models and soft collision analyses, which are privileged in the so-called Global North. On the other hand, it guards against some postcolonialist pundits, who tend to reduce the problem to a semantic question of domination by a language inducing imposed, deformed and heteronomous understandings, and to cover up the structural asymmetries through the euphemistic distinction between Global North and Global South.

Neves does not deny asymmetries in the circulation of constitutional ideas within world society when they move through various states. Concerning the postcolonial Latin-American period, being unaware that there were centres that were predominantly irradiators and peripheries that were primarily receivers of constitutional ideas, meant leaving aside some crucial aspects of the legal and political experience of these countries.

(Trans) constitutionalism as a challenge should neither be overvalued in cosmopolitan terms, because of its European origin nor despised, in postcolonial terms, according to the discourse of cultural authenticity: it only makes sense if it is responsive and flexible to the immense diversity of world society.

The research was developed on the basis of constitutional case law and context in Brazil and South Africa, and within the STIAS theme project *Crossing borders*, associated with the collective project *Boundaries and legal authority in a global context*. During his stay at STIAS he did further research on his book project, *Transdemocracy*, which is still ongoing.

As a first result of his research at STIAS, Neves published an article in the *European Law Journal* in 2017.



Ian Goldin (University of Oxford)

Interdisciplinary approaches to meeting long-term challenges

During his fellowship at STIAS, Goldin's principal research aim was to develop a framework and research methodologies for the undertaking of interdisciplinary research. This will reconcile the growing specialisation of academics in top-tier universities and the fragmentation of disciplines into increasingly narrow silos, with the needs to provide integrated multidisciplinary perspectives to address increasingly complex global challenges.

The framework is being applied in Goldin's work on *After the Crash*, which is a reflection of the 2008 economic crisis on politics and society. It also is at the core of his new programme which is looking at the impact of technological change on societies.

Goldin also revised his book, *The pursuit of development* (Oxford University Press, 2016) for *The very short introduction to development* (Oxford University Press, 2018); he revised *Age of discovery* for the paperback edition (Bloomsbury, 2017) and updated his book, *Exceptional people* (Princeton University Press, 2011) for a forthcoming report on migration.



Ulf Engel (Leipzig University)

Comparative regionalism: the political economy of regional security organisations

After the end of the Cold War a respacing of international politics has begun, with a new world order emerging that is described as "multipolar". Within this complex process, regional organisations were revived and started playing a major role. These real world dynamics are mirrored by the development of new approaches to the study of regional organisations, with the "new regionalisms" debate probably being the most innovative one so far. As one result of this debate, comparative (trans-) regional studies have been established.

Engel's project is focusing on a policy field that has, so far, been greatly understudied: the political

economy and finances of regional organisations in general and regional security organisations (RSOs) in particular. How do RSOs source and manage their finances, and what are the implications of often high levels of co-financing by international partners in terms of ownership and sovereignty?

One example of new dynamics in this field is the African Union (AU). Financing the AU and her activities in the area of peace and security has been a major challenge right from the start. Over the years the AU has become highly dependent on international partners. By 2015, donors financed almost 72 percent of the regular budget and more than 95 percent of AU-led peace-support operations. At the same time, forms of burden-sharing emerged. This has led to a situation whereby currently 48 percent of the AU's budget is shouldered by just five member states: Algeria, Egypt, Morocco, Nigeria and South Africa.

This state of affairs only started changing when the AU, at its assembly held in July 2016 in Kigali, Rwanda, introduced a 0,2 percent levy on eligible imports to finance its budget and peace-support operations. However, even though 21 member states had already started implementing the new funding formula by January 2018, the AU's financial situation remains somewhat fragile, as continental heavy-weights such as South Africa and Nigeria are opposing the new funding formula implemented under the leadership of Rwandan President Paul Kagame.

In comparison, it seems that African regional security organisations are far more ambitious than those in Latin America or Asia. The latter have rather limited their collective security activities, hence their budgets are fairly lean, and their dependence on donors usually is not an issue. African regional security organisations and the AU in particular, are however relying heavily on international partnerships,

particularly with the United Nations and the European Union. The jury is still out whether this dependence has an influence on concrete policies, and under which circumstance.

An editorial workshop, *The political economy of regional security organisations*, was conducted at the Wallenberg Centre from 6 to 8 April 2017 to discuss papers on various regional security organisations from Africa, Asia and Latin America. The workshop was attended by scholars from Germany, the Netherlands, Nigeria, Sweden, South Africa and the United Kingdom. The keynote was given by Carlos Lopes, the former Secretary-General of the UN Economic Commission for Africa (Addis Ababa). The revised papers of this workshop are being published with Routledge (editors U Engel and F Mattheis).



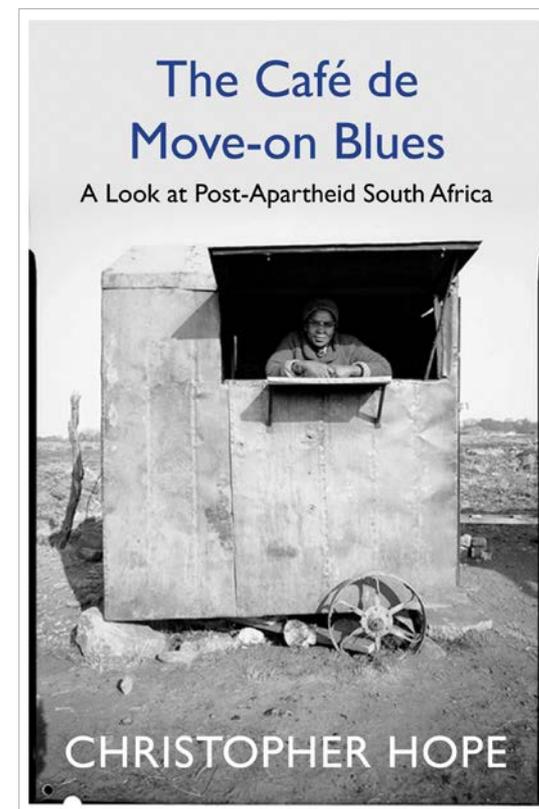
Christopher Hope (Artist-in-residence)

The Café de Move-on Blues

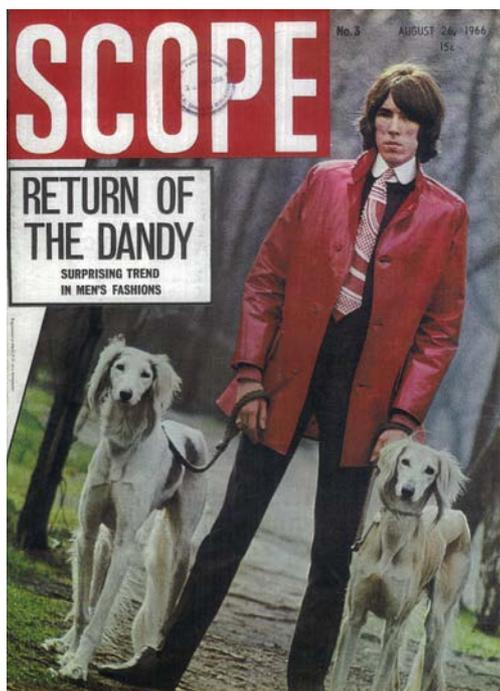
The Café de Move-on Blues is an account of a journey around South Africa, at a time when effigies, statues and monuments were being assaulted, strung with placards, toppled and daubed with paint and other ordures. It is also a search for understanding who “we” are and what we thought we were doing in South Africa. People like the author and those from whom he came: English-speakers, descendants of European settlers, or “whites” – to use the weary, inevitable classification, and thus South Africans, of a certain sort. Christopher Hope's travels began in

April 2015, when by chance he witnessed the fall of the statue of Cecil John Rhodes, the imperial fortune hunter, attacked and removed from the campus of the University of Cape Town. It proved to be the start of the statue wars.

The second draft of this book was completed while Hope was at STIAS in early 2017. It will be published by Atlantic Press (London) and Penguin Random House (South Africa) in May and April 2018 respectively.



Cover of the book *The Café de Move-on Blues* to be published in 2018



A dandy on the cover of SCOPE, a popular South African men's magazine, 26 August 1966



Stella Viljoen (Stellenbosch University)

Mad men: a South African media history

The history of men's magazines in South Africa is important because it reminds us that so-called popular media may reveal alternative insights about the structural formations of society to those garnered from works of "high culture". To some extent, these popular texts are an honest and prophetic mirror that is instructive of gender and race, in other words, they are political. Masculinity is the inadvertent focus of Viljoen's project because men are interesting too, meaning that they too should be the subject of the scholarly gaze. Viljoen's early work involved a more predictable feminist critique of the objectification of women (drawing from discourses on pornography), but the more recent shift to masculinity as subject,

nevertheless engenders a continuation of feminism as hermeneutical lens.

Men's magazines had their official start in South Africa in 1920 with the inception of publications aimed at asserting the continued role of the Empire in establishing a benchmark of good taste. At this time there was little awareness of political correctness and the magazines perpetuated an ironic endorsement of the very best of especially British so-called high culture alongside more everyday enactments of masculine boorishness, often without much regard for gender or cultural sensitivity. In particular Viljoen's research is focused on the creation and perpetuation of an aspirational syntax of class, style and culture as tied to western cosmopolitanism and as reflected in South African print capitalism. Viljoen documents the ways in which masculine ideals were appropriated from the west and transformed into more attainable types for a South African public keen to find itself articulated in photographic print. This story reaches into democracy and traces the recent history of men's magazines that emerged in the early 21st century as a mirror of the new-fangled masculine types that seemed to rise out of the ashes of apartheid.

During her five months at STIAS, Viljoen restructured the monograph she is writing and drafted a number of chapters (including those on the impact of religious paradigms, sports culture and sexual performativity). She found the fertile conversations over lunch invaluable in thinking about how to facilitate critical but smooth reading and that the intellectual hospitality offered by STIAS proved how stimulating interdisciplinary interactions could be. Viljoen was invited to participate in the research project, *Transformation through the arts*, hosted by Michelle LeBaron and Kim Berman, two fellows resident at STIAS during 2017. In this capacity Viljoen says she will continue thoughtful conversations and friendships started at STIAS.



Bo Stråth (University of Helsinki)

Democracy, ujamaa, ubuntu: Eurafrican elusions of progress

Ubuntu is an Nguni word that covers a broad semantic field to signify a sharing that connects humans and typifies all right thinking. As such, it functions as a meta-norm, similar to the religious halacha in Judaism, dharma in Hinduism and even the Western enlightenment discourse on universal human rights.

Since the 1990s, ubuntu has played an important role in South Africa's transition to democracy. Its ready assimilation into the country's public discourse – and even other parts of the African continent – can be attributed to an open-ended field of reference that connotes a universalism and, at the same time, an emancipative Africanisation. Ubuntu therefore carried the mark of a distinctive African cultural heritage.

When work began on the new South African constitution, ubuntu was used as a means of contributing to the creation of a new national ideology, and it has since wrought significant changes in all branches of the state's legal system.

The initiative of this research project came at a time when the Western enlightenment ideal of universalism, based on the liberal idea of democracy and human rights, was changing. A new norm had been evolving, becoming ever more entwined with an economic neoliberal vocabulary focused on key

words such as market and globalisation, as the royal roads to realising the enlightenment ideal of universal democracy and human rights. Neoliberalism shifted to a radical economic hyper-liberalism with ever fewer connections to earlier models of democracy. With the collapse of the financial markets in 2008, disillusionment with democracy set in, and faith in it has not recovered. Instead, it has been overtaken by an aggressive nationalism.

This was the framework of Str ath's application for a STIAS fellowship under the STIAS longer-term theme *The future of democracy*. In accordance with this subject, the aim was to seek rehabilitation of democracy by transposing ubuntu, as a political and legal meta-norm, to the Western world, that is, the idea was about the West learning from the South. The question was: how can ubuntu capture public imagination and contribute to the sense of legitimacy that is failing the Western conception of democracy?

Initially Str ath designed the project together with Tom Bennett, University of Cape Town. The project soon proved to be dealing with a moving target. Both democracy and ubuntu lost ever more of mobilising and legitimising capacity and the original idea of transposition of ubuntu had to be abandoned. In this situation Str ath took on board experiences and results from an earlier project at STIAS on the conceptual history of *ujamaa*. Julius Nyerere's concept of *ujamaa* in the 1960s was intended to provide a unique and genuine Tanzanian post-independence ideology. Nyerere's idea was to find an African version of the imagined community that socialism outlined in Europe. *Ujamaa* was translated African socialism, approximately but not identically, inspired by and at the same time demarcated from Europe. By the 1980s it had made a similar career as ubuntu today.

We know little about the meaning of ubuntu in pre-colonial time since there are no written sources. In the 1830s and 1840s, Christian missionaries used

the term in southern Africa when they were translating their dualistic religion centred on the dichotomy of good and evil to the native Africans as the monograph resulting from this project will discuss in detail. The history of ubuntu as a *political* concept is briefer than that of democracy. Ubuntu has so far not been accompanied by a corresponding institutional setting as democracy. Ubuntu has mainly remained a concept at the value level, a legitimising norm that has provoked legal exegesis rather than been an operative instrument for political action.

Democracy was an explicit or implicit point of reference in the discourses on *ujamaa* in the 1960s and the 1970s and on ubuntu in the 1990s. The African concepts gave democracy an African connection, *ujamaa* at the level of the village community and ubuntu at the ethical and normative level connoting reconciliation. Democracy is closely connected to politics and political institutions, ubuntu to policies and moral norms. The meaning of *ujamaa* is in between, politics and political institutions at the level of the local village community, but also with a strong normative appeal. The three concepts are thus different. They express in their entanglement and historical connections different value orientations and different approaches to the political. The book explores this entanglement.

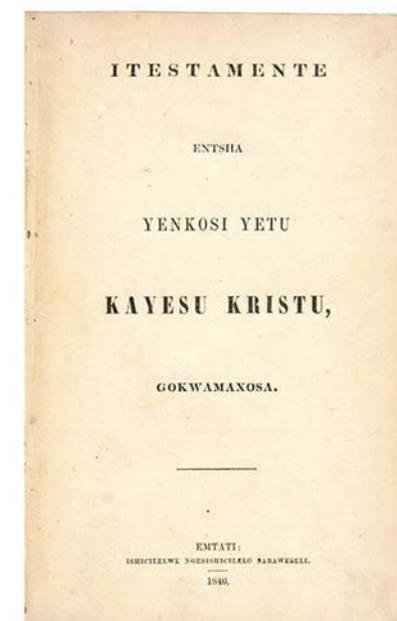
The application of democracy, *ujamaa* and ubuntu in particular circumstances shows that they are not only entangled but also elastic, and the ideals inherent in them are all too often blurred and bent as the book demonstrates. They are ambiguous and contradictory. This is not least because they represent European and African politics and values in ways that are connected and intertwined rather than demarcated and separate. Democracy, *ujamaa* and ubuntu were mobilising political key concepts connoting progress and breaking up towards new horizons. They are different but interconnected, embedded in European and African entanglements of history and

values. The Eurafrican history is forever marked by the experiences of the colonial ensnaring and the attempts to escape it as the analysis of democracy, *ujamaa* and ubuntu demonstrates.

The idea of democracy, not least its promise of critique and protest as a motor of change, inspired the movements for decolonisation in Africa. However, the discourses of *ujamaa* and ubuntu were rather in reaction to shortcomings in the democracy concept, in particular shortcomings connected to the focus on individual freedom in liberal democracy, and, in the South African case, also to the fact that democracy could be made compatible with racial segregation. Democracy both attracted and repulsed, being far from the universal value it is often argued to be.

Today, democracy is in a state of crisis, *ujamaa* an honoured historical relic, and ubuntu rather

According to John Whittle Appleyard, who together with Henry H Dugmore initiated the project of the translation of the New Testament into Xhosa, the various portions were prepared by Dugmore (Wesleyan Missionary Society); William J Davis (Wesleyan Missionary Society); CW Posselt (Berlin Missionary Society); Jakob L D hne (Berlin Missionary Society); and Joseph C. Warner (Wesleyan Missionary Society). The portions were printed at Fort Peddie and Newton Dale and the printing was begun in 1842 and completed in February 1846. Emtati is the Xhosa name for Newton Dale. The book was printed in sections and unpaginated with the text in double column format. (  Michael Graves-Johnston)



a ridiculing concept. These are the developments of the connected concepts that the book is analysing. The focus is on the shift from expectations of progress and breaking up to experiences of disappointment and disillusion. The declining belief in progress is in the case of democracy reflected in the spread of authoritarianism and xenophobic nationalism, and in the case of ubuntu in the ever more generic meaning and erosion of its mobilising power and viability.

The manuscript of *Democracy, ujamaa, ubuntu: Eurafrikan elusions of progress*, will be completed in July 2018, and publication is estimated for 2019. The book is, in methodological terms, primarily about a Eurafrikan entanglement of values and value politics. The values and value politics around democracy, ujamaa and ubuntu connected to the issue of progress, are at the centre. A key issue is the connection to globalised economies and colonial continuities. The chapter on ubuntu begins with a conceptual historical analysis of the use of the word in the first translation of the New Testament into Xhosa in 1846, an analysis that came to surprising results. The chapter explores the shift towards today's meaning and the politicisation of the term since the 1950s. At the end, it connects to Tom Bennett's rich publication on the use and meaning of ubuntu since the 1990s.

The book intends to go beyond a conventional view where democracy stands for Europe, and ujamaa and ubuntu for Africa as two separate value clusters and political ideals belonging to one continent each. The book focuses on the intertwining of the values propagated by these concepts through their embedding in connected histories. It investigates how imperialism was an instrument in attempts to prevent democracy in the colonies, how continued colonialism was compatible with attempts to make the world safe for democracy after the First World War, and how claims for decolonisation, democracy and development after the next world war went in tandem with new forms of continued dependencies.



Wolfgang Huber (Humboldt University of Berlin)



Hans Joas (Humboldt University of Berlin)

Faith and Fabric

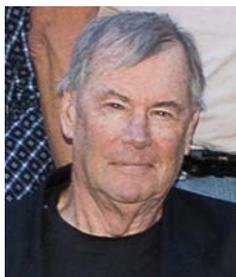
Relations between “faith” and the “fabric” – whether political, social, economic, cultural or moral – of communities, societies and the global world are increasingly studied in many disciplines, not primarily because of the popular claim that “religion is back” and the fact that the so-called secularisation theory is today rejected by many, but rather since many scholars increasingly recognise the public role of faith, not in the sense of religious convictions, communities and traditions, but in the sense of basic axioms and values, core beliefs and commitments (Taylor), cardinal convictions (Huber), notions of the sacred (Joas), in short, the faith of the faithless (Critchley).

Behind the debates about secularisation that mostly refer to European history from the 18th century to the present day, lies a narrative of the long-term

preparation of European modernisation in an alleged process of disenchantment since the time of the Hebrew prophets. Joas used his short stay at STIAS to complete his book *The power of the sacred: an alternative to the narrative of disenchantment* (published by Suhrkamp in Germany in 2017; French and Dutch translations in preparation). While at STIAS, he rewrote the section on Max Weber's understanding of the Hebrew prophets. Huber commented extensively on the 500-page manuscript and his review essay, *Sakralität und Macht. Hans Joas überwindet den Mythos von der Entzauberung*, will be published in *Herder Korrespondenz*.

Joas had an opportunity on two occasions to present his line of thought on the above book. One was the official STIAS seminar in which he elucidated the relevance of the historical sociology of religion to an interdisciplinary audience. The other was an international workshop of the *Faith and Fabric* project with a group of theologians, social scientists and natural scientists. The focus of further research was on the institution of sacred kingship in postaxial civilisations.

Huber took the protestant reform of the 16th century and its consequences for economic ethics as an example for the interaction between faith and fabric. His paper was presented at the joint conference of STIAS and the Center for Theological Inquiry, Princeton, on Faith and Fabric, as well as at the STIAS seminar. Different versions were later presented at various conferences in Germany and the USA. The Stellenbosch version, *Protestantism and economic ethic: an example for the interaction of faith and fabric?*, has been published in the *Stellenbosch Theological Journal* in 2017. In the framework of his ongoing work on an ethics of responsibility for our time, he did some research on the concept of the anthropocene and its ethical implications. He used the results for a paper on the late philosopher Hans Jonas and his concept of an ethics of responsibility, presented later in 2017 at a conference in Berlin.



David Simpson (University of California, Davis)

States of terror: history, theory, literature

This book project is a critical philology aiming to distinguish terror from terrorism and to elucidate their relations at some crucial junctures in history, literature and philosophy. Terror has a long career as an aesthetic category, for example, in translations of Homer and Aristotle and in 18th-century theories of the sublime, along with its being named as a technique of violent intimidation in religious and political rhetoric. Terrorism, on the other hand, is a late 18th-century neologism generated by the enemies of the Jacobin faction in the later phases of the French Revolution. At first associated with the punitive actions of the state, and despite striking instances of state terror throughout the 20th century, terrorism has now become more familiarly identified with anti-state agencies and especially with foreigners. Terror too has been relocated, displaced from its nation-state affiliations and re-described as the exclusive attribute of the enemy other. But its rich rhetorical history resists such simplification, not least owing to its reflexive function as a term describing either or both an internal emotion and/or an external threat. Its ambiguity has assisted its users in privileging terror over other terms in the fear-terror lexicon, with which it has competed both in English and as a favoured translation for foreign words. Simpson follows its career through exemplary moments over four centuries in different discursive traditions, for example in the King James Bible,

the gothic novel, the literary response to the French Revolution and the so-called dynamite fiction of the late 19th century, and the modelling of subject formation in 20th-century European philosophy. The success of the media-political campaign, especially in the anglophone world, to disavow terror as a strategy adopted by the democratic nation-states and to ascribe the recourse to terror only to their enemies (very evident in the framing of responses to the events of 9/11) has been partly enabled by the absence of any robust critical understanding of the history and rhetoric of the term itself. Simpson's aim is to reveal the complexity and variety of that history in its literary, theological, aesthetic and philosophical implementations, which collectively resist imagining terror as merely a trigger-word for demonising one's enemies.

Residence at STIAS and daily exposure to a rich South African tradition confronting questions about terror and terrorism, significantly refigured the shape of the project and gave it a much more international dimension. Simpson submitted the manuscript to the University of Chicago Press, with publication expected in February 2018. This book, says Simpson, owes a great deal to STIAS and to conversations with its fellows.

During his three-month residence, Simpson was also able to write the Freilich lecture on tolerance which he delivered in Canberra in October 2017. This topic too, was significantly informed by being in a place where so many intellectuals from different academic disciplines are exploring and debating issues of social and environmental justice and political-economic reform. Thinking about tolerance led him to look anew at some unpublished work on civility and, in particular, its relation to imagining a projected global civility, whether as a utopian paradigm or as a tool for disciplining dissident populations – or both. STIAS was important in generating another project as well as revising Simpson's understanding of the one he arrived with.



Maik Nwosu (University of Denver)

Forms and transformations: a regional poetics of the African imagination

The focus of Nwosu's main research project at STIAS is the relationship between different phases or kinds of African narratives. African narratives in both their traditional and contemporary phases apparently extend or re-stage tendencies previously encoded in folklore. These narratives are related not because newer ones or forms simply repeat previous ones but in the way in which continuity and innovation are simultaneous aspects of evolving traditions. These connections (as well as divergences), both cultural and aesthetic, constitute a basis for an interdisciplinary poetics or, specifically, a theory of African narrative rooted in literature and cinema.

Nwosu's aim is to investigate this possibility, not in a generalised manner but in a focused study of narratives produced by or related to the Igbo ethnic group in south-eastern Nigeria. This study will include the examination of the significant relations between such connected forms of narrative as oral literature, ideographic narratives, written literature in both native and foreign languages, and film. This study could therefore be contextualised as an exemplification of a phenomenon that may be applicable to African narratives in general.

Nwosu's stay at STIAS enabled him to further research and frame this book-length project. He also completed an important chapter.



A field worker instructing a TB patient how to use a tablet to answer questions related to TB treatment initiation while in the waiting room of the clinic. The questions are also read to the respondent and they can keep the earphones after the interview as a token of appreciation for their cooperation in the research project.

Eddy van Doorslaer (Erasmus University Rotterdam)

No longer apart but far from equal: health inequality in South Africa

In 2017, Van Doorslaer spent a second period at STIAS to continue joint work in the broader context of the STIAS longer-term theme project *Health in transition*. This visit provided an opportunity to continue work started in early 2016 through his contact with Ronelle Burger, Department of Economics, Stellenbosch University, and to have many stimulating and useful interactions with the STIAS fellows' cohort of 2017. During his two months at STIAS he continued collaborations with South African researchers on the following:

- Health is unequally distributed between rich and poor across the world. However, objective measures of ill-health, like mortality or malnutrition, often show far greater gradients by socioeconomic status than self-reported health measures.



Together with colleagues from Erasmus University Rotterdam (Teresa Bago d'Uva) and from Stellenbosch University (Laura Rossouw; now at the University of Cape Town), Van Doorslaer investigated empirically whether self-reports were biased by unequal health perceptions and expectations across income and race. The group used anchoring vignettes for 16 health domains data from the World Health Organisation's SAGE (*Survey on Global Health and Ageing*) and showed that – after testing and correcting for reporting tendencies using econometric models – there were no health differences left between blacks and other races on high incomes, but that there was a strong health gradient by income: in all race groups, those on higher incomes experienced far better health. This result highlights the usefulness of vignettes data to correct for heterogeneous reporting when investigating health inequalities. An article entitled *Poor health reporting? Using anchoring vignettes to uncover health disparities by wealth and race* is now forthcoming in *Demography*, the top scientific journal in the field of demographics.

- Funding from the World Bank and the Bill and Melinda Gates Foundation was obtained to do a proof of concept study on how to use insights from behavioural economics to improve the effective coverage of health care. It addressed two important problems in the treatment of tuberculosis: 1) the non-initiation of treatment despite diagnosis by about 15-20% of patients and 2) the non-adherence to treatment during the six-month antibiotics treatment course. Together with Burger, a randomised controlled trial in three clinics in the Cape Town Metro area (Gugulethu, Nolungile and Mzamomhle) was initiated to test whether sms text reminders could reduce the non-initiation rate. The results show that the sms reminders induced patients tested for TB to return to the clinic to collect their test result and, if positive, start treatment. Especially the reminder stating that TB

is lethal but can be cured ensured a timely return to the clinic. These results are currently being written up as a pilot study for a medical journal, and the lessons learned feed into a next and larger study that will be conducted in collaboration with the City of Cape Town's Health Department to couple an appointment system to sms reminders.

- Van Doorslaer also continued working on a new study with Stellenbosch University (Department of Economics) that aims to estimate the population health impact of the free rollout of antiretroviral (ARV) therapy since 2006 among HIV-positive patients in South Africa. Their econometric model links longitudinal data on health and mortality from a panel of 28 000 individuals for 2006-2014 from four waves of the National Income Dynamics Study (NIDS) to the South African Department of Health's district health information system. They found that this ARV programme has not only led to unprecedented health and survival improvements among millions of HIV patients, but it had also reduced the large health gaps between rich and poor by disproportionately benefiting the worst off in South Africa. In future work, they plan to explore the consequences of these dramatic health improvements for the labour force participation and earnings of successfully treated HIV patients in South Africa, to obtain estimates of the economic gains deriving from the population health improvements.

Van Doorslaer states that the STIAS fellowship provided him with an excellent opportunity to set up new, groundbreaking research in health economics on South African topics, of which there has been far too little to date, given the type and size of problems the country is confronted with in its declared pursuit of universal health coverage. He says: "As on the previous occasion, the STIAS environment with a very diverse group of scientists and artists in a very similar position, has created opportunities for me to think out

of the health economics box, and obtain insights from fields that I had never been exposed to before. Casual encounters and conversations with the other visiting scholars also led to promising new opportunities. The collaborative work that was started with colleagues from Stellenbosch University is very likely to bring me back to the town in the next few years.”



Stephen Brown (University of Ottawa)

Aid effectiveness and policy coherence for development: donor policies and practices in comparative perspective

Brown’s research project explores the extent to which donor countries’ aid and non-aid policies work together in the interests of development, as well as the extent to which donors work with each other and recipient governments. It also seeks to 1) explain policy coherence and incoherence at the national and international levels; 2) analyse their intended and unintended consequences; and 3) determine to what extent the impediments to more effective assistance can be overcome. The original empirical research focused primarily on aid from a range of donors to three African countries – Ethiopia, Ghana and Mali – and the extent to which international aid-effectiveness principles are being put into practice there.

A better understanding of why foreign aid has not yielded better development results is key to resolving one of the largest global challenges of the 21st century: fighting enduring poverty and inequality.

By examining domestic and international policy coherence and incoherence from an interdisciplinary perspective, this project is generating new theoretical and empirical knowledge on the impediments and possibilities of improved development cooperation in Africa and other developing regions.

While at STIAS, Brown worked on a book manuscript and several journal articles, of which some are in print. He also presented his work at several seminars and workshops, receiving valuable feedback. The research he undertook has provided him with enough momentum to keep publishing on this topic.



Daniel Conley (Lund University)

Saving the Okavango Delta: water quality, ecology and future challenges

The Okavango Delta, Botswana, is a UNESCO World Heritage Site and an international treasure. The Delta is created by seasonal flooding originating from the highlands in Angola; the water is transported by the Okavango River and is lost through evapotranspiration in the Kalahari Basin. The continued inflow of clean water allows the Okavango Delta to remain a productive freshwater wetland ecosystem teeming with wildlife. However, the unique nature of this amazing ecosystem is threatened. There are development plans to dam the upper tributaries of the Okavango River and to increase rice farming along its banks. Damming coupled with intensive agriculture would reduce the amount of water

flowing into the Delta and add fertiliser pollutants. The potential for environmental degradation of the Delta is considerable.

During Conley’s fellowship at STIAS, a water quality database with state-of-the-art biogeochemical measurements was created that have been carried out in the Delta during the last 15 years by different researchers. Assembling the data allows researchers to ask important questions regarding changes in baseline conditions and helps them to determine the kinds of measurements that need to be made in a future monitoring programme. Secondly, work is continuing on creating the scientific basis for the potential threat of intense agriculture and comparisons have been made between the Okavango Delta and the Everglades, Florida. In the Everglades, nutrient inputs from agriculture have altered the vegetation and ecosystem functioning and changed the water flow through flood control. These changes in the ecology of the Everglades can provide insight into how agriculture in the upper watershed of the Okavango Delta may potentially alter the extent of seasonal flooding, and how nutrient inputs could change the distribution of plant and animal communities.

There is intense political pressure for agricultural development in the highlands of Angola.

The question is how the ecosystem health of the Okavango Delta can be maintained while enhancing the economic conditions of an expanding world population.

Gabeba Baderoon

In the work Baderoon wrote at STIAS, she expanded her earlier use of the personal lyric into a broader arena, employing a poetic register to explore the complexity of the everyday. Some poems in the collection were directly inspired by the conversations with other STIAS fellows, such as *Promised land*, which was shaped by musings on jazz and sound with Fred Khumalo and Lizabé Lambrechts, and by the natural landscape at STIAS, particularly the poem *Green pincushion proteas*.



Gabeba Baderoon (Artist-in-residence, Pennsylvania State University)

Axis and revolution, a poetry collection

During her fellowship at STIAS as artist-in-residence from March to December 2017, Baderoon completed her fourth collection of poetry, *The history of intimacy*, which will be published by Kwela in August 2018. The collection draws on poems she has been writing over the past ten years, as well as newer work produced at STIAS. It broadens the formal repertoire and thematic scope of her previous work, and includes poetry as autobiography, the relation of love and memory, the losses caused by illness, and the pivotal decade of the 1990s.

In the work Baderoon wrote at STIAS, she expanded her earlier use of the personal lyric into a broader arena, employing a poetic register to explore the complexity of the everyday. Some poems in the collection were directly inspired by the conversations with other STIAS fellows, such as *Promised land*, which was shaped by musings on jazz and sound with Fred Khumalo and Lizabé Lambrechts, and by the natural landscape at STIAS, particularly the poem *Green pincushion proteas*.

Several of the poems revisit the ambiguous and momentous period of the 1990s, in poems such as *History of the body*, *Surface* and *Cardinal points*, which reflect on moments of history-making at both an intimate and national scale. The poem *The word* addresses the legacy of sexual violence, and *The Muslim woman's guide to sex* writes an account of complex and layered privacies.

Baderoon says the poems of *The history of intimacy* were written amid a rich atmosphere of sage debates and nourishing intellectual company. This generated a poetic language in which Baderoon tried to face difficult themes with honesty and formal innovation, such as the complexities of love and selfhood and the

way our painful past is so familiar it almost becomes the background of the present. The new poems in the collection were born from these juxtapositions and traces, and from these appear glimpses of other futures.



Salima Ikram (American University in Cairo)

Controlling landscapes and bodies: humans and animals

During her time at STIAS, Ikram completed the first draft of a book for the Turin museum on their collection of animal mummies, which will be published by the Museo Egizio. The revised second draft awaits C14 test results. Work on the Wife of Herodotus head, carried out with colleagues in the Department of Ancient Studies, has progressed and they are awaiting x-ray results to complete the publication. Ikram also compiled a draft of an article on the landscape of Kharga Oasis, which will be sent out to peer-reviewed journals once its revision is complete.

In addition, work with Hans Hertz (STIAS fellow, 2014) has been completed and their article has been forwarded to *PNAS* for consideration.



Boike Rehbein (Humboldt University of Berlin)

Social inequality in South Africa

While economic inequality in South Africa has been studied extensively on a high level, social inequality has received comparatively little attention. The term social inequality refers to social structures that entail different social positions and life-chances for different groups of people. In South Africa, the link between contemporary inequality and the history of apartheid is evident even to the most casual observer. It remains to be understood why and how the related forms of inequality are reproduced and why some social mobility has taken place since 1994. In addition, inequalities rooted in factors such as geography, gender, education, access to capital, country of origin or age need to be studied as well.

The project carried out at STIAS generated and interpreted a total of 50 qualitative interviews with people dwelling in South Africa from radically different walks of life in order to construct a preliminary hypothesis about contemporary social structure of South Africa. The concepts and methods used derive from a large comparative research programme covering all world regions. The empirical study of South Africa confirms the hypothesis that social inequality in South Africa is increasingly shaped by social class, while social classes themselves are transformations of pre-1994 inequalities and these inequalities persist to some degree in addition to the emerging class structure.



Daniel Olago (University of Nairobi)

The challenges and options in relation to water security for groundwater-dependent urban settlements located in fragile regions of Kenya

Many towns in Kenya's arid and semi-arid lands (ASALs) (and to a lesser extent, sub-humid zones) rely largely or exclusively on groundwater for public and private water supply. Urban water service delivery in such areas faces significant challenges through the intersection of higher poverty rates, inadequate and more variable water sources, smaller towns with lower economies of scale, institutional barriers/low capacities, and increasing anthropogenic pressures and climate variability (which influence groundwater recharge, storage and quality). The main objective of this project was to collate, assess and re-evaluate the various strands of available scientific evidence to inform, in new ways, policies and practices that would sustain the quantity and quality of urban water supply systems in these fragile regions in the face of rapidly increasing urbanisation, industrial activity and climate change.

A five-town case study cohort was selected for the investigation: Kisumu city and Nakuru town, sited in sub-humid zones and both partly dependent on groundwater supplies; Lodwar and Wajir towns in arid zones and fully dependent on groundwater supplies; and Msambweni town in a semi-arid zone, partly dependent on groundwater supplies. The in-force national and county water policies, strategies,

and plans for the case study areas were critically reviewed. An analysis of a range of hydrogeological data and information acquired over the past 15 years through personal research and technical projects implemented in each of the case study areas, combined with review and analysis of related published papers and reports, was undertaken. Water access disparities, competing uses, and risks were evaluated through critical literature reviews, personal observations in the field, and analysis of the sources of water data for the case study sites from the records of the Kenya National Bureau of Statistics.

The hydrogeological settings of these towns are complex: Msambweni, Wajir and Lodwar areas are within essentially sedimentary settings associated in part with marine (Msambweni and Wajir) and lacustrine (Lodwar) systems, while Kisumu and Nakuru are in rift settings that are partly associated with lacustrine systems. They all have, however, been affected by rifting and volcanism during their geological history, which contribute to their hydrogeological complexity. Consequently, widely variable quantities and qualities of groundwater may be encountered in close juxtaposition, and the sustainability of the exploited resource is uncertain due to insufficient knowledge of the aquifer characteristics. Water supply sources for the town dwellers include boreholes, shallow wells, springs, treated piped water (from lakes, rivers and/or springs), and water vendors (who sell water from all sources at different prices); in some cases, one source may dominate, while in others a hybrid variety of sources is accessed. The low-income groups are particularly exposed to use of untreated and contaminated water from shallow wells and springs (as opposed to those in higher income groups who have treated reticulated water from "safer" deep boreholes), and also tend to receive lower amounts of water for their use, often well below the nationally recommended per capita daily water use. Recent oil and mineral discoveries, and rapid development of towns in part related to

the devolution of the political governance structure in 2010, have led to a rapid rise in demand for water in these towns whose groundwater resources are already stressed through direct and indirect effects of land degradation and a highly variable and changing climate.

Insufficient technical knowledge of urban aquifers and their interplay with the wider social-ecological system constrains the development of holistic, effective and robust management systems to ensure their sustainability for intended uses. The key aquifers need urgent characterisation to reverse the current situation whereby development proceeds with insufficient aquifer knowledge. Private sector and public participation in management should be enhanced through decentralised management approaches. Water infrastructure and technologies should be fit-for-purpose in application and scale, and the pro-poor focus should be underpinned by appropriately focused management regimes. Based on the assessment of the challenges and constraints faced with respect to knowledge of the aquifers and their development, management and governance, solutions that could promote water security for urban towns in Kenya through the sustainable use of groundwater in the context of its complex hydrogeology, water access disparities, competing uses and future risks are proposed. A conceptual framework has been developed that enables the formulation of holistic and effective strategies that encompass the national aspirations and regional to global sustainability agendas, and which can be used to monitor progress in achieving set objectives. The approach is flexible, scalable and transferrable, so that it can be applied in different contexts and using different indicators, based upon the same construct. The paper covering these ideas has been submitted for publication in the *Special Issue on Groundwater in Sub-Saharan Africa* of the *Hydrogeology Journal*.



Magnus Berggren (Linköping University)

Paper batteries and chemical electronics

Batteries are devices that convert chemical energy into electricity and have served the modern society over decades as the source for backup and to enable mobility of electrified technologies and electronics. The fundamental chemistry and physics behind the operation in batteries are referred to as electrochemistry. Today, batteries are crucial components that enable us to escape from a fossil-fuel-based society towards a fully renewable future. Battery storage power stations can balance the natural supply of wind and solar energy, and the need for power in our society. However, the battery technology, as it stands today, is far from environmentally friendly, since it is typically based on hazardous and toxic materials and is very difficult to recycle.

In an effort to make battery technology “green” and to enable very large-scale production capability, the Laboratory of Organic Electronics at Linköping University is developing batteries that to a great extent are based on bio-polymers (green plastics) originating from the forest. With these “paper” batteries, the aim is to develop paper rolls that resemble the critical components of a battery, that is, the anode, cathode and electrolyte. “Our goal is to derive the material and engineering technology to enable large-scale battery rolls produced using ordinary paper machines,” says Berggren. One of the critical components in this

effort is to develop the actual chemistry and materials that convert chemical energy into electricity at high efficiency, density and rate. Berggren and his team have investigated one of the natural components of wood, lignin, to boost the energy storage of their paper batteries. By chemically modifying this material, into lignosulphonate (LS), they could achieve large-scale anodes and cathodes also composited with nano-cellulose and conducting polymers. They were successful in more than doubling the charge storage capacity by including the LS material into the electrodes.

Electrochemistry is also the phenomenon that can convert electronic signals into chemical ones, and vice versa. In so called electrochemical transistors, chemical signals are “translated” and amplified into electrical ones. These devices have found their way as chemical sensors to, for instance, record neuronal signals and to enable sensors for various chemical and biological compounds. Further, these electrochemical devices can be made onto and into paper to enable novel forms of electronics, in the form as “paper electronics”. Paper electronics can be very robust, while still maintaining a high degree of flexibility and stretchability. In one study it was demonstrated that such paper electronics can be manufactured using very simple manufacturing protocols. With a simple cut-and-paste approach, digital circuits, built up from electrochemical transistors were achieved. The group managed to make the fundamental digital gates that are conventionally utilised in ordinary computers, now made inside paper materials where systems are built up utilising production steps inspired from the conversion of paper into products rather than from traditional manufacturing industry of electronics. This radically new approach of making electronics could perhaps be used to include electronics in future paper packages and even in large-area paper billboards, while still being environmentally friendly.

Various applications of electrochemical transistors are currently extensively explored worldwide.

The technology of these devices has now matured into a technology platform involving many research groups and even industry, targeting various commercial applications. Five of the most active research groups in this field wrote a joint review article for *Nature Reviews* to be published in 2018.

During Berggren's time at STIAS, he co-wrote and performed theoretical modelling for three manuscripts covering the topics reported above. All three manuscripts will be published in 2018.



Paper batteries as a future large-scale technology to balance the supply of renewable solar and wind energy with the need in society for electrical energy (Image: Linköping University)



Kaarlo Tuori (University of Helsinki)

Contemporary law: the dialectic of unity and plurality

This is a sub-project of the STIAS project led by Hans Lindahl. During his stay Tuori was engaged with writing an extended article which will be published both separately and as a chapter in his coming legal theoretical monograph, *Kaleidoscope of Law*.

Tuori's main points can be summarised in six theses:

- Under the dominance of state law, plurality was construed from unity. Legal positivists, such as Hans Kelsen and HLA Hart saw plurality as plurality of self-contained state legal orders. Under the conditions of postnational law, marked by the rise of non-state law, the order in which we conceive of the unity and plurality of law should be reversed: instead of examining how plurality emerges from unity, we should explore how unity arises from plurality.
- Even though we reverse the order of unity and plurality, in our reconstruction of the dialectic of unity and plurality we must still start from unity; from identifying the instances of law – possessing a certain unity – which make up the plurality of law in our postnational era. In turn, the unity and identity of the constitutive entities of legal plurality can be examined from three different starting-points, focusing on three different modes of existence of law: law as a normative legal order (an order

of legal norms); law as it is realised in first-level socio-legal practices; and law as it is (re)produced in specialised second-level legal practices, such as adjudication, law-making, and legal scholarship.

- Despite growing scepticism towards a general concept of law, Tuori argues that we still need some basic conceptual tools which facilitate identifying instances of law; drawing a boundary, however fuzzy and porous, between law and non-law; and separating, however tentatively and acknowledging fuzziness and porosity even here, state law and non-state law. Yet such conceptual tools should be elaborated adhering to Max Weber's ideal type methodology. They are not meant to involve precise criteria allowing for clear-cut distinctions or comprehensive taxonomies, but to provide a tentative framework for launching the discussion of the present variety of law. Elaborating such ideal typical conceptual means from the distinctive features of (western) state law does not necessarily entail falling in the eurocentric trap and imposing parochial western categories on non-western (legal) cultures.
- Inter-relations between the instances making up the postnational plurality of law are not only boundary-asserting but also boundary-crossing; not only conflictual but also consensual and dialogical, manifesting interlegality rather than simple diversity or radical pluralism. Moreover, postnational developments have altered the nature of both conflicts between legal regimes and relations of interlegality. Thus, fundamental conflicts of authority, turning on the autonomy and identity of the legal regimes at issue, are increasingly common.
- Postnational plurality has fundamentally affected the internal unity of instances of law, including state law regimes. The formal unity of the national legal order, so important to legal positivists and, as they argue, ultimately guaranteed by a master rule (such as Kelsen's *Grundnorm* or Hart's rule of

recognition), is increasingly difficult to maintain, even when the legal order is reduced to its surface-level and the supporting legal cultural layers are ignored. The emphasis has shifted from formal to substantive (legal cultural) and discursive unity.

- The exploration of the dialectic of unity and plurality also requires discussing whether a second-level unity can be constructed from the plurality of instances of law. Evidently, second-level unity cannot rely on formal organising principles, such as those constituting the unity of Kelsen's universal law, covering all the national legal orders and international law. Under the conditions of postnational plurality, the unity can only be of discursive and substantive nature, building on deep cultural unities. Unities of varying reach can be reconstructed, and additional variation is brought about by the inevitable perspectivism of all reconstructions. In the dialectic of unity and plurality, plurality ultimately retains the upper hand.



Derek Attridge (University of York)

World literature, minor languages, and the art of translation: the example of Afrikaans

Literary fiction in Afrikaans has flourished in the past 25 years, in spite of the relatively small reading public and the downgrading of the language in many public institutions. In order to achieve an international audience, however, the work of translators has been crucial. This study set out to answer such questions as: Does translation of literary works into major

languages represent a danger for the future of minor languages? Is a translated work always inferior to the original? Does the involvement of the author in a translation make a significant difference? What skills does a literary translator most need? To what extent do translations need to be modified to achieve success in the global arena? A secondary aim was to find ways of making an international audience aware of the excellence of contemporary Afrikaans fiction.

Stellenbosch is a particularly appropriate place to conduct this research, given its importance in the history of Afrikaans, its continuing fostering of Afrikaans literature, and the presence of a number of the language's most prominent authors and translators in the area. This last fact made it possible to conduct interviews that fed directly into the research. Among those interviewed were the authors Ingrid Winterbach, Etienne van Heerden, and SJ Naudé, the translators Michiel Heyns and Leon de Kock, and the author/translator Antjie Krog.

A substantial part of the project at STIAS involved an investigation of the currently very lively fields of translation studies and world literature. Email discussions with two leading translators/translation theorists, Lawrence Venuti (in the USA) and Kate Briggs (in France), proved valuable. A particularly challenging argument recently put forward is that what we think of as distinct languages are in fact the somewhat artificial product of political nationalism, and that in reality there is fluidity between the speech competences of various groups. The history of Afrikaans seems a textbook example of the creation of a "pure" language for political and social reasons. This argument has important implications for translation theory and for the translation of Afrikaans in particular.

This research is ongoing, but an early publication titled *The triumph of Afrikaans fiction*, meant for a general readership, will appear in February 2018 in the American online journal *Public Books*.



J Scott Turner (SUNY College of Environmental Science and Forestry)

Life in the transients

This project explored a fundamental question about life and its evolution: the phenomenon of adaptation. Adaptation – how life “fits” into its environment, which includes both physical and biotic aspects – is a central concept both in ecology and evolution. Despite its centrality, we do not currently have a coherent theory of adaptation. Without that, we cannot say we have a coherent theory either of life itself, or its evolution. This project strives to solve that dilemma.

The project's overall theme was *Life in the transients* (LiT). Rather than the conventional model of adaptation as a genetic convergence on a “good fit” between organism and environment, LiT posits that adaptation occurs by organisms actively striving to survive at the margins of harsh environments, which are transient and unpredictable. This provides an alternative, and therefore testable, prediction for the directionality of “evolution's arrow”: the tendency toward apt structure and function, the literal meaning of adaptation. In addition, the LiT model resolves one of the central incoherencies of modern Darwinism. Rather than separating physiological adaptation from genetic adaptation, as current Darwinian models do, LiT unifies them into a coherent theory of adaptation, life and evolution.

At STIAS, Turner developed this theme along several lines. He completed the manuscript of a new book, *Purpose and desire. What makes something “alive” and why modern Darwinism has failed to explain it* (Harper Collins Publishers). The book was published in September 2017.

Turner also completed the manuscript of an essay, titled *Evolution as cognition*, which is currently in press at the journal *Inference: International Review of Science*. This article proposes that evolution is best understood, not so much as a phenomenon of natural selection, but as an active, cognitive and intentional phenomenon.

During his STIAS fellowship, Turner spent the inter-term break in Namibia, at the Gobabeb Desert Research Station, gathering experimental evidence for the LiT idea, most significantly on how Namibia's emblematic plant *Welwitschia mirabilis* survives in the desert climate of the Namib. *Welwitschia's* large leaves that spread close to the ground are contrary to the usual picture of leaf adaptation, which holds that leaves of desert plants should be numerous and small. It was discovered that *Welwitschia's* large leaves create a microclimate that favours the storage in soil of transient inputs of water from fogs: life in a transient. Transient uptake and loss of water by lichens in response to intermittent fog events, and capture of aeolian (wind-borne) water and sand by the thickets of a local melon-bearing plant *Nara (Acanthocycos horribilis)* were also studied.

Says Turner: “In addition to these formal activities, I was privileged to share my heterodox thoughts on adaptation within stimulating and critical discussions with other fellows, most notably with Addy Pross (Ben Gurion University of the Negev) and with Jan-Hendrik Hofmeyr (Stellenbosch Centre for Complex Systems in Transition). These discussions were enriched by the eclectic mix of resident fellows.”

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– J Scott Turner

Harald Wolf (University of Ulm)

Sensory representation for a combined chemo- and mechanosensory organ, the scorpion's pectine

Chemosensation – comprising the senses of olfaction and taste – is an essential sensory capacity in most animals (and indeed in many plants). The initial stages of chemosensory signal processing in an animal's central nervous system are typically organised as so-called chemotopic representations. That is, sensory neurons that respond to a particular group of odour chemicals send their axons into clearly delimited partitions of the chemosensory neuropil. These partitions thus collate chemosensory input according to the (coarse) chemical nature of the odorant. Those parcels of nervous tissue are called glomeruli according to their often spherical shape, and there are tens to hundreds of glomeruli in the respective brain region, depending on animal species. This initial sorting by chemical quality appears to be a prerequisite for the identification of odours that often consist of a mixture of hundreds of chemicals. The volatile compounds in roasted coffee flavour, for instance, are more than a thousand in number,

while vanilla flavour is primarily the result of a single chemical (vanillin, a phenolic aldehyde, C₈H₈O₃).

This chemotopic representation is in contrast to the more common somatotopic representation typically observed in mechanosensory systems. Somatotopic representations map a sensory surface – the human skin, for example – onto brain tissue in a topographic manner. That is, touch stimuli to the body are mapped onto a brain region that resembles in its shape and layout the body surface, and that is hence called homunculus (Latin for “small human”). Sensory surface areas that are more densely equipped with sensory neurons occupy relatively larger representations in the brain, though, deforming the homunculus. Mechanosensors from human finger tips, for example, occupy more space in the somatosensory cortex than input from a person's whole spine. Again, this somatotopic representation is a prerequisite for determining nature and location of a stimulus on the body surface.

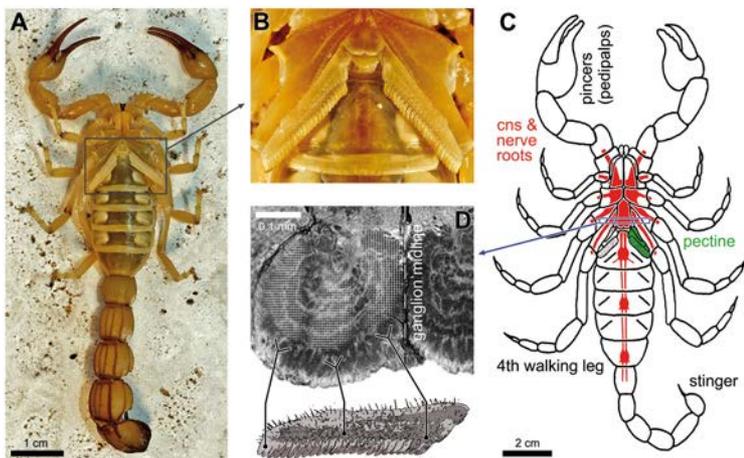
A problem arises for sense organs that need to fulfil both requirements, code chemical nature and location of a stimulus. Scorpion pectines are

good examples for such structures. Pectines are comb-shaped appendages located on the ventral side of a scorpion, just behind the walking legs.

Their branched structure reflects the need to increase sensory surface area for high sensitivity. The pectines are not (only) used to sense airborne chemicals, but they scan the substrate surface both chemically and with regard to tactile cues. They are thus convenient sensors to follow chemical trails on the desert surface, be they prey or mate leads. The scorpion central nervous system thus needs to process both types of signals in parallel, chemo- and mechanosensory input. This is the reason why scorpion pectines may provide a perfect study case for the, as yet, barely investigated interaction of chemotopic and somatotopic representations in the central nervous system.

Recent results from Wolf's laboratory show that, on the one hand, the main pectine neuropils are indeed somatotopically organised, reflecting the location of sensory input along the proximal-distal axis of the pectine appendage. On the other hand, the pectine neuropils have a structure that is reminiscent of the glomerular organisation observed in primary chemosensory neuropils across all animal phyla. This organisation is not strictly glomerular though, but rather the main pectine neuropil contains layers of nervous tissue that resemble onion peels, and these layers are further subdivided into lobate structures. It is as yet unclear whether this organisation reflects a chemotopic representation superimposed on the somatotopic one.

The fellowship at STIAS gave Wolf the opportunity to compile the present state of knowledge on the scorpion pectine appendages, to evaluate some data sets from his own lab, and to write a review article on the topic which was published in *Arthropod Structure and Development* in 2017.



*The scorpion pectine appendages. (A) Ventral view of a male North African scorpion, *Androctonus occitanus*. Comb-shaped pectines are located on the abdomen just behind the walking legs. (B) Enlarged image of pectines, showing the comb-shaped structure with 24 pegs in this case. Pegs expose dense arrays of chemosensors too small to be resolved in this image. (C) Drawing of a large Asian scorpion, *Pandinus cavimanus*, with the major part of the nervous system indicated in red. Blue frame indicates plane of sectioning for brain slice shown in (D). (D) Central nervous projection of the scorpion pectines, the (primary) pectine neuropil. Cross-section through the neuropil shows the almost concentric layers of sensory projections. Approximate projection areas of selected pectine segments (pegs) are indicated with regard to a pectine outline. Distal pegs project to distal neuropil areas, and proximal pegs, to proximal areas.*

A close-up portrait of Harald Wolf, an older man with short, graying hair and a light beard. He is wearing a dark, vertically striped button-down shirt. The background is a blurred bookshelf with various colored books.

Harald Wolf

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Richard Price (University of Maryland)

Creating a liberal empire: histories and legacies

This project is about the effort to create an empire of racial reconciliation and cooperation to emerge in the early 19th century and about the legacies that this effort left in the history of the British Empire. While it focuses on New Zealand and Australia, with some attention also on South Africa, it was a policy that resonated in all the settler colonies. For a brief historical moment these were the main centres where policy makers and others tried to use a “humane policy” towards indigenous peoples, to avoid the violence and racial hostility that they knew had accompanied empire building in the past. It is obvious that the attempt failed. But like many lost historical causes, it had a significant afterlife in the legacies it bequeathed to British imperial culture and to the heritage of societies that were the centre of the effort – Australia, New Zealand, or those that were touched by it – South Africa and Canada. Thus, the book that is now being written will not only be about the period of the early 19th century, but also about the legacies of the period for the subsequent history of the late 19th and 20th centuries.

The book will examine the four large issues that presented themselves to those responsible for realising British rule in the new colonies of the southern cone in the early 19th century. Firstly, there was the problem of reconciling settler culture with indigenous culture. Early 19th century commentators

were acutely aware of the violence that accompanied empire. They believed, however, that the humanitarian sensibility of the age would rectify the sins of the past.

Secondly it will address policies that aimed to conciliate relations between the imperial presence and indigenous peoples. The most important of these was the attempt to create a policy of “racial amalgamation” in New Zealand that would serve as a model for the races to co-exist and cooperate and, eventually, perhaps, under some circumstances, to literally intermingle.

Thirdly it will focus on land policy. Land was at the heart of the imperial encounter, and dispossession a major cause of settler-indigenous violence. But the expectation was that the violence associated with land struggles in the past could be avoided. Much effort was expended at the local and the metropolitan level exploring ways to reconcile the different claims to the land. Protecting aboriginal rights and access to land was a major (although not consistent) theme of imperial policy, championed by the missionary lobby.

The fourth area where the possibilities of a different kind of empire were played out was in the legal sphere. The law was a key component of the civilising mission of empire. There was a recognition that British law needed to accommodate indigenous customs, and much ink was spilt in the official correspondence between governors in Australia and New Zealand and the colonial office on how this could or should be done. Planting the law in colonial soil took time and effort, and throughout the early 19th century a legal pluralism prevailed with indigenous law operating alongside the common law. This changed dramatically later in the century when settler governments took control of policy from the imperial government.

And by that time, these efforts had faded in memory and collapsed in reality. But they left legacies in the

history of the British Empire and its settler colonies that continued to shape their histories. The narrative of humanitarianism allowed Britain to claim that it ran a liberal empire whose purpose embodied the humanitarian mission of bringing modernity to (in Kipling’s phrase) “lesser breeds without the law.” But the age of liberal empire also created spaces where the seeds of indigenous politics could be planted. These plantings were often fragile and weak but they formed the roots of the modern politics in the settler colonies. From the late 20th century across the old settler colonies the issues of the early 19th century re-emerged: the issues of racial reconciliation; of using the law to redefine sovereignty in a way that includes indigenous rights; and the question of land rights have all, in one way or another, lain at the heart of modern politics in Australia, New Zealand and South Africa.

Price refined his thinking on this project while at STIAS. He began writing a first draft and completed three chapters during his residence. He is now finishing a first draft of the whole manuscript.



John Noyes (University of Toronto)

Global citizenship and the practice of being human. South African visions and the legacy of enlightenment

The idea of common humanity seems to be a part of human culture everywhere. But the way it is used in social contexts has differed widely. This project traces

the connections between the idea of global citizenship and common humanity in Enlightenment Europe and in South Africa today. These ideas were powerful in Enlightenment Europe, where they promised a new regime of justice in opposition to despotism, exploitation and slavery. But they were also highly problematic, since they tended to obscure cultural difference and impose European values on other cultures, often by force. South African scholarship today is a renewed engagement with the rich African humanist discussion of the 1950s to 1970s, in which a number of African intellectuals interrogated the humanist ideals of their European training in the context of African liberation. The resulting dynamic holds great potential for the idea of humanism, and the thesis of this project is that the South African case provides a valuable model of how this potential may be realised today.

The first step in this project was to address the concern that European humanism was an ideology of imperialism. In his work at STIAS in 2016, Noyes had concluded that humanism in Enlightenment Europe faced a crisis of legitimacy as a result of imperialism, and that this crisis led to a number of unanswered questions. During his research at STIAS this year, he was occupied with formulating these open questions and examining answers offered by the African humanists. He says: "Once again, STIAS provided an ideal environment for testing my ideas. I had the good fortune to share the period of my visit with a number of scholars working on related questions. Bo Stråth (Helsinki), who was working on the concept of ubuntu as a meta-norm, was a valuable source of insight; so was Sundya Pahuja (Melbourne) who was working on legal authority and economic globalisation; the team working on the longer-term theme project *Being human today* under the leadership of Michelle LeBaron (*The theory and practice of social transformation through the arts*) provided valuable inputs on my project; and Jane Taylor (Leeds/University of Western Cape) spent

a short intensive period at STIAS working with me on questions concerning the limits of the human. When it came to discussing my project, all the scholars at STIAS showed remarkable intellectual generosity, and my exchanges with scholars far outside my field proved extremely beneficial."

Noyes's collaboration with both Stråth and Taylor continues. Stråth and he are discussing ways to collaborate on his project to establish a virtual "academy" of global humanities, taking advantage of virtual platforms to maximise international dialogue on a number of important topics in the humanities. Taylor and Noyes are planning joint teaching projects on the limits of the human and the world of things.

During his time at STIAS, Noyes presented a paper on *Enlightenment humanism* to the biannual conference of the Association for German Studies in Southern Africa. In subsequent months, he was able to present his research findings at symposia in Madison, Wisconsin, USA (on Goethe's humanism), Hannover, Germany (on humanism and national liberation movements in Africa), and took part in a round table discussion in Atlanta, Georgia, USA, on the topic of globalism and German settlement in Kenya. He organised a panel as part of a workshop at the Jackman Humanities Institute in Toronto on *Literature pedagogy and decolonisation*; the workshop papers will be published in 2018. The monograph that was designed during his time at STIAS is progressing well and a first draft of three chapters will be available later in 2018. As an initial exploration of his third chapter on humanism and the decolonisation of knowledge, Noyes published a paper in German entitled *Literature, truth, being human*. He also has a paper in preparation on post-apartheid humanism and economic globalisation in South Africa.



Margaret Ferguson (University of California, Davis)

Sealing the female body before marriage: cultural debates about hymeneal signs

During her time at STIAS, Ferguson worked on her book project *Myths of hymen: cross-cultural debates about female virginity*. She analysed a wide range of written texts and visual materials that contribute to debates about the existence and social value of the hymen construed as a female body part and intricately linked to competing ideas about female sexual purity, about ownership of women's bodies in patrilineal systems, and about the institution of procreative marriage. Ferguson excavates a set of texts in several languages, mostly produced in the ancient Mediterranean world, in early modern England during and after the reign of the "virgin" queen Elizabeth I, and in 18th century France and Germany, that evince scepticism about the existence of the hymen as a "universal" female body part. She links her archive of sceptical narratives about the female hymen to a set of stories and visual representations of Hymen as the Greek god of marriage who changed his social and sexual status in strange ways that greatly interested Renaissance authors such as Shakespeare and Marlowe.

To introduce the complexities of H/hymen's histories through a critical practice indebted to recent theoretical work on queer philology and on translation, Ferguson notes that Aristotle understood the word

“hymen” to signify a “thin membrane” that surrounds the organs of all mammals. There is no evidence that the ancient Greeks associated “hymen” with a specifically *female* body part until the late Hellenistic period, although modern advertisements for “hymenoplasty” surgeries (procedures that allegedly “restore” a woman’s virginity) regularly imply a seemingly natural connection between reconstructed hymens and the god Hymen interpreted as an emblem of happy marriages.

Ferguson came to STIAS planning to complete a chapter on the epistemological and representational problems of “seeing” hymens considered both as female body parts important in medical and legal discourses and as images of the Greek god Hymen in literature and in works of visual art. She finished this chapter while also pursuing new research for the book’s epilogue, which analyses the global spread of hymenoplasty surgeries in the late 20th and early 21st centuries; the epilogue also undertakes a brief theoretical inquiry into current debates about hymenoplasty surgeries considered in relation to the surgical cutting and suturing operations called “female circumcision” or, more polemically (for instance, in World Health Organization documents), female genital mutilation (FGM). As a result of conversations with STIAS fellows who were deeply knowledgeable about FGM and also about the constitutional issues raised by the mass virginity testing currently practised in KwaZulu-Natal (ostensibly as a revival starting in the 1990s of ancient customs), Ferguson made more progress on conceiving and writing her epilogue than expected; she also made a decision to add a new chapter focused on “testing” to the four chapters she had initially planned, on (respectively) seeing, knowing, teaching, and allegorising hymeneal matters. The work done at STIAS extended the international scope of the book and strengthened its case for questioning the fetishisation of the hymen as a “sign” of an invisible state of female sexual purity.

During her fellowship, Ferguson also worked on a supplementary project of co-editing the sixth edition of *The Norton Anthology of Poetry*. This volume will be published in February 2018.



Elisabeth Gerle (Lund University)



Göran Gunner (Visiting scholar, Stockholm School of Theology)

Many modernities – freedom of religion in different settings

In September 2016 Gerle and others, in cooperation with the Faculty of Theology and the Beyers Naudé Centre at Stellenbosch University, began to outline details for a seminar entitled *Many modernities – freedom of religion in different settings*. The intention was to explore the role of religion and religious freedom, in relation to the state, between faith traditions and within faith traditions, including the intersection of religious freedom and, for example, women’s rights. Three different regional settings were chosen – South Africa, Kenya and Europe.

In line with one of the longer-term theme projects at STIAS *Being human today*, this project is based on the assumption that freedom of religion is one of the basic human rights, essential for democratic societies. It is often understood that there is a stronger tendency to focus on collective rights in Africa and a more individualistic trend in Europe. However this dichotomy between an individualised interpretation of freedom of religion and a more collective orientation was deemed too simplistic, hence scholars were invited to problematise some of the binaries between individual and collective rights as well as comparing different settings. A very successful seminar was held at STIAS and at the Beyers Naudé Centre at Stellenbosch University during March/April 2017, with speakers from Belgium, Kenya, South Africa, Sweden and the United Kingdom.

An anthology from the seminar, edited by Gerle, Gunner and Dion Forster (Stellenbosch University) is in preparation. The papers from the seminar have already been accepted for publication in the STIAS series as well as by Pickwick Publishers, USA.



David Attwell (University of York)

Towards a cultural history of the African Resistance Movement

The ARM (African Resistance Movement) was an underground group of roughly 60 adherents that operated for four years (1960-1964) following the Sharpeville massacre and the state of emergency that followed. A broad church in ideological terms, including

African nationalists and Trotskyites, most of its members were in fact liberals, some formally affiliated to the Liberal Party but acting without Party approval. Sympathetic to the African National Congress (ANC), it distanced itself from the South African Communist Party and communism and therefore remained separate from *Umkhonto weSizwe*. Its activities were aimed at bringing down the apartheid government through economic disruption and sabotage aimed at installations, not people. In these terms it was relatively successful, targeting mainly the national electricity grid and the suburban railway in Cape Town.

The ARM ended badly, however, with betrayals leading to lengthy convictions, and the unauthorised bombing by John Harris of Johannesburg's Park Station, in which two dozen people were seriously injured with one fatality, Ethyl Rhys. The story of the ARM is one of youthful idealism marred by tragedy and has produced a significant body of writing which is its cultural afterlife – it could be said that the legacy of the ARM is not political, but cultural. It has attracted the attention of some of South Africa's major writers, in Nadine Gordimer, André Brink, Jonty Driver and Athol Fugard, and is the subject of autobiography and prison writing by some of those involved, notably Hugh Lewin, Eddie Daniels, Hilary Claire and Baruch Hirson.

During Attwell's fellowship at STIAS he was able to collect and read this literature, while also reading more deeply into the social history of liberalism in South Africa and in moral philosophy relating to political violence. He was also able to do archival research in the Cape Supreme Court records and interview writers and several former members of the ARM. The fellowship at STIAS, he says, was exceptionally valuable in providing a wonderfully supportive environment and many rich conversations, particularly in pushing him to think boldly about the form a cultural history of the ARM might take, to bring the subject to a broad readership.



Michael Laffan (Princeton University)

From unwilling Umma to unsettled loyalties

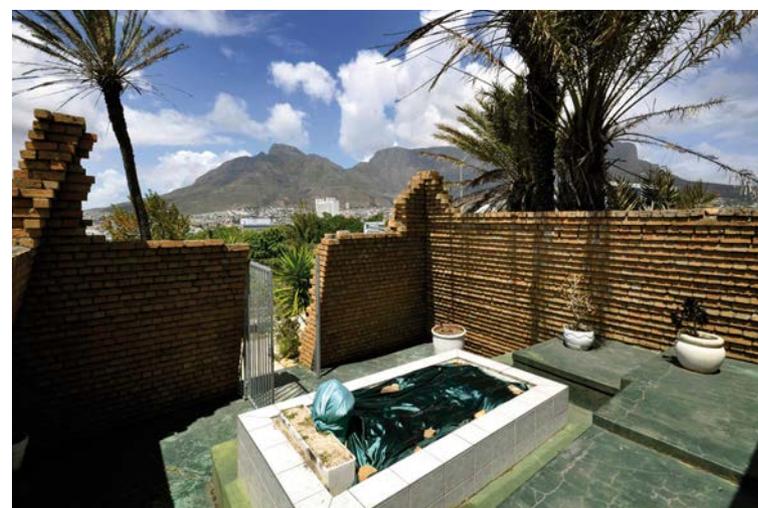
Laffan came to STIAS in August 2017 in the hope of exploring stories of the life and memories associated with three key saints of the local Capetonian scene, most notably Abdullah bin Qadi Abd al-Salam. More commonly known as Tuan Guru (d.1807), this scholar from the island of Tidore, in eastern Indonesia, had been exiled across the Indian Ocean by the Dutch in 1780, later making his mark as the first major Imam of Cape Town. In dealing with Tuan Guru, though, Laffan soon found far more than he bargained for, learning how contentious such histories can be as he met local Muslim historians and community members, who hosted him for interviews on local radio and discussions at a bookshop in Athlone. From the conversations with them and his colleagues at STIAS, Laffan has since mapped a clearer sense of Tuan Guru's life and legacy, presenting his findings most recently in Tokyo and showing how a community founded on forced migration and slavery could assert itself as a partner to the state in the process of nation building and with an eye to creating loyal Muslim subjects.

Being able to alternately visit the archives and the descendants of Tuan Guru in Cape Town, and to hunker down in the warmth of Mostertsdrift, Laffan says that he experienced the most productive three months of his career which had a profound impact on his work. Initially conceived to explain the ruptures

between Muslims of the Indian Ocean arena, and hence entitled *“Unwilling Umma”*, his project has since developed to tackle the notion of imaginings of Malay community, and most particularly at moments of what might be called imperial flux. Such moments range from the transitions from Dutch to English rule at the Cape and in Lanka at the end of the 18th century, the arrival of imperial Japanese forces on Java and the Indies more generally in the 1940s, or even with the arrival of Australian officials on the Cocos Islands in the 1950s.

While Laffan finalised various projects during his first days at STIAS, the main results of his fellowship will come as three key chapters of his current book, entitled *Unsettled loyalties*. Two of these chapters focus on the Cape and one is a discussion of the so-called Malays of Colombo, who shared the same moment of a transition from Dutch to British rule. Indeed there have been numerous parallels between both colonies, if not in time, then in the foundational histories of displacement and reconnection with the idea of a Malay world; though there were important differences that developed as a result of divergent

A view of the tomb of Tuan Guru (d.1807), left, at the Tana Baru. In the background is the tomb of Tuan Sayyid ‘Alawi, a political exile sent to the Cape in 1744 (Photo: Shafaq Morton)



histories of unfree labour and military recruitment. Also key to the larger story is the desire often voiced by Muslim travellers from such sites to reconfigure their admittedly colonial worlds in terms of compatible loyalties to physical and spiritual empires. It was no mere coincidence that as access to a very British ocean was opened up by steam shipping in the second half of the 19th century, believers in Cape Town, Colombo and the Malay worlds further east, would be attracted to the notions of Ottoman primacy, and to adopt similar dress after making their way to Arabia for the Hajj.

Laffan's project has become much larger than that first proposed for STIAS, stretching as it does from Asia to Africa (and even Australia), and tackling two centuries from 1780, seeing the demise of empires and the rise of nation states, and not necessarily Muslim ones. As such it will take a little more time to come to fruition, but with the time at STIAS and the good fellowship of his peers there, whose fields of research were so different and yet so inspiring, he believes that the real moment of its realisation came when at Stellenbosch, and he is hopeful to complete the project at Princeton this year.



Nicole Sampson (SUNY Stony Brook)

TB diagnosis in children and TB drug discovery

Tuberculosis (TB) rates are at unprecedented high levels in sub-Saharan Africa. TB incidence in South Africa, estimated at 1 000 per 100 000, is the

world's third highest; 65% of TB patients are HIV co-infected. Children in resource-limited settings with a high incidence of TB and HIV suffer a substantial, but often underappreciated TB disease burden. Young children have a high risk of developing active disease and a propensity to develop severe and disseminated forms of disease following exposure to *Mycobacterium tuberculosis (Mtb)*, the causative agent of TB. Existing diagnostic tools fail to confirm TB in children, who typically have disease with low bacterial counts and who cannot provide sputum samples. More sensitive and child-friendly diagnostic tools are urgently needed to diagnose TB. During Sampson's fellowship, a number of studies were undertaken to address the need for diagnostics in children as well as to develop better drugs to treat TB in all TB patients.

Sampson's laboratory developed an antibody-based diagnostic assay to detect TB in small volume blood samples. The assay detects a biomolecule found in the blood that is altered in the presence of TB disease. Current studies are defining the relationship between TB disease state and the levels of the biomolecule to define its use as a biomarker of disease.

Previously, samples collected at different times after diagnosing disease and in patients with different treatment regimes were assayed for the presence of this biomarker. These samples were samples that were readily available for feasibility testing. Despite the heterogeneity of the samples tested, Sampson's laboratory observed that levels of the biomarker are elevated in children suspected of having TB disease.

Through the period of fellowship at STIAS, Sampson established protocols for further sample analysis. In collaboration with colleagues at the Desmond Tutu TB Centre at the Faculty of Medicine and Health Studies (FHMS) of Stellenbosch University, studies were designed to test TB patient serum from

children that were better characterised. The samples being provided by the group at Tygerberg are better matched for timing of sample collection relative to diagnosis with disease. Thus, using these samples, cut-off biomarker levels for defining a positive test result will be established. Sample testing will begin in mid-2018, with funding provided by the United States National Institutes of Health to Sampson's laboratory and to a small company, Chronus Pharmaceuticals Inc., working to commercialise the assay.

In a second activity during her fellowship, Sampson wrote an invited review of the methods and models used for screening libraries of compounds for new inhibitors of *Mtb* that can be developed into drugs. This review is important for comparing and assessing what can be expected from different assays. The review *Hit generation in TB drug discovery: from genome to granuloma* co-authored with her student, Tianao Yuan, will appear in *Chemical* in 2018.

Much focus in the tuberculosis field has been on the catabolism of cholesterol by *Mtb* to generate energy for *Mtb* survival in vivo. Sampson's laboratory discovered that cholesterol metabolism is involved in stress resistance. They have drug leads that target this pathway, and which improve the efficacy of existing TB drugs. While at STIAS, Sampson began writing a manuscript that describes this work that is currently under review. In addition, she finished a manuscript that describes how the activity of cholesterol catabolism can be controlled by changes in redox potential in *Mtb* that occur because of changes in the human macrophage cell. This work is important as the first link between the two pathways described above. Discussions with the FHMS and SACEMA (South African Centre for Epidemiological Modelling and Analysis) aided her manuscript revisions.



Addy Pross (Ben Gurion University)

Bridging between the physical and biological worlds

Living and non-living systems are strikingly different. Yet the established principles of physics and chemistry seem unable to clarify the basis for that difference and a wide conceptual gulf continues to separate animate and inanimate. Science continues to struggle with two central questions regarding living systems: how was life able to emerge from non-life, and how can the evolutionary process be understood in more general physical/chemical terms. In recent years a newly emergent field of study termed systems chemistry has begun to make progress in advancing this research area. A primary goal is to fill the chemical void between simple molecular replicating systems and highly complex replicating systems, life. Research within this area involves elucidating the physical and chemical principles governing replicating molecules and the networks they establish. Such study will hopefully help uncover the chemical roots of Darwinism, better connect the physical and biological sciences, and hopefully open up new avenues toward answering one of the most tantalising of all scientific questions – how was life able to emerge from non-life?

The presence of several leading biologists at STIAS during Pross's stay, in particular Scott Turner, Bill Kunin, Dan Brooks and Harald Wolf, led to many valuable discussions, including a round table discussion of the group with John Collier who visited

STIAS for the occasion. Also during his visit at STIAS, Pross learnt of Turner's new book, *Purpose and Desire*, which had just been published, and he subsequently reviewed it for *Quarterly Review of Biology*. It also formed the basis for many productive discussions. While at STIAS, Pross completed an interview article on the subject of his recent book *What is Life? How chemistry becomes biology* for a high-ranking popular science magazine in Turkey. Finally a research paper on his efforts at STIAS was presented to the COST Systems Chemistry (CM 1304) conference, which was held in Sopron, Hungary, September 2017. The paper's title was *On the emergence of functional complexity: the elephant in the room*.



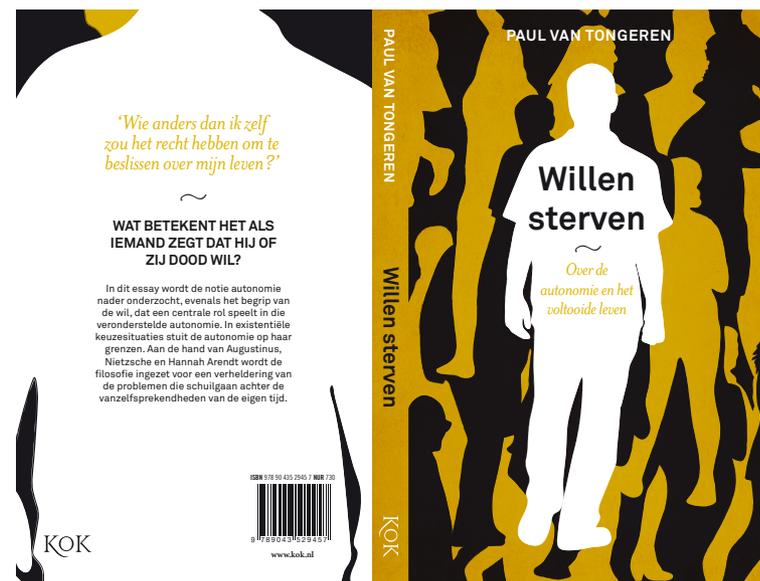
Paul van Tongeren (Radboud University Nijmegen)

Nietzsche's diagnosis of European culture seen from an African perspective

The project continues on previous research done on the philosophy of Friedrich Nietzsche and his diagnosis of "European nihilism". The aim was to explore whether African thinkers and writers could provide a different view on the European character of nihilism, the nihilistic character of Europe and on the possibility of either overcoming or bearing this condition of nihilism. The research has been mainly exploratory: a voyage of discovery through a hitherto unknown territory. The initial questions proved to be too simple and were partly complemented with,

partly replaced by many more new questions, such as: what do African authors mean when they speak of nihilism? How could one ever recognise nihilism where these authors do not explicitly use the term? How is the research question about nihilism related to the widespread tendency in (especially South) African philosophy to focus on (post)colonialism? Is colonialism a symptom of nihilism? Is postcolonialism condemned to be bound to colonialism in a similar way in which the criticism of nihilism is bound to nihilism? Isn't speaking of "Africa" already a generalisation that is itself a product of a European construction? What distinctions should be made within "Africa": different countries, different traditions, different phases of a process? Or could this categorisation once again be a symptom of nihilism, just like the initial generalisation? How to prevent nihilistic structures intruding in the interpretation of African authors and discussion partners? And even in the way we ask our questions: for doesn't Nietzsche

Book cover of Willen sterven by Paul van Tongeren. A first draft on the topic of euthanasia and assisted suicide, more specifically "autonomy" and the alleged right to euthanasia in cases of what is called a completed life, was completed at STIAS. The book will be published in April 2018.



suggest that nihilism is part of the structure of our questioning? Do we not conceive of “Africa” as “the other” of Europe? Does this opposition not repeat a nihilist structure? In what sense is Africa (or a particular tradition in Africa) different from Europe? Has it developed in a different way or did it grow from different roots? After being immersed in the subject for a few months, Van Tongeren believes that the Nigerian writer Wole Soyinka and the Kenyan scholar Ali Mazrui seem to be very promising guides in this domain.

The research was presented during a philosophy conference on *Displacement* at Cintsá, organised by colleagues from the University of Fort Hare. The English translation of Van Tongeren’s (originally Dutch) book on *Het Europese nihilisme* (Nijmegen: 2012) by two master’s students from Stellenbosch University was completed during his stay at STIAS and will be published shortly with Cambridge Scholars Publishing.

Apart from this main project, Van Tongeren also completed the following:

- A *Nawoord* to a new Dutch translation of Nietzsche’s *Die fröhliche Wissenschaft*. The book will be published in February 2018.
- An extensive review of the latest book by Anton van Niekerk, Stellenbosch University, *Die dood en die sin van die lewe*. (Kaapstad: Tafelberg 2017). The review was published in the December issue (2017) of the *Tydskrif vir Geesteswetenskappe*. A shorter version of the same review will be published in the *Tijdschrift voor Filosofie, Leuven*.
- A first draft of an essay on the topic of euthanasia and assisted suicide, more specifically “autonomy” and the alleged right to euthanasia in cases of what is called a completed life. The essay will be published in April 2018.



Bill Kunin (University of Leeds)

Scaling up biodiversity

Biological diversity measures such as species richness are intrinsically scale-specific. What further complicates matters is that one usually cannot scale diversity up in a simple additive way; if you have ten species in one plot and five in another, you do not necessarily (or even usually) have 15 species altogether. Thus one of the long-standing puzzles in ecology is finding ways to estimate coarse-scale diversity from a set of fine-scale samples. “If we had a reliable way of doing this, it would be useful for estimating biodiversity in poorly studied taxa or regions, for up-scaling experimental results, and for assessing cross-scale biodiversity change,” says Kunin. Quite a few such up-scaling methods have been put forward over the past 20 years, but most have been tested on different datasets, and most of those tests have been relatively modest. One of Kunin’s goals at STIAS was to complete a review of the available methods, and test virtually all of the available methods against a single high quality and challenging dataset.

To do so, he made use of one of the best biodiversity datasets available: the UK Countryside Survey – a periodic survey of plants in several hundred sites scattered across Britain. The challenge was to estimate the number of plant species in Britain as a whole, and for different scales within the country from 10x10 km up to national scale, based on a large

number of samples each of which was only a few metres across, a task which required approximately 500 000-fold upscaling. These estimates were then tested against the so-called “true” plant diversity of the country, as published in a recent botanical atlas (*The New Atlas of the British and Irish Flora*, by Preston and colleagues 2002) surveyed contemporaneously.

During his time in Stellenbosch, Kunin was collaborating with Cang Hui at Stellenbosch University on a number of topics of shared interest. Amongst the topics explored were the challenges of biodiversity up-scaling; Hui quickly derived three new approaches which were added to the developing manuscript, bringing the total number of methods tested up to 19. They were set two tasks: 1) to correctly predict the number of plant species in Britain, and 2) to estimate how species richness changes with scale (the so-called Species-Area Relationship or SAR).

The methods differed greatly in their predictive accuracy. There are 2 326 plant species recorded in Britain, but the methods made predictions ranging from 62 to nearly 11 600. The best of the methods, however, predicted species richness quite accurately (in particular, the method proposed by Shen and He in 2008), generally remaining within about 10% of the correct value. The challenge of predicting SAR shape proved to be more demanding, but even so the best models could get within 20 percent of the correct result. Two of the three best SAR approaches – including the overall winner – were developed during the STIAS fellowship as part of Kunin and Hui’s collaboration. The challenge of biodiversity up-scaling is not yet solved, but the results of this work (to be published in *Ecological Monographs* in 2018) suggest that significant progress has been made.



Sarah Duff (University of the Witwatersrand)

A brief history of sexuality in Africa

Focused on the scholarship on the history of sexuality in Africa, this short book is intended to be an introduction to this rich and complex literature for both students as well as lay readers. As a work of synthesis, this book of about 30 000 words is a condensation of, and commentary on, the very large number of books and articles published on the topic by historians. Its credibility as a textbook and as a work of scholarship rests on extensive reading. Yet *A brief history of sexuality in Africa* will also offer an intervention in the field. Duff would like to use this book to think through new ways of writing the history of sexuality on the continent. One of these is to think beyond Foucault, whose writing – in many ways – produced and shaped the history of sex and sexuality. For example, Duff turns to the American historian of early modern European sexuality, Thomas Laqueur, to ask different questions of the sources available to historians of precolonial Africa: how does rethinking definitions of gender and the relationship between sex, gender and the body, help us to understand precolonial African sexualities? Does it make sense to put the literature on early modern European and precolonial African sexuality in conversation with each other? And what does this exercise help to reveal about early modern Europe? “This is a process of decentring Europe, certainly. But it is also one that refreshes scholarship on precolonial Africa,” says Duff.

Subsequent chapters will consider topics within the broader history of sexuality in Africa, including migration, disease, love, attempts to promote and control fertility, the making of hetero- and homosexual identities, and monitoring of youth sexualities. In so doing, Duff also hopes that this book will move the study of sexuality in Africa beyond themes such as risk and persecution.



Denis Ekpo (University of Port Harcourt)

PostAfricanism versus Fanonism

Although the current global age in its most crucial structural orientations, has turned viscerally anti-Fanonian, Fanon remains, especially among the intellectual left, a key intellectual and moral authority still sponsoring the seeming perpetuation of the anti-colonial/decolonial outlook not just in Africa but in the rest of the Third World. Similarly, even though the ideology of Africanism (that is an abiding faith in the existence of a specific African interpretation of life, of the modern world and our place in it, leading to amongst others the strong ideological preference for an African path to development, African solutions and African Renaissance) has notoriously failed to produce the outcomes wanted, Africa has not felt any need to somehow question, redefine or transcend Africanism.

This research sets out to make a case for why Africa, in its own developmental interests, should endeavour to overcome both Africanism and Fanonism. The new

philosophy through which Africa could identify (and rethink itself out of) the traps and burdens of both ideologies is called PostAfricanism. PostAfricanism is about re-diagnosing constitutive ills of most Africa-centred anti-colonialist ideologies and then finding newer strategies of thinking, feeling and imaging that can help Africa rethink itself and the modern world more adaptively and self-empoweringly. PostAfricanism expresses the strong desire to lift Africa out of the many unseen anti-progress patterns of thoughts and action embedded within some of the preferred models of self/world interpretation. While most Afrophiliac ideologies and Fanonian decoloniality continue to promote the anachronistic feeling that the colonial route through which Africa entered modernity was an error and the source of Africa’s woes, in the PostAfrican turn, modernity, no matter the route taken to it, is wholly appropriated as the inescapable horizon for all mankind living in the 21st century. Not only is it that Africans are condemned to be modern if they must grow, but it is the inability or refusal to adapt performatively to the modern, rather than the persistence of coloniality that could be the source of their many discomfitures in globalising modernity. In both Africanism and Fanonism, alienation was understood as forced estrangement from old cultural roots caused by the colonial cultural bomb (Ngugi); in PostAfricanism, alienation is re-inscribed no longer as loss of old native roots but as inability, refusal or unwillingness to fully adapt to the global modern. Symptoms of such refusal/inability range from persistent underdevelopment to terrorism.

During his stay at STIAS and thereafter, Ekpo has worked on a book project tentatively titled *Forget Fanon, remember Senghor: closing anti-colonialism in Africa* of which four of five chapters have been completed and work on the last one is still ongoing. In addition he has been preparing a paper resulting from his STIAS seminar for publication in the *Journal of Post-Colonial Studies*.

SELECTED PROJECT PROFILES continued



Darius Brubeck (Artist-in-residence)



Catherine Brubeck (Visiting scholar, Artist-in-residence)

Jazz life

This project, *It was a Jazz life*, is a personal memoir that became, according to its authors, a more analytical and expansive work largely due to the support and recognition at and by STIAS. It is a book in progress replete with personal incident and an appreciation of South African jazz history and culture, musicians and the music played. Darius and Catherine Brubeck worked together for almost a quarter of a century, promoting jazz and jazz education from 1983 to 2006. One of the pillars of the University of KwaZulu-Natal's international status was the establishment in 1984 of the first jazz studies degree programme in Africa, followed in 1989 by the creation of the Centre for Jazz and Popular Music (CJPM) on campus, under Darius Brubeck's directorship. This popular performance

venue and bar enjoyed a unique international reputation. The Brubecks were deeply involved in the complicated cultural politics of the eighties and nineties and consequent institutional transformation. Their book contains sketches of remarkable people (many now deceased), who made music throughout these turbulent and challenging times and tells their own story. It describes many sad, humorous and dramatic events. As a freelance project manager at CJPM, Catherine Brubeck organised and managed numerous bands, concerts and tours and this book is a narrative about this era from the inside-outsider perspective of the jazz life, its fullness and its limitations under apartheid and thereafter.

Jazz affected change in South Africa, as it has done in many places throughout its history. Establishing tertiary education in jazz at the then University of Natal broke many rules and was a life-changing event for the University and the community at large. It was also formative in what became the University of KwaZulu-Natal. This STIAS project will tell that story. Many people have been interviewed for the book to build the narrative on more than just the Brubecks' own perspective.

During their residency in the first 2017 semester, the Brubecks focused mostly on certain people, events and music that had a significant impact on jazz and jazz education in South Africa. They collaborated with Lizabé Lambrechts on setting up the Brubeck Archive for the Africa Open Institute. This archive currently covers jazz and jazz education in South Africa between 1983 and 2006.

Their STIAS seminar combined personal anecdote with a preliminary look at what motivated the then University of Natal to start the first jazz degree course in Africa in 1983, create CJPM five years later, and officially admit non-matriculants to diploma and subsequently degree programmes.

In August 2017, Darius Brubeck presented a paper based on work done at STIAS, at the prestigious *Fifth International Rhythm Changes* conference at the Conservatory of Amsterdam. Before continuing with a further STIAS residence in the second semester of 2017, Catherine and Darius Brubeck co-authored a presentation at the *Language in the Media* conference at the University of the Western Cape with Colleen Cotter (Queen Mary College in London).

During 2018, Catherine and Darius Brubeck will continue their work in the hope that they will be able to edit their final draft on their return to STIAS in 2019.

Sundhya Pahuja (University of Melbourne)

Boundaries and legal authority in a global context: rivalries between states and global corporations in international law

The modern corporation is often understood as a child of the state, which has grown too powerful to control. But arguably, it is necessary to go back further than the advent of the modern corporation, to see that the corporation emerged in the early modern period not as a child of the state, but rather as a rival form of both associational life and public authority. "Once we think about the corporation in those terms, we can pay attention to that rivalry at different moments and in different forms of relation between company, state, and other actors," says Pahuja. Understanding the historical relationship between company and state as one of rivalry between corporate forms of association and authority – both to speak the law as well as to decide what "law" is – is crucial for understanding the current relationship between modern corporation and state in a politically meaningful way. Or, as the STIAS research theme on *Boundaries and legal authority in a global context* puts it, to consider "what [...] appropriate and effective institutional mechanisms by which such authority can be contested" might be.

A close-up portrait of Sundhya Pahuja, a woman with short, dark, wavy hair, smiling warmly at the camera. She is wearing a black top under a light-colored, possibly white, cardigan. The background is a blurred indoor setting with warm tones.

Sundhya Pahuja

The research Pahuja conducted at STIAS centred on the intersection between two questions posed explicitly by the thematic research group, and her research on the history of the company in international law, a large project which traces the changing place of the company in international law from the Verenigde Oostindische Compagnie and East India Company to the UN Global Compact, and the turn to business and human rights.

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Whilst at STIAS, Pahuja conducted work on two different refereed publications, one accepted for publication by Oxford University Press, and another, well advanced, for the *Leiden Journal of International Law*. Both publications are elements of a wider and longer study on the relationship between corporations, states and international law. The two pieces she focused on at STIAS together produce an historically contextualised account of the UN Global Compact and the associated turn to business and human rights, the now dominant way of approaching the relationship between multinational corporations and international institutions, as well as the emergence of international investment law, at roughly the same moment. To produce this account, Pahuja traced the attempt in 1974, by the so-called Group of 77 developing states, to assert international legal control over trans- or multi-national corporations through the establishment of the Commission on Transnational Corporations (the OUP book chapter), and described the split and transformation of that attempt after the

end of the Cold War into international investment law and the UN Global Compact in the *Leiden Journal of International Law* article. Significant progress toward a third article relating to the bigger project (on public debt and the Peace of Utrecht) was also made. She gave a STIAS seminar on the UN Commission on Transnational Corporations initiative and its transformation, and another seminar on the public debt research to the Legal Authority Research Group (led by Hans Lindahl). According to Pahuja both seminars were, in different ways, very helpful in clarifying the nature and purpose of the research. The research group seminar also involved visiting scholars from the University of the Western Cape and Stellenbosch University, as well as group members from Helsinki and Leiden.

Pahuja found the experience of being at STIAS immensely rewarding. This was due in no small measure to the way the programme is constructed, and its several unusual, if not unique, features. The first is the composition of the fellows, which is exceptionally interdisciplinary and mixes humanities, social sciences, artists and natural sciences in equal parts. The second is the expectation that the fellows will attend the institute every day and are provided with lunch during a fixed time as a focal point for discussion. The third is the requirement that every fellow give a seminar, and that people are expected to attend. "These three factors together catalyse a much deeper, more sustained conversation between a rich mixture of thinkers in a way I have never experienced before. These structural features of the programme are enhanced by the conviviality promoted by the small reception convened after each seminar, and the way this encourages fellows and their families also to eat together afterward. The intimacy of the town also produces a residential feel, again contributing to intellectual exchange and the chance to build meaningful collaborations, rather than produce superficial network building."



Carlos Ibanez (Karolinska Institute)

Dementia: a growing problem in South Africa and the world

Prosperous people live longer and old age carries a high risk of dementia, a condition that is so far neither preventable nor curable. The trend of incidence of Alzheimer's disease (AD), the most common form of dementia, is increasing all over the world. When AD is consolidated with other dementias with similar clinical profiles, it covers an estimated 35,6 million people, around 0,5 percent of the global population. AD is widely thought to be driven by amyloid pathology, in which peptides of amyloid- β are generated in the brain and clump together into plaques. Another form of dementia with similar symptoms, generally known as vascular dementia, is driven by vascular pathology. Vascular dementia is one of the most common causes of dementia after AD, causing around 20 to 30 percent of cases. However, unlike AD, the underlying mechanisms are less clear, and there are no licensed treatments for vascular dementia.

Several studies performed in Asian populations have found a high prevalence of cerebrovascular disease in cognitive impaired and AD patients. These and other results suggest that the prevalence of different types of dementias may be region-specific and thus different in different world populations. Few studies to determine the prevalence of dementia have been conducted in sub-Saharan Africa. A systematic review of studies reporting the prevalence of dementia and

cognitive impairment among older black Africans in sub-Saharan Africa countries was conducted in 2013 and found prevalences varied widely between countries. The predominant factors associated with a higher prevalence of dementia were older age and female sex, and similar associations have been reported globally. There is a paucity of published research on the prevalence of dementia in South Africa.

During the time Ibanez was at STIAS, he concentrated mainly on developing several projects. He did preparatory research and wrote two articles on their current investigations of the biology of the growth factors in the nervous system, with relevance for developmental mechanisms and neurodegeneration. The first article has been accepted for publication in *BiO*, the second is under revision. The first article describes studies that resolve how the GFR α 1 receptor can contribute to development of a subclass of neurons in the olfactory bulb without actually being expressed by those neurons. They found that progenitors of those neurons, early in development, express the receptor and showed, using different lines of transgenic mice, how loss of the receptor in those specific neurons can cause developmental abnormalities in the olfactory system.

The second article describes studies that elucidated a novel signalling mechanism in the p75NTR death receptor by which cell survival and cell death pathways are regulated. Also using special lines of transgenic mice and in vitro cell culture assays, they found that a novel competition between two intracellular proteins for binding to the p75NTR receptor, gates the balance between neuronal death and survival. The cerebellum of these mutant mice lacks a certain proportion of its neurons and, as a consequence, abnormal motor behaviours appear in those mice.

Ibanez also wrote in whole or part two grant proposals during his stay at STIAS. The first was a large

collaborative grant for the National Medical Research Council of Singapore on the topic of vascular dementia. Here he contributed a section on studies of the brain vasculature in mutant mice lacking specific signalling pathways in selected cells of the brain vasculature, namely endothelial cells, smooth muscle cells and pericytes. This proposal is part of a large collaboration that includes several scientists as well as clinicians. The second proposal describes a new approach to drug discovery based on the use of receptor transmembrane domains for small molecule screening. Ibanez's group have exciting preliminary results that support the feasibility of this approach. They have proposed receptor targets important for Alzheimer's dementia, melanoma cancers and obesity. The outcome of both proposals is not yet known.

Ibanez says: "It was inspiring for our work on dementia to have interacted with Marc Combrinck from the University of Cape Town. His studies of dementia in rural populations of South Africa are important for our understanding of the heterogeneity in this disease and its genetic as well as environmental causes. Combrinck agreed to exchange results for a future study comparing dementia in Singapore and in South Africa. A better understanding of the underlying causes for regional variations in dementia is critical. Combrinck is undertaking Magnetic Resonance Imaging studies and invited me to share the results for comparative studies with our own cohorts from Singapore. These studies are planned for 2019 and will be presented later to STIAS as a continuation project to develop in the spring of that year."



Jacob Dlamini (Princeton University)

Dying to forget: history, memory and the intergenerational transfer of trauma in South Africa

Dlamini's project is about the discipline of history and the intergenerational transfer of trauma in South Africa. How do individuals who never personally experienced the trauma of apartheid rule nonetheless claim to suffer from trauma as a result of apartheid? How are historians to make sense of the anger of the born-free generation – those born after the formal collapse of apartheid in 1994 – towards their parents' generation, as well as the born-frees' rejection of the political settlement that brought about the new South Africa? Is this anger an expression of a historical trauma? If so, how is the trauma of the past transmitted across generations? Drawing on insights from a range of disciplines, this project seeks to answer the above questions in ways that might help to think differently about attempts to forge a new South Africa.

The project draws on a range of historical sources. The aim is to understand how ordinary South Africans remember histories of violence and how their memories of this violence are shared across generations. How, in short, do these memories become history? What does it mean to remember your parents' pain of humiliation when you yourself never experienced that humiliation? The project is motivated in part by an attempt to understand how South Africa's past has shaped the way the discipline of history has developed in South Africa.

When Dlamini arrived at STIAS, his plan was to work on three book projects. The first was a new book project about history and the intergenerational transfer of trauma, the second a book about the social history of the Kruger National Park, and the third a research project about the history of police photography in South Africa. Progress was made on all three projects. The Kruger National Park project is almost completed. The police photography study is ongoing, and the trauma project has taken shape and will be underway in the next twelve months. The latter will draw on the guidance received and questions asked during Dlamini's STIAS seminar on this project.

Dlamini says: "I am also happy to report that, through STIAS's generous and legendary lunches, I was able to invite a number of guests to help me with all my projects. My stay at STIAS was a truly rewarding experience and some of the conversations with my fellow-fellows will stay with me for a long time. I am a better thinker and scholar for all the conversations I had at STIAS."



Berhanu Abegaz (African Academy of Sciences)

Retrospective and prospective reflections on higher education in Africa

Abegaz came to STIAS to complete a background paper on the status of higher education, science, technology and innovation in Africa for the technical expert meeting and heads of states summit for the ten

Champions on Education, Science and Technology which was held during the last week of October in Malawi. His task had been to summarise the current status of science, technology and innovation with particular emphasis on the higher education sector in Africa, and to make key recommendations to African governments and policymakers on actions needed to strengthen higher education, science and technology in Africa.

The paper begins with a historical background attempting to provide an African-wide perspective unifying the often-fragmented contributions of North Africa, South Africa and the rest of the continent. It reveals that Africa's experiment in higher education may be traced with the founding of two madrassas: Al Quaraouiyine in Morocco in 859 AD and of Al-Azhar in Egypt in 970-975 AD. In West Africa, Fourah Bay College (known since 1966 as the University of Sierra Leone) also started as a missionary school in 1827. All three institutions have transformed over time to become degree-granting universities. By the onset of the European scramble for Africa (1885), Africa had four more tertiary institutions of learning in South Africa, Libya and Liberia, bringing the total to seven universities. In 1960, Africa had 35 universities in 22 countries. More than half (19) of the universities were established under colonial administration of Britain, France, Portugal and Belgium.

The 1960s occupy a prominent period in Africa's effort to emerge from colonial rule, and indeed 18 countries gained independence in this period. On the eve of this period Africa had only 27 universities. The euphoria associated with the wave of independence of many African countries led to the ruling that many of the universities created under colonial administration were faulty in terms of serving the needs of the continent, and generated dreams of establishing an African University – a developmental university that would be run and managed by

Africans and with unique abilities to respond to the needs and aspirations of the African peoples and in doing so propel the continent to glory. This dream was shattered with the wave of military coups that occurred in the 70s and 80s and the economic and social problems that ensued. The nineties brought new hopes and aspirations as many African countries experienced better economic performances. At the same time higher education became a globally tradeable service with the coming into effect of GATS (The General Agreement on Trade in Services).

The number of universities has now grown from less than 40 in 1960 to over 1 500 with much of this unparalleled growth taking place during the last two decades. Even with these massive increases, Africa remains a continent with one of the lowest enrolment rates (6%) in higher education compared to the world average of 26%. The African Union has been leading the continental effort to shape the conceptual role of higher education with no remarkable success.

Besides those of the national governments and international partners, there have been many regional and sub-regional initiatives over several decades concerned with different aspects of higher education. These initiatives have largely focused on three areas:

1. coordination and policy undertaken by pan-African organisations like the African Union, the Association of African Universities, The Association for the Development of Education in Africa and others;
2. creating and strengthening institutional capacity in the sciences and applied sciences such as those of the African Union's pan-African University Project; the World Bank's Africa centers of excellence project, and the African University of Science and Technology, RUFORUM's (Regional Universities Forum for Capacity Building in Agriculture) efforts on higher education, the African Virtual University and others;

3. Building human and institutional capacity in specific thematic areas conducted by networks and associations such as the Partnership for African Social and Governance Research (PASGR), African Economic Research Consortium (AERC), African Institute for Mathematical Sciences (AIMS), Regional Initiative for Science and Engineering (RISE), Natural Products Research Network for Eastern and Central Africa (NAPRECA), Network for Analytical and Bioassay Services in Africa (NABSA), African Regional Postgraduate Programme in Insect Sciences (ARPPIS), the Southern and Eastern Africa Network of Analytical Chemists (SEANAC), and others.

Despite the various initiatives listed above and others, African higher education has faced, and continues to face many challenges. The current landscape may be described as follows:

- the sector has undergone huge expansion without the concomitant injection of human and financial resources
- quality has been diluted by a lack of investments, assurance and compliance mechanisms
- the declining quality has made institutions unattractive to the young and bright minds who wish to go to the best schools for higher degrees
- higher educational institutions are having difficulty to manage the shifting demands of the developmental needs of the social and economic sectors they serve, with the result that many of their graduates are often unemployable in countries that are simultaneously experiencing low productivity due to the lack of skilled workers
- the scarcities of reasonable research infrastructure, access to relevant data, and poor remunerations have hindered efforts to retain high quality staff as well as attract those in the diaspora to return

Abegaz recognises that making key recommendations of continental dimensions to strengthen the higher

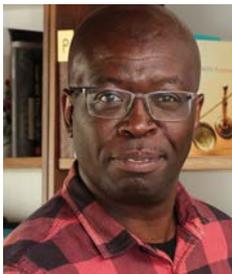
education sector is no easy task. Comparisons of Africa with small nations like Singapore, Taiwan and Korea are simply not valid although some lessons can be learned from their experiences. Abegaz contends that the realisation that the scale of operations in Africa is unlike any seen hitherto and must trigger, on the one hand, a sense of pioneering (or despair!), while on the other should make us understand the need for a deep reflection on the issues and rise to the challenge of generating solutions from within. The challenges are real, but so are the opportunities. “We are in a period of fast global change with technological tools, untapped resources and possibilities and a huge youth population that expects and demands quality education to be empowered to contribute to Africa’s and global future,” says Abegaz. There is now a common feeling among the international community to shift the centre of gravity for agenda setting to Africa. World leaders have committed themselves to the achievement of the Sustainable Development Goals. African leaders have also envisioned “the Africa we want” through Agenda 2063. These commitments and aspirations can only be met through a knowledge-based economy with higher education providing the required large and well-educated workforce.

Abegaz’s paper lists eight recommendations. The first is intended to create a lean structure for communication not only among the higher education institutions but also the various stakeholders. The second is about governance and good management; if universities are to produce the right kind of graduates for the job market and some to serve as the centre for inclusive and sustainable development, then there has to be proper governance and good management. The third recommendation is a critical one to get out of the quandary that higher education is in; it is advising the Committee of Ten to call for a decade of quality improvement in higher education in Africa. The fourth recommendation is advocating the need for differentiation of universities

and urges for the creation/identification of so-called flagship universities in every country. The fifth recommendation is about postdoctoral programmes being the backbone of the best universities and as such a career path has to be created. The sixth recommendation is to increase the participation of the private sector including African philanthropists. The seventh and eighth recommendations are about mainstreaming gender, and inspiring and stimulating African youth and early-career professionals, respectively.

The paper concludes saying that Africa’s experiences in higher education are rather unique and there is a need to engage in a deep reflection to develop appropriate leadership by the Committee of Ten African state presidents who wish to champion higher education, science, technology and innovation for the continent and, in doing so, develop long-term views that define Africa’s future universities. Africa’s desire to embrace knowledge economies and to empower its citizens for a global world cannot ignore the need to have higher education and research generating leadership to derive the full benefits of its wealth and resources. African nations must have universities that generate cutting-edge knowledge to sustainably generate enough hydro, nuclear, solar, and wind resources so as to meet the huge energy needs of the continent. There must be differentiation and specialisation to promote cooperation and collaboration.

Abegaz succeeded in producing a 30-page final draft of his paper at STIAS. The paper was presented at the above meeting in Malawi entitled *The challenges and opportunities of higher education for Africa’s sustainable development*.



Fred Khumalo (Artist-in-residence)

She has arrived

Khumalo came to STIAS to work on a contemporary novel of dislocation that seeks to explore and expose the rise of xenophobia in South Africa. This it will do through the story of Fikile Gumede, an American-born biracial teenage girl – her mother is a white American and her father a black South African – who has to go and finish her schooling in her father’s country after her father dies in a car accident, and her mother breaks down and has to be hospitalised.

The post-apartheid South Africa that Fikile arrives at is a complicated country. And it is this post-apartheid complexity that the writer seeks to expose and interrogate in this novel.

When Nelson Mandela became the first president of post-apartheid South Africa in 1994, he engendered a new philosophy, a new spirit, a new nationalism which sought to locate his country at the crossroads of a cosmopolitanism sweeping hitherto insular and closed societies. With his passing away, there was a remarkable and immediate retrogression: tribalism, racism and xenophobia rose to the surface.

The book seeks to explore a process of synthesis between two aspects of the novel which have long consorted and contested with each other: between “on the one hand, the novel’s propensity toward realism, social documentation and interrelation with historical

events and movements, and on the other...its propensity toward form, fictionality and reflexive self-examination”.

Khumalo says comments received after his STIAS seminar helped him to resolve a number of issues about his project – including the title. His original title had been *Devil with blue eyes*, but having listened to his story, co-fellow Stephen Brown suggested the new title – *She has arrived*, inspired by the main character’s African name, Fikile. While the new title is a literal translation of the name Fikile, it also sums up the theme of the book – an American-born child arriving in a country where her late father was born; a country currently torn asunder by a new wave of racist and xenophobic incidents. Khumalo arrived at STIAS when he was a third into the book and left STIAS with a book that was roughly two-thirds complete. The book is currently nearing completion.



Onur Güntürkün (Ruhr-University Bochum)

The functional structure of brain asymmetries: a unified theory

For his visit to STIAS, Güntürkün planned to develop a unified theory of functional brain asymmetries. Although this aim was certainly too ambitious, he did however achieve a good understanding of at least two main factors of lateralised brains: first, the evolutionary advantage of functional asymmetries, and second, the ontogenetic conditions of asymmetry.

Güntürkün first outlines what functional brain asymmetries are and why they matter.

“What are functional brain asymmetries? I’m writing this report to a good extent with my left hemisphere. This hemisphere harbors most syntactic rules of English, including those of orthography (American English orthography, regrettably for you guys). My left hemisphere also commands most abstract words. Only concrete words (describing objects that one can see, hear or touch) are memorized in both hemispheres. I’m writing this text on a keyboard with both hands. When handwriting, I exclusively use my right hand (left hemisphere). When orienting in space I mostly use areas of my right hemispheres. This half brain also organizes the inner feelings as well as the facial expressions of negative emotions like sadness or disgust. As a consequence, these emotions are stronger expressed on the contralateral left part of my face. This is due to the simple fact that muscles are always under control of the contralateral hemisphere.”

The above are just few examples of functional brain asymmetries. They play an important role in almost all cognitive functions. “Despite this tremendous relevance, our understanding of the evolutionary and neurobiological fundamentals of lateralization is just in its infancy,” says Güntürkün. In the last decade he tried to integrate his research on bird, dolphin and human asymmetries such that overlapping phenomena were studied with diverse neuroscientific methods from neuron to behaviour. To develop an overarching theory, he first had to come up with an explanation why most animals have some form of functional brain asymmetry. If this is such a widespread finding, it should provide some evolutionary advantage says Güntürkün.

Güntürkün wrote a review on the ontogeny of functional asymmetries and wrote parts of a textbook on the same topic. In both, he reviewed a vast literature on functional asymmetries in vertebrates, to then make the point that asymmetries are widespread throughout all clades; are possibly phylogenetically very old; do not have a common origin but have

developed or have disappeared in diverse branches of life; cannot be explained by phylogenetic relations but rather seem to represent local ecological adaptations that were shaped by natural selection. Thus, asymmetries pay. This overview gave him and his postdoctoral fellow, Sebastian Ocklenburg, the opportunity to identify three factors that could explain what the evolutionary advantage of functional left-right differences of the brain are:

- First, asymmetry selectively increases perceptual or motor learning effects in one hemisphere. For example, increased perceptual training of one eye results in higher degrees of object recognition ability with this side. The situation is similar for the motor system, for example in primates where some tasks are executed by only one hand or leg.
- Second, increased learning with one perceptual or motor system decreases reaction times, resulting in a time advantage of the dominant side.
- Third, parallel and complementary processing during task execution is a further relevant advantage. When lateralised and non-lateralised animals are tested under time pressure, lateralised individuals can conduct multitasking experiments more efficiently and in parallel. Thus, hemispheric specialisation seems to increase parallel processing by enabling separate processing of complementary information into the two hemispheres.

To understand neural lateralisation, it is essential to also study its ontogeny. Such studies have been undertaken in Güntürkün's laboratory for almost three decades. During most of this time, the most widely accepted form of explanation were different variants of single gene explanations. Güntürkün never had believed in them, since his own studies in pigeons revealed a tight interaction of different lateralised phenotypes along with epigenetic effects. Several studies that helped to shift the general scientific opinion towards a model that foresees multiple, small and additive genetic factors plus various epigenetic effects were published in the

last years (a good part also from his laboratory). During his stay at STIAS he co-wrote four publications that study this question in great detail. Overall, these studies aim to advance the idea that epigenetic regulation might be the mediating mechanism between environment and genotype. Recent findings on molecular epigenetic mechanisms indicate that particular asymmetries in DNA methylation might affect asymmetric gene expression in the central nervous system that in turn mediates, for example, handedness. Güntürkün proposes that an integration of genes and environment is essential to fully comprehend the ontogenesis of handedness and other hemispheric asymmetries.

The critical point hereby is to identify both the genetic and the epigenetic factors. In studies that reach from embryonic and adult humans to migrating robins, Güntürkün could identify several of these factors.

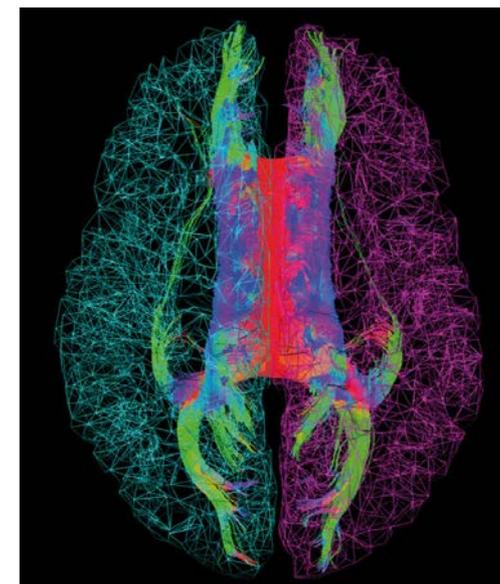
But how is asymmetry measured? Data are as good as the measurement is, says Güntürkün. A core point in all studies on brain asymmetries is the speed of communication between the two differently specialised hemispheres. A classic method to measure this speed is the Poffenberger paradigm. In this task, a visual flash is presented in either the left or the right visual half field. Participants have to react by pressing a button with either the ipsilateral or the contralateral hand. Trials in which stimulus and hand are on the same side are called "uncrossed", whereas trials in which stimulus and reacting hand are on opposite sides are called "crossed". The reason for this labelling is because in the first case, perceptual information stays within the same hemisphere. In the latter case the information has to cross the fibre bundle that connects the two half brains. Thus, in this case both hemispheres are involved in the transduction of stimulus perception to motor output. A comparison between the reaction times of uncrossed and crossed conditions shows that uncrossed trials usually produce faster reaction times compared to the crossed condition. Subtracting

the reaction times in the uncrossed condition from those in the crossed condition results in an estimate of interhemispheric transfer time.

Unfortunately, the behavioural Poffenberger paradigm is not very reliable. In Güntürkün's group they therefore developed a combined behavioural and an EEG-based version of the Poffenberger paradigm and compared them in a sample of healthy subjects. The results show high reliability for the EEG version of the paradigm. In contrast, reliability measures for the behavioural Poffenberger paradigm were low. Hence, their results clearly indicate that electrophysiological measures of inter-hemispheric transfer should be used for neurocognitive measures. This paper was also co-written by Güntürkün during his stay at STIAS.

Güntürkün arrived at STIAS with four further half-written manuscripts or manuscript ideas. He says: "In the serenity of STIAS I could indeed finish or contribute to finish all these four different papers."

Image based on a magnetic resonance tomography technique called DTI showing the subtle asymmetries in the projections between the hemispheres of the brain (Image: Erhan Genc)



Yvonne Adhiambo Owuor (Artist-in-residence)

“Hiraeth” (a novel in progress)

Owuor’s proposed project for her time at STIAS was to begin work on her third novel, with the working title *Hiraeth*. She spent her initial days searching for the core of the story and found it while on a train ride into Cape Town, inspired by the landscape that was, at that time aching for water. Her presentation on the process of finding the spine of a story benefited from the responses of her colleagues, and which responses gave further form, direction and focus to the evolution of the text. By the end of her STIAS session, she had developed five chapters and confidence in the premise of a story in which a shy, haunted cricket scientist (character career choice inspired by some of her impressive STIAS cohort) and his wild motorcycling fanatic son, flee each other in the process of their unrequited grief over a woman’s death. After and through an odyssey into the Nairobi’s depths and margins, the man learns to make peace with the wounds of existence, and can re-emerge with the strength to reclaim his son.

The writing journey undertaken at STIAS allowed Owuor the freedom to condense the roles she had allotted myriad characters into the lives of the two key protagonists. The opportunity to engage with other South Africa-based scholars on the idea of Africa and its future, and all the questions surrounding its present and its discontents, merely entrenched Owuor’s commitment to evolving this story. Owuor is also working with this story as a process to continue her exploration of the power that an unexamined past wields over African presents and futures. The role of the father is to journey, Dante’s inferno style, into a purgatory and hell represented by the Nairobi cityscape, while his son, representing a new generation of African youth, flees the present towards a future he imagines he can command into being.

Since STIAS, although caught up in the whirlwind of promoting her previous book, *Dust*, Owuor intends to produce the full manuscript ready for a spring 2019 launch.



Desta Mebratu (Lund University)

Africa’s leapfrogging opportunity to sustainability

The unprecedented global economic growth that was witnessed since the middle of the 20th century resulted in major improvement in human wellbeing over the second half of this century. But, it also resulted in a significant rise of environmental pollution, natural resource degradation and widening income inequality both within and between countries. The challenges that are faced by the global community continued to grow over the last couple of decades, leading to unprecedented confluence of economic, environmental and social challenges. In the case of Africa, economies of African countries showed significant turnaround towards the turn of the 21st century registering positive economic growth after decades of decline and stagnation. While Africa is recognised as a continent that is on the rise, it is also faced with enormous environmental and social challenges that are posing major threats to the livelihood of its population.

Studies carried out during an earlier STIAS fellowship have shown that, even if Africa is equally, if not more, challenged by the emerging global drivers/pressures,

it has a unique opportunity of leapfrogging to a more inclusive, sustainable and resource efficient society that eradicates poverty and ensures an improved wellbeing to its population. The relatively low lock-in inertia associated with its early stage of infrastructure development combined with the availability of resource-efficient and low-carbon technologies are key factors that give the highest leapfrogging potential to the region. Realising this potential is, however, dependent mainly on Africa’s ability to plan and develop its socio-economic and socio-ecological infrastructure on a more sustainable basis. During his fellowship at STIAS, Mebratu reviewed key lessons and experiences of existing international and regional indicators related to sustainability and sustainable development. The major infrastructural elements that would determine Africa’s leapfrogging possibilities to sustainability were identified.

Subsequent to the conclusion of this fellowship, Mebratu contributed to an opening plenary at the Wellbeing Economy Festival in Pretoria in November 2017, and gave an interview to the popular academic journal *Solutions* on a new vision of Africa’s sustainable development. In addition, a short article on Africa’s leapfrogging opportunities is due to be published in *Solutions* in 2018. Furthermore, a proposal for a book on *Retooling development pathways for sustainability transition in Africa*, is being developed. The book covers the key strategic considerations that African policymakers and planners should make in developing their socio-economic infrastructure for an inclusive, low-carbon and resource-efficient society. Highly qualified experts from across the region and discipline have been identified to work on the individual chapters. STIAS will support the production of the book, which is planned to be ready for publication by the end of 2019.



Yvonne Adhiambo Owuor

“The writing journey undertaken at STIAS allowed me the freedom to condense the roles I had allotted myriad characters into the lives of the two key protagonists. The opportunity to engage with other South Africa-based scholars on the idea of Africa and its future, and all the questions surrounding its present and its discontents, merely entrenched my commitment to evolving this story.”



During his fellowship Smith enjoyed to climb the nearest mountain which rises more than 1 000 metres above Stellenbosch. Leaving at five in the morning he could experience being alone – him and the mountain – with its flowers and wildlife.



Edvard Smith (Karolinska Institute)

New therapies for cancer and genetic disease

During recent years there has been a profound advancement in several therapeutic arenas.

Smith is interested in two major therapeutic areas. One of them relates to enzymes involved in controlling intracellular signalling. Many of these enzymes are kinases; there are more than 500 kinases in humans. Their job is to transfer phosphate groups onto their substrates. This reversible process controls many of the decisions that cells continuously make. Smith's focus is on enzymes phosphorylating the amino acid tyrosine, and in particular one of them named Bruton's tyrosine kinase, or BTK. His group identified the corresponding gene more than 20 years ago and over the last ten years inhibitors for this kinase have

demonstrated highly potent treatment effects on leukaemias. The field has exploded, with more than 1 200 publications related only to the first clinical inhibitor, over the last eight years. Thousands of patients have been treated with excellent results. The complexity of this field stems from the fact that such drugs can inhibit an enzyme in different ways; inhibitors can be more or less selective for a particular kinase and the ensuing effect on cells differ. One of Smith's aims was to make comparisons between different inhibitors in order to better understand their pros and cons. This work is still ongoing, but the foundation for the work was laid at STIAS.

Smith's other project relates to synthetic oligonucleotides. These are building blocks of nucleic acids, the genetic material in cells, which have been chemically altered. Through this process the synthetic oligonucleotides get equipped with new functions. They become resistant to degradation, are more readily taken up into cells, and can exert new functions. The beauty with these compounds as drugs is the fact that they can be designed in a much simpler way than regular pharmaceuticals. Knowledge about the human genome enables a much more directed development. The challenge is that conventional drugs are small and easy to deliver, whereas the synthetic oligonucleotides are much larger, making delivery a major issue, but recent developments have paved the way for pharmaceutical advancements. This analysis has resulted in a manuscript, which will be published in the *Annual Review of Pharmacology and Toxicology*.

Smith says: "The visit to STIAS gave me a chance to concentrate on the many new developments that have taken place. In my regular daily work at my home institute there is essentially never time for a continuous, long-term analysis. Interruptions by all kinds of other activities often change your focus, with major consequences. At STIAS it is however possible to be in control of time. Apart from giving

me time to concentrate, the STIAS environment was highly stimulating. The other fellows provided me with novel perspectives, which were useful in many ways. It is often when exposed to people with other backgrounds than your own that new insights are gained and this was certainly true for my visit. The concentrated mixture of scientific backgrounds provided at STIAS is rather unique and something that I am not experiencing in my home university."



Nelson Kasfir (Dartmouth College)

How rebels govern civilians: resources, objectives and institutional design – cases from Uganda

Although not well-known, during most civil wars throughout the world rebels create governments for civilians living in territories they control. These governments often include political, administrative or judicial structures that resemble those in conventional states. Some rebel groups form elaborate political and administrative structures, while others create only minimal forms. Some organise dictatorships, others introduce democratic arrangements. Rebel governance, then, is a new field of study exploring how insurgents manage civilians and why they organise their governments differently from each other.

In Kasfir's book project, he compares the unexpectedly different forms of governance introduced by two Ugandan rebel groups, the National Resistance Army (NRA) and the Rwenzururu Kingdom Government (RKG).

The NRA had considerably more resources and better educated leaders than the RKG that could have led the NRA to introduce more complex forms of governance. Surprisingly however, the NRA provided civilians with relatively limited political arrangements, while the RKG insisted on far more complex governmental structures. Kasfir is developing a different answer to this unanticipated behaviour based on the dissimilar challenges confronting these two groups. The RKG wanted to secede from Uganda, while the NRA intended to take it over. To make its claim to establish a new country credible to its prospective citizens, foreign states and donors, the RKG had to establish a full range of new government structures and seek international recognition. The NRA needed only to insist it would run Uganda better than the government it rebelled against without having to divert resources from fighting to construct many administrative structures.

During his fellowship at STIAS and since, Kasfir has read widely in the state-building literature for insights on the conditions leading to the production of “thick” as opposed to “thin” political and administrative arrangements. This literature tends to stress institutions at the expense of examining civilian responses to state-building initiatives. However, other authors are now correcting that view by looking more carefully at how civilian agency shapes the articulation of early state agencies. To develop his application of this latter idea to rebel governance, Kasfir has written an essay on legitimacy and rebel governance since leaving STIAS that will become the foreword to an edited collection to be published in 2018. While at STIAS, he also wrote drafts of two chapters specifying the precise growth of governance during each rebellion.

To test his argument more broadly, Kasfir is examining other secessionist and take-over insurgencies also paired to the same country. The argument seems to apply well in secessionist cases, but not necessarily in all take-over cases. For example, in Ethiopia, the most

important secessionist group, the Eritrean People's Liberation Front (EPLF), created an impressive array of effective organisations that exceeded what the RKG achieved. However, contrary to Kasfir's hypothesis, the leading take-over group, the Tigray Peoples Liberation Front (TPLF), formed an impressive range of civilian governing structures, probably due to its commitment to Marxism at that time. Kasfir is also working on another paired comparison in Myanmar between the secessionist-minded Karen National Union (KNU) and the take-over-minded Burma communist party (BCP).

Kasfir says: “I was especially fortunate to find STIAS fellows willing to take the time to examine my accounts of governance by those rebel groups about which they had knowledge. Other fellows provided valuable critical suggestions of my ideas in my seminar and over several lunchtime conversations. I found the STIAS environment especially conducive to intellectual engagement at the most critical time in the production of my ideas.”



Dan Brooks (University of Toronto)

Climate change and the emerging disease crisis: an existential threat to technological humanity

The aim of this project was to write a book about climate change and disease. That has been accomplished and the University of Chicago will publish *A perfect storm: climate change, emerging disease, us* in early 2019. The first version of the

manuscript was submitted in June 2017, shortly after Brooks completed his fellowship at STIAS.

In the interim, the framework discussed at length in the book has led to a number of professional opportunities for Brooks. *Trends in Ecology and Evolution* will publish an article based on a workshop held in Tovetorp, Sweden in March 2016 and funded by the Wallenberg Foundation. Work on that manuscript was done at STIAS. Furthermore, Brooks has submitted an invited commentary to the *American Journal of Public Health's* issue commemorating the 1918 Spanish influenza pandemic that will be published in November 2018. Additional publications are in progress.

In terms of public outreach, Brooks has given an invited lecture about this topic at the Hungarian Academy of Science (November 2017) and will address the Congress of the Brazilian Society of Zoologists in March 2018. He has also been asked to partake in the public lecture series of the Institute for Advanced Studies, Koszeg in April 2018; at the Institute of Ecology, Ukraine Academy of Science in May 2018; and in a public symposium on climate change threats to civilisation at the Hungarian Public Service University, also in May 2018.

Finally, Brooks has been a co-organiser and consultant for two workshops aimed at obtaining funding from the European Union for work on proactive approaches to coping with emerging disease, one in Balatonfured, Hungary (Hungarian National Institute of Ecology, October 2017) and one in Pullach, Germany (Parmenides Foundation, to be held in March 2018).

STIAS FELLOWS AND PROJECTS LIST

STIAS fellows

Abegaz, Berhanu

African Academy of Sciences
Retrospective and prospective reflections on higher education in Africa

Akinwumi, Olayemi

Nasarawa State University
Opposition in African politics: the case of Nigeria, Ghana, South Africa and Kenya (The future of democracy theme project)

Attridge, Derek

University of York
World literature, minor languages, and the art of translation: the example of Afrikaans

Attwell, David

University of York
The African resistance movement: a cultural history

Baderoon, Gabeba

Artist-in-residence
Pennsylvania State University
Axis and revolution (a poetry collection)

Berggren, Magnus

Linköping University
On the charge accumulation and ion exchange in PEDOT electrodes

Bogardi, Janos

University of Bonn
Springer handbook of water resources management (Sustainable agro-ecosystems theme project)

Brooks, Daniel

University of Toronto
Climate change and the emerging disease crisis: an existential threat to technological humanity

Brown, Stephen

University of Ottawa
Aid effectiveness and policy coherence for development: donor policies and practices in comparative perspective

Brubeck, Darius

Artist-in-residence
Jazz life

Byass, Peter

Umeå University
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Conley, Daniel

Lund University
Assessing the potential impact of agriculture on the biogeochemistry of a pristine wetland, the Okavango delta (Sustainable agro-ecosystems theme project)

Daar, Abdallah

Permanent visiting fellow
University of Toronto
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Dlamini, Jacob

Princeton University
Dying to forget: history, memory and the intergenerational transfer of trauma in South Africa

Duff, Sarah

University of the Witwatersrand
Sex and sexuality in Africa: a brief history (Being human today theme project)

Du Toit, Louise

Stellenbosch University
Self, autonomy, authority and law: the challenge of “leaky bodies” (Crossing borders theme project)

Ekpo, Denis

University of Port Harcourt
PostAfricanism vs Fanonism (The future of democracy theme project)

Engel, Ulf

Leipzig University
Comparative regionalism: the political economy of regional security organisations (The future of democracy theme project)

Ferguson, Margaret

University of California, Davis
Sealing the female body before marriage: cultural debates about hymeneal signs (Being human today theme project)

Fombad, Charles

University of Pretoria
Constitutionalism in Africa (The future of democracy theme project)

Fuchs, Christopher

University of Massachusetts Boston
Participatory realism

Ganle, John

Iso Lomso fellow
University of Ghana
Disability and reproduction in Africa: a multi-methods investigation to identify, describe and determine the sexual, reproductive and maternal healthcare needs and challenges of women with disability in Ghana (Health in transition theme project)

Gerle, Elisabeth

Lund University
Many modernities – religious freedom in South Africa and Sweden – a brief summary (Being human today theme project)

Goldin, Ian

University of Oxford
Interdisciplinary approaches to meeting long-term challenges

Güntürkün, Onur

Ruhr-University Bochum
The functional structure of brain asymmetries: a unified theory

Hjerm, Mikael

Umeå University
The effects of race (Being human today theme project)

Hope, Christopher

Artist-in-residence
Café de Move-on Blues

Huber, Wolfgang

Humboldt University of Berlin
Faith and fabric (The status of “secular modernity” in an African context) (Being human today theme project)

Ibanez, Carlos

Karolinska Institute
Dementia: a growing problem in South Africa and the world (Health in transition theme project)

Ikram, Salima

American University in Cairo
Controlling landscapes and bodies

Jablonski, Nina

Permanent visiting fellow
Pennsylvania State University
The effects of race (Being human today theme project)

Joas, Hans

Humboldt University of Berlin
Faith and fabric (The status of “secular modernity” in an African context) (Being human today theme project)

Kasfir, Nelson

Dartmouth College
Comparative rebel governance in Uganda: the influence of rebel objectives on rebel government structure – comparing takeover to secession (The future of democracy theme project)

Khumalo, Fred

Artist-in-residence
Devil with blue eyes (a novel)

Kunin, William

University of Leeds
Scaling the drivers and consequences of biodiversity change

Laffan, Michael

Princeton University
Unwilling Umma: histories of exile and Islam across the Indian Ocean

Lafamme, Lucie

Karolinska Institute
Health transition and injury care and prevention (Health in transition theme project)

Lambrechts, Lizabé

Stellenbosch University
The Free Peoples Festivals: exploring cross-border relationships and interactions in the fostering of alternative music communities in South Africa

LeBaron, Michelle

University of British Columbia
The theory and practice of social transformation through the arts (Being human today theme project)

Lindahl, Hans

University of Tilburg
Law and world (Crossing borders theme project)

Macnab, Andrew

University of British Columbia
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Marè, Gerhard

University of KwaZulu-Natal
The effects of race (Being human today theme project)

Mebratu, Desta

Lund University
African leapfrogging index to sustainability (Sustainable agro-ecosystems theme project)

Ndebele, Njabulo

Permanent visiting fellow
University of Cape Town
The effects of race (Being human today theme project)

Neves, Marcelo

University of Brasília
Asymmetric (trans) constitutionalism beyond eurocentrism and post-colonialism (Crossing borders theme project)

Ngoepe, Malebogo

Iso Lomso fellow
University of Cape Town
Comparative computational study of thrombosis in cerebral and abdominal aortic aneurysms

Norris, Shane

University of the Witwatersrand
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Noyes, John

University of Toronto
Global citizenship and the practice of being human. South African visions and the legacy of enlightenment (Being human today theme project)

Nwosu, Maik

University of Denver
Texts/forms and transformations: a poetics of the African imagination

Okeja, Uchenna

Iso Lomso fellow
 Rhodes University
The public sphere in African political thought (The future of democracy theme project)

Olago, Daniel

University of Nairobi
The challenges and options in relation to water security for groundwater-dependent urban settlements located in fragile regions of Kenya (Sustainable agro-ecosystems theme project)

Oni, Tolu

Iso Lomso fellow
 University of Cape Town
Health in all policies: healthy housing policies to address the risk and burden of infectious and non-communicable diseases (Health in transition theme project)

Owuor, Yvonne Adhiambo

Artist-in-residence
Hiraeth (a novel)

Pahuja, Sundhya

University of Melbourne
Jurisdictional rivalries between company and state (Crossing borders theme project)

Phiri, Aretha

Iso Lomso fellow
 Rhodes University
Interrogating blackness, locating "Africanness": call-and-response in the (literary) works of Toni Morrison and Zoë Wicomb, NoViolet Bulawayo, Chimamanda Ngozi Adichie and Taiye Selasi

Pityana, Barney

Thabo Mbeki Foundation
The effects of race (Being human today theme project)

Price, Richard

University of Maryland
Creating a liberal empire: histories and legacies

Pross, Addy

Ben Gurion University
Bridging between the physical and biological worlds

Rehbein, Boike

Humboldt University of Berlin
Symbolic classification (Being human today theme project)

Sampson, Nicole

SUNY Stony Brook
Addressing the need for a rapid diagnostic for childhood tuberculosis (Health in transition theme project)

Schack, Rüdiger

University of London
Participatory realism

Sikora, Richard

University of Bonn
Impact of sustainable intensification of food production on environment and human well-being (Sustainable agro-ecosystems theme project)

Simpson, David

University of California, Davis
States of terror: history, theory, literature

Smith, Edvard

Karolinska Institute
Systematic generation of an update of the ongoing studies on the new BTK inhibitors (Health in transition theme project)

Soudien, Crain

Human Sciences Research Council
The effects of race (Being human today theme project)

Stiglitz, Joseph E.

Columbia University
The revolution of information economics: the past and the future

Stråth, Bo

University of Helsinki
Ubuntu: a meta-norm for the West? (The future of democracy theme project)

Terry, Eugene

TransFarm Africa
Impact of sustainable intensification of food production on environment and human well-being (Sustainable agro-ecosystems theme project)

Therborn, Göran

University of Cambridge
The effects of race (Being human today theme project)

Tuori, Kaarlo

University of Helsinki
Contemporary law: the dialectic of unity and plurality (Crossing borders theme project)

Turner, Scott

SUNY College of Environmental Science and Forestry
Life in the transients

Van den Broeck, Christian

University of Hasselt
Reservoir computing of (African) bird song

Van Doorslaer, Eddy

Erasmus University Rotterdam
Low cost nudges to patients to improve treatment adherence: do they work? (Health in transition theme project)

Van Tongeren, Paul

Radboud University Nijmegen
Nietzsche and the alleged European nature of nihilism

Viljoen, Stella

Stellenbosch University
The aspirational syntax of men's magazines: a South African media history

Vlek, Paul

University of Bonn
Impact of sustainable intensification of food production on environment and human well-being (Sustainable agro-ecosystems theme project)

Wolf, Harald

University of Ulm
Biological contexts of pain perception and suffering in experimental animals

Visiting scholars

Berman, Kim

University of Johannesburg
The theory and practice of social transformation through the arts (Being human today theme project)

Brubeck, Catherine

Artist-in-residence
Jazz life

Cobbinah, Patrick

Iso Lomso scholar
 Kwame Nkrumah University of Science and Technology
3D print a house for development (3D-H-4D): prototyping climate change adaptation in African urban planning

Erasmus, Zimitri

University of the Witwatersrand
The effects of race (Being human today theme project)

Githae, Eunice

Iso Lomso scholar
 Chuka University
Assessment of social-economic impacts of invasive cactus (Opuntia engelmannii) to rural livelihoods and their environment in the drylands of Kenya

Gunner, Göran

Stockholm School of Theology
Many modernities – religious freedom in South Africa and Sweden – a brief summary (Being human today theme project)

Hasselberg, Marie

Karolinska Institute
Health transition and injury care and prevention (Health in transition theme project)

Kimani-Murage, Elizabeth

African Population and Health Research Center (APHRC)
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Magak, Kitche

Maseno University
The theory and practice of social transformation through the arts (Being human today theme project)

Marsh, Kevin

University of Oxford and African Academy of Sciences
The Africa Oxford initiative (AfOx)

Meintjies, Frank

Independent consultant
The theory and practice of social transformation through the arts (Being human today theme project)

Meressa, Beira Hailu

Iso Lomso scholar
 Jimma University
Prevalence of phytoparasitic nematodes and damage levels on vegetable crops in the southwest Ethiopia: an approach towards development of a sustainable nematode management

Singhal, Atul

UCL Institute of Child Health (ICH), London
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Sobngwi, Eugene

University of Yaoundé 1
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

Tchieda, Victor

Iso Lomso scholar
 University of Yaoundé 1
Removal of pollutants from drinking water by clay minerals using metal oxide nanoparticles

Yajnik, Chittaranjan

King Edward Memorial Hospital, Pune
DOHaD and sustainable development goals: moving towards early implementation (Health in transition theme project)

STIAS LECTURES AND SEMINARS

STIAS lecture series

22 February

Richard Price
(University of Maryland)
The psychology of colonial violence

22 March

Onur Güntürkün
(Ruhr-University Bochum)
The parallel evolution of cognition in birds and mammals

19 April

Ian Goldin
(University of Oxford)
Renaissance 2.0: the disruptive changes shaping our world

8 August

Tolu Oni
(University of Cape Town)
Re-conceptualising health in cities: challenges and opportunities

12 September

Gabeba Baderoon
(Pennsylvania State University)
Axis and revolution (a poetry reading)

27 September

(Cosmopolitan Karoo and STIAS public lecture)

Bernie Fanaroff
(former Director of the Square Kilometre Array Project in South Africa)
Science, the Square Kilometre Array telescope and big data: can Africa lead

17 October

Carlos Ibanez
(Karolinska Institute)
Dementia: clinical overview and preclinical research

14 November

Joseph E. Stiglitz
(Columbia University)
The revolution of information economics: the past and the future

STIAS seminars

19 January

Magnus Berggren
Artificial neuronal systems and electronic plants

26 January

Christian van den Broeck
Deep learning: challenges and opportunities

2 February

Hans Joas
Sacralisation and desacralisation: political domination and religious interpretation

9 February

Eddy van Doorslaer
No longer apart but far from equal: health inequality in South Africa in the new millennium

16 February

Wolfgang Huber
Protestantism and economic ethics – an example for the interaction of faith and fabric?

23 February

Bo Stråth
The global(?)value crisis and ubuntu: the search for a global metanorm

2 March

Christopher Hope
Café de Move-on Blues

9 March

John Noyes
Humanity, humanities, African humanism

14 March

Stephen Brown
The aid effectiveness agenda: norms and practices

23 March

Daniel Brooks
Climate change and the emerging disease crisis: an existential threat to technological humanity

28 March

Stella Viljoen
More masculinities in a 1960s South African men's magazine

30 March

Yvonne Owuor
Imagining "Tizita" conjuring worlds, mapping story (or, an overly optimistic rumination on creative process)

6 April

Sundhya Pahuja
The changing place of the corporation in international law: from the UN Commission on Transnational Corporations to "business and human rights"

11 April

Ulf Engel
Comparative regionalism: the political economy of regional security organisations – the African Union

20 April

Daniel Conley
Saving the Okavango Delta: biogeochemistry, ecology and future challenges

25 April

Bill Kunin
Declines in pollinators, wildflowers and pollination services: what we know and what we don't know

4 May

Andy Pross
The logic of life: reconciling Boltzmann and Darwin

9 May

Harald Wolf
Insects, neurobiology, navigation ... where does it lead?

11 May

Sarah Duff
Laqueur in Lagos: thinking about sexuality in early modern Europe and pre-colonial Africa

16 May

Kaarlo Tuori

*Six theses on the dialectic of unity and plurality in postnational law***18 May**

Salima Ikram

*Controlling the landscape and living things: ancient Egyptians' relationship with the animal world***25 May**

Fred Khumalo

*Devil with blue eyes: a novel of dislocation, trauma and mourning***1 June**

Christopher Fuchs

*QBism: from the modern quantum mysteries to early American pragmatism***8 June**

Hans Lindahl

*Authority and the globalisation of inclusion and exclusion***13 July**

Scott Turner

*Evolution as a cognitive phenomenon***20 July**

John Ganle

*Disability and reproduction in Africa: developing the theoretical, methodological and evidence base for inclusive reproductive health care in Ghana***27 July**

Nina Jablonski and EoR group

*What do we wish to change with regard to race, racism and racialism?***3 August**

Nicole Sampson

*Cholesterol metabolic pathways in M. tuberculosis: opportunities for tuberculosis diagnosis and drug discovery***10 August**

Marcelo Neves

*From transconstitutionalism to transdemocracy***17 August**

David Simpson

*Terror-talk and political management***22 August**

Maik Nwosu

*Forms and transformations: a regional poetics of the African imagination***24 August**

Margaret Ferguson

*Myths of hymen***31 August**

Uchenna Okeja

*African arenas of deliberation: justice as embodied humanism***5 September**

Nelson Kasfir

*How rebels govern civilians: resources, objectives and institutional design***7 September**

Jacob Dlamini

*Dying to forget: history, memory and the intergenerational transfer of trauma in South Africa***14 September**

Boike Rehbein

*Social inequality in capitalist societies***21 September**

Daniel Olago

*Constraints and solutions for groundwater development, supply and governance in urban areas in Kenya's sub-humid and ASAL regions***26 September**

Louise du Toit

*Rethinking boundaries, borders and transgressions***28 September**

Michael Laffan

*Who was Tuan Guru?***5 October**

Denis Ekpo

*PostAfricanism versus Fanonism: decolonisation/Africanisation or the re-closing of the African mind?***12 October**

Paul van Tongeren

*Why reading Nietzsche in Africa?***19 October**

Richard Sikora, Eugene Terry and Paul Vlek

*Technologies for sustainable transformation of agriculture in southern Africa***24 October**

Lizabé Lambrechts

*The Free Peoples Concerts: music and (white) resistance in apartheid South Africa***26 October**

Derek Attridge

*On translating works of literature***2 November**

Malebogo Ngoepe

*Computational modelling of thrombosis in aneurysms***9 November**

Darius and Catherine Brubeck

*It was a jazz life: a memoir***16 November**

Abdallah Daar and DOHaD group

*DOHaD translational science: from cell to society***21 November**

David Attwell

*Towards a cultural history of the African Resistance Movement***23 November**

Edvard Smith

*From the search for a disease gene to the development of cancer therapy (part 1)
In response to curiosity at STIAS regarding the Nobel Prize process, brief overview (part 2)***30 November**

Janos Bogardi

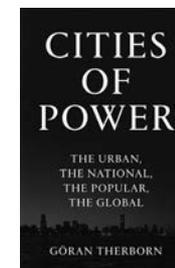
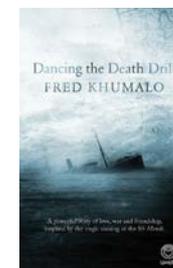
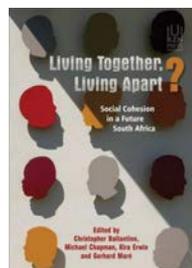
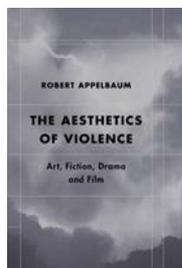
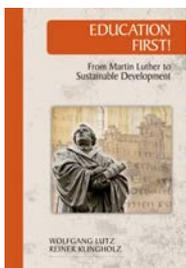
*Look at the world through the "water lens"!***5 December**

Aretha Phiri

Trespassing borders, transgressing boundaries: (re)imagining Africa(ns) in the world

STIAS PUBLICATIONS

www.stias.ac.za/publications/fellow-publications/publications-2017



Books

STIAS series

Dube S

Subjects of modernity. Time-space, disciplines, margins
AFRICAN SUN MeDIA, Stellenbosch (2017)

Lutz W and Klingholz R

Education first! From Martin Luther to sustainable development
AFRICAN SUN MeDIA, Stellenbosch (2017)

Other books

Ågren M

The state as master: gender, state formation and commercialisation in urban Sweden, 1650–1780
Manchester University Press, Manchester (2017)

Appelbaum R

The aesthetics of violence. Art, fiction, drama and film
Rowman & Littlefield International, London and New York (2017)

Ballantine C, Chapman M, Erwin K and Maré G (eds)

Living together, living apart? Social cohesion in a future South Africa
University of KwaZulu-Natal Press, Pietermaritzburg (2017)

Broberg G and Dunér D (eds)

Prepared for both: Lund University and the surrounding world
Lund University Press, Lund (2017)

Carruthers J

National Park science – a century of research in South Africa
Cambridge University Press, Cambridge (2017)

Conradie EM

Redeeming sin? Social diagnostics amid ecological destruction
Lexington Books, Lanham (2017)

Fombad CM (ed)

Constitutional adjudication in Africa
Oxford University Press, Oxford (2017)

Gaulier A and Martin DC

Cape Town harmonies, memory, humour & resilience
African Minds, Cape Town (2016)

Gerle E

Passionate embrace: Luther on love, body, and sensual presence
Cascade Books, Eugene, Oregon (2017)

Khumalo F

Dancing the death drill
Umuzi, Cape Town (2017)

Nyamnjoh FB

Drinking from the cosmic gourd: How Amos Tutuola can change our minds
Langaa RPCIG, Bamenda, Cameroon (2017)

Poli R

Introduction to anticipation studies (vol. 1)
Springer International Publishing, Cham, Switzerland (2017)

Simone A and Pieterse E

New urban worlds: inhabiting dissonant times
Polity, Cambridge (2017)

Therborn G

Cities of power: the urban, the national, the popular, the global
Verso, London and New York (2017)

Turner JS

Purpose and desire
HarperCollins Publishers, New York (2017)

Chapters in books

Ahlsen E

Pragmatics and neurolinguistics. In A Barron, Y Gu and G Steen (eds) *Routledge Handbook of Pragmatics* 433–446. Routledge, Abingdon and New York (2017)

Bossuyt M

Individual communicatio under Article 14 of the ICERD. In A Pedone (ed) *Réciprocité et Universalité: Sources et Régimes du droit international des droits de l'homme (En l'honneur du Professeur Emmanuel Decaux)* 1023–1038. Paris

Bossuyt M

The Constitutional Court of South Africa and affirmative action. In S Dewulf (ed) *la [CVDW]. Liber Amicorum Chris Van den Wyngaert* 37–54. Maklu, Antwerp (2017)

Louie AH

Mathematical foundations of anticipatory systems. In R Poli (ed) *Handbook of anticipation*. Springer, Cham, Switzerland (2017)

Louie AH

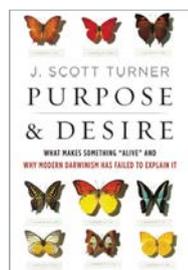
Relational biology. In R Poli (ed) *Handbook of anticipation*. Springer, Cham, Switzerland (2017)

Phillips A

Exploitation, commodification and inequality. In M Deveaux and V Panitch (eds) *Exploitation: from practice to theory*. Rowman and Littlefield, London and New York (2017)

Shisanya CA

Role of traditional ethnobotanical knowledge and indigenous institutions in sustainable land management in Western Highlands of Kenya. In P Venkatesan (ed) *Indigenous People*. IntechOpen Limited, London (2017)



Wetterberg G

Skånes historia. Del 2 1376 – 1720
Albert Bonniers Förlag, Stockholm (2017)

Wilkins AS

Making faces. The evolutionary origins of the human face
Harvard University Press, Cambridge, Massachusetts (2017)

Journal articles

Baderoon G

Finding and growing Athlone.
New England Review (2017) **38**(4) 37–42

Behroozi M, Ströckens F, Stacho M and Güntürkün O

Functional connectivity pattern of the internal hippocampal network in awake pigeons: a resting-state fMRI study.
Brain, Behavior and Evolution (2017) **90**(1) 62–72

Brown S

Foreign aid and national ownership in Mali and Ghana.
Forum for Development Studies (2017) **44**(3) 335–356

Cobbinah PB, Addaney M and Agyeman KO

Locating the role of urbanites in solid waste management in Ghana.
Environmental Development (2017) **24** 9–21

Cobbinah PB

Managing cities and resolving conflicts: local people's attitudes towards urban planning in Kumasi, Ghana.
Land Use Policy (2017) **68** 222–231

Conley DJ, Frings PJ, Fontorbe G, Clymans W, Stadmark J, Hendry KR, Marron AO and De La Rocha CL

Biosilicification drives a decline of dissolved Si in the oceans through geologic time.
Frontiers in Marine Science (2017) **4** 397

Dapaah EK and Harris LM

Framing community entitlements to water in Accra, Ghana: a complex reality.
Geoforum (2017) **82** 26–39

De Sanctis V, Soliman AT, Elsedfy H, Albu A, Al Jaouni S, Anastasi S, Bisconte MG, Canatan D, Christou S, Daar S et al

Review and recommendations on management of adult female thalassemia patients with hypogonadism based on literature review and experience of ICET-A network specialists.
Mediterranean Journal of Hematology and Infectious Diseases (2017) **9** e2017001

Dunér D

On the plausibility of intelligent life on other worlds.
Environmental Humanities (2017) **9**(2) 433–453

Edberg J, Malti A, Granberg H, Hamed MM, Crispin X, Engquist I and Berggren M

Electrochemical circuits from 'cut and stick' PEDOT: PSS-nanocellulose composite.
Flexible and Printed Electronics (2017) **2**(4) 045010

Friedrich P, Ocklenburg S, Mochalski L, Schlüter C, Güntürkün O and Genc E

Long-term reliability of the visual EEG Poffenberger paradigm.
Behavioural Brain Research (2017) **330** 85–91

Galloway M

STIAS–Wallenberg Roundtable on mHealth: towards a roadmap for image-based mobile technologies for health care.
South African Journal of Science (2017) **113**(7/8) a0218

Gärdenfors P and Höberg A

The archaeology of teaching and the evolution of *Homo docens*.
Current Anthropology (2017) **58**(2) 188–208

Gärdenfors P

Demonstration and pantomime in the evolution of teaching.
Frontiers in Psychology (2017) **8** 415

Gehring D, Güntürkün O, Wiltchko W and Wiltchko R

Lateralization of the avian magnetic compass: analysis of its early plasticity.
Symmetry (2017) **9**(5) 77

Gillespie MAK, Baude M, Biesmeijer J, Boatman N, Budge GE, Crowe A, Memmott J, Morton RD, Pietravalle S, Potts SG, Senapathi D, Smart SM and Kunin WE

A method for the objective selection of landscape-scale study regions and sites at the national level.
Methods in Ecology and Evolution (2017) **8**(11) 1468–1476

Güntürkün O and Ocklenburg S

Ontogenesis of lateralization.
Neuron (2017) **94**(2) 249–263

Harris LM

Political ecologies of the state: recent interventions and questions going forward.
Political Geography (2017) **58** 90–92

Hasselberg M, Wallis L, Blessing P and Laflamme L

A smartphone-based consultation system for acute burns – methodological challenges related to follow-up of the system.
Global Health Action (2017) **10**(s3) 1328168

Hui C, Fox GA and Gurevitch J

Scale-dependent portfolio effects explain growth inflation and volatility reduction in landscape demography.
Proceedings of the National Academy of Sciences (2017) **114**(47) 12507–12511

Ibáñez CF and Andressoo JO

Biology of GDNF and its receptors – relevance for disorders of the central nervous system.
Neurobiology of Disease (2017) **97** 80–89

Neha Jain

Radical dissents in international criminal trials.
European Journal of International Law (2017) **28**(4) 1163–1186

Johannesson K and Butlin RK

What explains rare and conspicuous colours in a snail? A test of time-series data against models of drift, migration or selection.
Heredity (2017) **118**(1) 21–30

Kimani-Murage EW, Griffiths PL, Wekesah FM, Wanjohi M, Muhia N, Muriuki P, Egondi T, Kyobutungi C, Ezeh AC, McGarvey ST, Musoke RN, Norris SA and Madise NJ

Effectiveness of home-based nutritional counselling and support on exclusive breastfeeding in urban poor settings in Nairobi: a cluster randomized controlled trial.
Globalization and Health (2017) **13**(1) 90

Laflamme L

Image-based mHealth for remote diagnostic assistance: a means to promote equity in quality care.
Global Health Action (2017) **10**(s3) 1344004

Lategan BC

A cosmopolitan ideal: Paul's declaration "Neither Jew nor Greek, neither slave nor free, nor male and female" in the context of first-century thought. By Karin B. Neutel.
Journal of Theological Studies (2017) **68**(1) 313–316

Lindborg R, Gordon LJ, Malinga R, Bengtsson J, Peterson G, Bommarco R, Deutsch L, Gren Å, Rundlöf M and Smith HG

How spatial scale shapes the generation and management of multiple ecosystem services.
Ecosphere (2017) **8**(4) e01741

Lombard M and Gärdenfors P

Tracking the evolution of causal cognition in humans.
Journal of Anthropological Sciences (2017) **95** 219–234

Lu R, Schaefer CM, Nesbitt NM, Kuper J, Kisker C and Sampson NS

Catabolism of the cholesterol side chain in *Mycobacterium tuberculosis* is controlled by a redox-sensitive thiol switch.
ACS Infectious Diseases (2017) **3**(9) 666–675

Lundin J and Dumont G

Medical mobile technologies – what is needed for a sustainable and scalable implementation on a global scale?
Global Health Action (2017) **10**(s3) 1344046

Lutz W

Global sustainable development priorities 500 y after Luther: Sola schola et sanitate.
Proceedings of the National Academy of Sciences (2017) **114**(27) 6904–6913

Macnab A

History teaches everything.
Medical Teacher (2017) **39**(9) 997–998

Musila GA

Navigating epistemic disarticulations.
African Affairs (2017) **116**(465) 692–704

Norris SA, Daar A, Balasubramanian D, Byass P, Kimani-Murage E, Macnab A, Pauw C, Singhal A, Yajnik C, Akazili J, Levitt N, Maatoug J, Mkhwanazi N, Moore SE, Nyirenda M, Pulliam JRC, Rochat T, Said-Mohamed R, Seedat S et al

Understanding and acting on the developmental origins of health and disease in Africa would improve health across generations.
Global Health Action (2017) **10**(1) 1334985

Ocklenburg S, Schmitz J, Moïfar Z, Moser D, Klose R, Lor S, Kunz G, Tegenthoff M, Faustmann P, Francks C, Epplen JT, Kumsta R and Güntürkün O

Epigenetic regulation of lateralized fetal spinal gene expression underlies hemispheric asymmetries.
eLife (2017) **6** e22784

Okeja U

The moral challenge of expatriate employment in developing countries.
Etikk i praksis - Nordic Journal of Applied Ethics (2017) **11**(2) 65–77

Peloso MM and Harris LM

Pathways for participatory water governance in Ashaiman, Ghana: learning from institutional bricolage and hydrosocial perspectives.
Society & Natural Resources (2017) **30**(12) 1491–1506

Proesmans K, Vandebroek H and Van den Broeck C

General criterion for harmonicity.
Physical Review Letters (2017) **119**(14) 147803

Rebič M, Mocci F, Uličný J, Lyubartsev AP and Laaksonen A

Coarse-grained simulation of rodlike higher-order quadruplex structures at different salt concentrations.
ACS Omega (2017) **2**(2) 386–396

Robinson JK, Penedo FJ, Hay JL and Jablonski NG

Recognizing Latinos' range of skin pigment and phototypes to enhance skin cancer prevention.
Pigment Cell & Melanoma Research (2017) **30**(5) 488–492

Rodina L, Baker LA, Galvin M, Goldin J, Harris LM, Manungufala T, Musemwa M, Sutherland C and Ziervogel G

Water, equity and resilience in southern Africa: future directions for research and practice.

Current Opinion in Environmental Sustainability (2017) **26–27** 143–151

Schlebusch CM, Malström H, Günther T, Sjödin P, Coutinho A, Edlund H, Munters AR, Vicente M, Steyn M, Soodyall H, Lombard M and Jakobsson M

Southern African ancient genomes estimate modern human divergence to 350,000 to 260,000 years ago. *Science* (2017) **358** (6363) 652–655

Schmitz J, Metz GAS, Güntürkün O and Ocklenburg O

Beyond the genome – towards an epigenetic understanding of handedness ontogenesis.

Progress in Neurobiology (2017) **159** 69–89

Shah SH, Angeles LC and Harris LM

Worlding the intangibility of resilience: the case of rice farmers and water-related risk in the Philippines.

World Development (2017) **98** 400–412

Singhal A

Long-term adverse effects of early growth acceleration or catch-up growth.

Annals of Nutrition and Metabolism (2017)

70(3) 236–240

Stothers L and Macnab A

Global implementation of advanced urological care: policy implementation research.

Canadian Urological Association Journal (2017)

11(6) 157–160

Stothers L, Macnab AJ, Bajunirwe F, Mutabazi S and Berkowitz J

Associations between the severity of obstructive lower urinary tract symptoms and care-seeking behavior in rural Africa: a cross-sectional survey from Uganda.

PLOS ONE (2017) **12**(3) e0173631

Stothers L, Macnab A, Bajunirwe F, Mutabazi S and Lobatt C

Comprehension and construct validity of the visual prostate symptom score (VPSS) by men with obstructive lower urinary tract symptoms in rural Africa.

Canadian Urological Association Journal (2017)

11(11) e405–e408

Stothers L, Macnab A, Mukisa R, Mutabazi S and Bajunirwe F

Traumatic spinal cord injury in Uganda: a prevention strategy and mechanism to improve home care.

International Journal of Epidemiology (2017)

46(4) 1086–1090

Toral R, Van den Broeck C, Escaff D and Lindenberg K

Stochastic thermodynamics for Ising chain and symmetric exclusion process.

Physical Review E (2017) **95**(3) 032114

Ünver E, Garland A, Tabrik S and Güntürkün O

Sneaking a peek: pigeons use peripheral vision (not mirrors) to find hidden food.

Animal Cognition (2017) **20**(4) 677–688

Van Klinken A and Otu KE

Ancestors, embodiment and sexual desire: wild religion and the body in the story of a South African lesbian sangoma.

Body and Religion (2017) **1**(1) 70–87

Van Klinken A

Culture wars, race, and sexuality: a nascent Pan-African LGBT-affirming Christian movement and the future of Christianity.

Journal of Africana Religions (2017) **5**(2) 217–238

Vlek P, Khamzina A, Azadi H, Bhaduri A, Bharati L, Braimoh A, Martius C, Sunderland T and Taheri F

Trade-offs in multi-purpose land use under land degradation.

Sustainability (2017) **9**(12) 2196

Volkov AV, Wijeratne K, Mitraka E, Ail U, Zhao D, Tybrandt K, Andreasen JW, Berggren M, Crispin X and Zozoulenko IV

Understanding the capacitance of PEDOT:PSS.

Advanced Functional Materials (2017) **27**(28) 1700329

Wallis L, Hasselberg M, Barkman C, Bogoch I, Broomhead S, Dumont G, Groenewald J, Lundin J, Norell Bergendahl J, Nyasulu P, Olofsson M, Weinehall L and Laflamme L

A roadmap for the implementation of mHealth innovations for image-based diagnostic support in clinical and public-health settings: a focus on front-line health workers and health-system organizations.

Global Health Action (2017) **10**(s3) 1340254

Wolf H

Scorpions pectines – idiosyncratic chemo- and mechanosensory organs.

Arthropod Structure & Development (2017)

46(6) 753–764

Yates JS, Harris LM and Wilson NJ

Multiple ontologies of water: Politics, conflict and implications for governance.

Environment and Planning D: Society and Space (2017)

35(5) 797–815

Conference proceedings

Jablonski NG, Lasisi T, Abhimanyu A et al

Variation in skin reflectance and pigmentation genes in young adults of Xhosa and Cape mixed ancestry from the Western Cape, South Africa.

American Journal of Physical Anthropology (2017)

162(s64) 228–228

Shadgan B, Kajbafzadeh M, Nigro M, Kajbafzadeh AM and Macnab A

Optical monitoring of testicular torsion using a miniaturized near infrared spectroscopy sensor.

Proceedings of SPIE (2017) **10038** 100380N

Shadgan B, Kwon BK, Streijger F, Manouchehri N, So K, Shortt K, Crompton PA and Macnab A

Optical monitoring of spinal cord hemodynamics, a feasibility study.

Proceedings of SPIE (2017) **10072** 100720T

Shadgan B, Macnab A, Nigro M and Nguan C

Optical monitoring of kidney oxygenation and hemodynamics using a miniaturized near-infrared sensor.

Proceedings of SPIE (2017) **10038** 100380I

FUNDING AND GOVERNANCE

STIAS was founded in 1999 by Stellenbosch University with the intention to develop it as an independent and national institute with an international reach and impact. During the initial stage (1999 to 2007) the Institute functioned as part of the University structure, reporting to the Vice-Rector: Research. In 2007, a not-for-profit (Section 21) company was established to prepare the ground for the staged transfer of functions and responsibilities to the Company as a separate legal entity. Stellenbosch University is a member of the Company, but as a national and independent institute, STIAS is governed by its own Board of Directors. The STIAS Board of Directors meets biannually (in 2017 it met on 6 April and 9 November). Since 2016 STIAS has been registered as a Public Benefit Organisation with the South African Revenue Services (PBO no 930051203), with tax exemption status and donations tax deductible under section 18A(1)(a) of the Income Tax Act No 58 of 1962.

The Director of STIAS is responsible for the development of the STIAS research programme. He is assisted in this task by an Academic Advisory Board and by an international panel of experts which includes former STIAS fellows. Since 2014 the Academic Advisory Board has met once a year (in the year under review the meeting took place on 16 and 17 March). The STIAS Fellowship and Research Programme Committee meets weekly during STIAS semesters and its members assist the Director in giving structure to the STIAS research programme.

Board of Directors

Desmond Smith Chair (Director of Companies)
Kåre Bremer (former Rector, Stockholm University)
Cheryl de la Rey (Vice-Chancellor and Principal, University of Pretoria)
Wim de Villiers (Rector and Vice-Chancellor, Stellenbosch University)
Hendrik Geyer (Director of STIAS)

Raenette Gottardo (Independent public policy consultant and political analyst)
Christof Heyns (University of Pretoria and member of the United Nations Human Rights Committee)
Bernard Lategan (STIAS founding Director)
Mosibudi Mangena (former South African Minister of Science and Technology)
Göran Sandberg (Executive Director, Knut and Alice Wallenberg Foundation)

STIAS Academic Advisory Board

Morné du Plessis Chair (CEO, World Wide Fund for Nature (WWF) South Africa)
Ahmed Bawa (CEO, Universities South Africa)
Hendrik Geyer (Director of STIAS)
Geoffrey Harpham (Senior Fellow, Kenan Institute for Ethics, Duke University)
Shireen Hassim (Department of Political Studies, University of the Witwatersrand)
Jan-Hendrik Hofmeyr (Centre for Complex Systems in Transition, Stellenbosch University)
Bernard Lategan (STIAS founding Director)
Thokozani Majozi (SA Research Chair in Sustainable Process Engineering, University of the Witwatersrand)
Staffan Normark (Karolinska Institute and Royal Swedish Academy of Sciences)
Francis Nyamnjoh (Department of Social Anthropology, University of Cape Town)
Daya Reddy (SA Research Chair in Computational Mechanics, University of Cape Town)
Bert van der Zwaan (Rector Magnificus Utrecht University)
Louise Viljoen (Department of Afrikaans and Dutch, Stellenbosch University)

STIAS Fellowship and Research Programme Committee

Hendrik Geyer Chair (Director of STIAS)
Jan-Hendrik Hofmeyr (Centre for Complex Systems in Transition, Stellenbosch University)
Francis Nyamnjoh (Department of Social Anthropology, University of Cape Town)
Bernard Lategan (STIAS founding Director)
Louise Viljoen (Department of Afrikaans and Dutch, Stellenbosch University)

FINANCIAL REPORT

Statement of income and expenditure for the year ended 31 December 2017

| Notes | 2017 R | 2016 R |
|---|--------------------|-------------------|
| Income: Conference facilities | 10 354 523 | 8 248 041 |
| Other income | 21 956 662 | 58 499 343 |
| <i>Donations</i> | | |
| – Trellis Charitable Trust | 2 000 000 | – |
| – Dr Edwin Hertzog | 1 000 000 | – |
| – Donald Gordon Foundation | 850 000 | 850 000 |
| – Riksbankens Jubileumsfond | 3 621 399 | 3 692 833 |
| – Transfer from STIAS Trust | 6 824 075 | 6 824 075 |
| – Knut & Alice Wallenberg Foundation | 6 824 075 | 46 824 075 |
| Rental income | 236 947 | 223 540 |
| Other income | 573 034 | 57 090 |
| Foreign exchange gain | 27 131 | 27 729 |
| | 34 414 953 | 32 452 211 |
| Expenses | | |
| Advertising | 258 549 | 20 805 |
| Affiliation and registration | 9 316 | – |
| <i>Audit fees:</i> | | |
| – for audit | 36 690 | 34 614 |
| – other services | 12 045 | 3 363 |
| Bad debt written off | 42 542 | – |
| Bank charges | 3 180 | 2 400 |
| Bursaries: postgraduate | 2 600 000 | 3 605 000 |
| Catering: conference facilities | 8 363 802 | 6 922 726 |
| Consultation and legal services | 71 751 | 95 093 |
| Consumables | 55 731 | 272 102 |
| Depreciation | 148 613 | 139 865 |
| Entertainment | 360 726 | 167 147 |
| Foreign exchange loss | 22 672 | 28 812 |
| General office expenses | 64 318 | 16 527 |
| Internet and software | 45 276 | 45 966 |
| Maintenance of equipment | 84 726 | 68 873 |
| Photographic expenses | 21 592 | – |
| Postage | 38 698 | 23 464 |
| Security services | 254 035 | 248 344 |
| Services | 1 653 292 | 2 194 950 |
| Smaller assets | 134 610 | 36 908 |
| Staff remuneration and stipends for fellows | 9 145 913 | 8 617 872 |
| Stationery and printing | 303 283 | 339 993 |
| Telephone | 196 249 | 160 589 |
| Travel and accommodation | 9 187 277 | 6 899 486 |
| Upgrading of facilities | – | 1 100 000 |
| Utility costs | 1 119 069 | 956 404 |
| Workshops | 181 000 | 450 908 |
| | (2 103 768) | 34 295 173 |
| Operating (loss)/surplus | (2 103 768) | 34 295 173 |
| Finance income | 7 279 920 | 6 283 242 |
| Surplus for the year | 5 176 152 | 40 578 415 |

STELLENBOSCH INSTITUTE FOR ADVANCED STUDY (STIAS) (REG NO 2007/014516/08)

Notes to the financial statement of STIAS for the year ended 31 December 2017

1. An amount of R34 120 376,69 was received from the Knut & Alice Wallenberg Foundation during 2013. This amount was donated for utilisation over a five-year period. As a result, the income will be recognised over a period of five years.

2. Services include maintenance costs paid to Stellenbosch University.



Ms F Majiet

Director of Financial Services, Stellenbosch University

DIRECTOR AND STAFF

Yanga Nkathazo
Gardener



Elize du Plessis (part-time)
Financial officer



Hendrik Geyer
Director



Maggie Pietersen
Building caretaker



Gudrun Schirge (part-time)
Senior programme
administrator



Nel-Mari Loock
Programme administrator;
IT support and office
arrangement



Maria Mouton
Coordinator of
general logistics and
personal assistant
to the STIAS Director



Leonard Katsokore
Senior Assistant



FACILITIES

STIAS is situated on a part of the historic Mostertsdrift, one of the first wine farms in the Stellenbosch area, dating back to 1691. The property was bought by Stellenbosch University in 1996 and made available to STIAS in 2001. The old Cape Victorian manor house, wine cellar and outbuildings are situated on 2,6 hectare of parkland. The manor house was restored and rebuilt in 2002 to serve as the STIAS headquarters. Its library is used by researchers and academics for small seminars and workshops. In 2003 the outside of the wine cellar was restored, but the inside was redesigned and refitted to

be used as a modern research facility. SACEMA, the South African Centre for Epidemiological Modelling and Analysis, a Centre of Excellence supported by the Department of Science and Technology, is the present occupant of the cellar. The project to refurbish the old stable building was completed in early 2016. The building now accommodates the Stellenbosch University Centre for Complex Systems in Transition.

With the opening of the Wallenberg Research Centre in 2007, STIAS acquired one of the most modern

facilities specially designed for advanced research. The centre houses up to 20 researchers at a time in spacious and well-equipped surroundings in a private wing of the building, with adequate seminar facilities and state-of-the-art equipment. It also provides a home to the National Institute for Theoretical Physics (NITheP) in its south wing.

The conference and workshop facilities at the Wallenberg Research Centre are well established as a prime conference/workshop venue in the Western Cape, associated with quality service.

Bernard Lategan (part-time) (absent) Coordinator: African programme

Goldie van Heerden
Owner patron of
Catering Unlimited

Michelle Galloway
(part-time)
Media officer

Johann Groenewald (part-time)
Coordinator: strategic initiatives

Makwande Nkathazo
Garden assistant

Gwen Singers
Support staff

Karin Brown
Support staff

Christoff Pauw
Programme manager



ACKNOWLEDGEMENTS

During 2017, 28 450 people used the facility, that is, approximately 105 per working day on average.

In line with the historical significance of Mostertsdrift, the Perold vineyard has now been registered as a single vineyard within the Jonkershoek Valley ward. An agreement with Lanzerac Wines has been concluded, in terms of which Lanzerac will manage the vineyard. They will also make and bottle the wine, some of which will be available to STIAS under its own label. A proportion of the wine will be marketed by Lanzerac as part of its range of wines, making

the wine available to the general public both locally and internationally. Part of the proceeds of sales will support an early career protégé-programme for young winemakers and viticulturalists, to be managed jointly with the Pinotage Association of South Africa.

In August 2014, Stellenbosch University and STIAS signed a 99-year lease agreement for the use of the facilities at Mostertsdrift by STIAS.

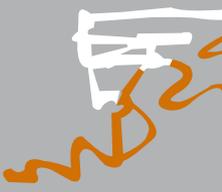
A special thanks to all our fellows and scholars who contributed to this publication and also provided photos of their research activities.

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A CREATIVE SPACE FOR THE MIND

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