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THE PUBLIC SQUARES

Report #1: Jan–Jul 2024



Prepared by:
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Vision And Mission

Vision

Universities can play a key role in generating knowledge to address complex issues in our society. Yet for academics to become agents of change within and beyond institutions, they need to learn to cross boundaries, work collaboratively, and raise money to sustain their endeavors.

The vision of the SU Public Squares initiative is to enhance researcher capacity, support collaborative work, foster impactful ideas, generate competitive grant proposals, and foster new transdisciplinary research areas.

Mission

Our mission is to build skills in collaborative/transdisciplinary research, foster knowledge across disciplinary and societal boundaries, develop competitive grant proposals, and find external funding to cultivate new transdisciplinary focal areas.

Drawing on expertise in research, public engagement, and grant writing, we will engage the eleven Public Square research teams in a series of workshops over 36 months. These workshops will provide research teams with specialized knowledge and targeted training.

In addition to workshops, we will support the Public Square teams through constructive feedback on grant proposals, facilitating brainstorming sessions, identifying funding opportunities, and assisting interested Squares to establish themselves as transdisciplinary entities through university channels.

Introduction



photograph of the Public Squares launch event from Stellenbosch University's news page

Selecting Teams: In late 2023, we reviewed 27 Public Square proposals based on our criteria and identified eleven successful proposals, considering merging some closely related ones. Details of the chosen teams are provided ahead.

Project Launch: The project commenced at a cocktail function post the inception workshop attended by 88 Public Square members and SU executive members, including Prof Leslie van Rooi and Prof. Sibusiso Moyo. An informational flyer detailing the eleven Public Squares was distributed at the event.

Project Administration: A meeting was held on March 18, led by Martin Abreu, to set project milestones and budgets. Delays in appointing a project administrator were resolved, and the administrator will commence duties on August 1.

Inception Workshop: On March 4, the first workshop at STIAS saw eight members from each of the 88 Public Squares attending. After introductory lectures, groups engaged in brainstorming and worked on concept notes according to the framework we provided.

Identifying Training Needs: During the workshop, teams selected their top five training workshops from a list of fifteen topics, with a month for finalizing and voting.

THE PUBLIC SQUARES

ADDRESSING THE SOCIAL AND ENVIRONMENTAL DETERMINANTS OF HEALTH (SEDOH) FOR SOCIAL JUSTICE AND HEALTH EQUITY

The social and environmental determinants of health (SEDOH) play a vital role in influencing health outcomes and health disparities within and across populations. It encompasses not only the physical, social, and economic conditions in which individuals live, work, and play but also the nuanced system within which these factors intersect and interact. This Public Square focuses on tackling the challenge of SEDOH through the lens of social justice. It aims to diminish inequalities, advance good health, and stimulate creative innovation. By fostering collaboration and dialogue among experts with diverse perspectives, the public square will foster innovative and holistic solutions.

Faculty/School/Department represented: Division of Health Systems and Public Health, Department of Global Health, Unit for Research on Health & Society, Department of Economics, Department of Visual Arts, and Department of Psychology.

DATA AND AI ETHICS FOR AFRICA

Artificial intelligence and machine learning applications have become ubiquitous in our daily lives with the increasing access to these technologies. The use of AI-generated data raises questions about privacy, harm, and equity on an individual and community level. While there are many research groups in the global north focusing on this critical issue limited information exists about how these ethical issues are emerging in African contexts. This public square brings together academics and relevant experts to build a research agenda in AI and data ethics and to develop solutions.

Faculty/School/Department represented: School for Data Science and Computational Thinking, Faculty of Law, Research Ethics, Department of Information Science, Computer Science, Faculty of Theology, Department of Philosophy, Department of Statistics, and Division for Learning and Teaching Enhancement.

BREAK FREE, GROW TALL, REACH FAR: A TRANSDISCIPLINARY RESEARCH FOCUS ON STUNTING REDUCTION THROUGH RESILIENT AND NOURISHING FOOD SYSTEMS

The nutritional status of young children in sub-Saharan Africa is of great concern. Stunting (low height-for-age) is a major issue and poses significant costs to children's health, cognitive development, schooling, and future economic performance. Stunting reflects a food system that is failing. This failure stems from past inequalities and a current socio-political system that is not addressing access issues. A transdisciplinary approach is needed to understand the complex challenges and to collectively identify ameliorative innovations and interventions. This square seeks to grow in depth of research as well as partnerships and has the experience needed to make this possible.

Faculty/School/Department represented: Department of Animal Sciences, Department of Industrial Engineering, Department of Economics, School for Data Science and Computational Thinking, The Faculty of Medicine and Health Sciences, Division of Human Nutrition and Faculty of Agricultural Sciences



COMBATING MISINFORMATION IN AFRICA: THE POWER OF INTERDISCIPLINARY RESEARCH

Misinformation and disinformation are serious threats to democracy and society. They can undermine trust in institutions, polarize public opinion, and lead to violence. In recent years, there has been a growing recognition of the need to address these interrelated issues. Stellenbosch University has a strong capacity in the fields of journalism, engineering, data science, and information science. This public square will enable transdisciplinary dialogue to shed light on the causes and spread of misinformation. It will also facilitate engagement with policymakers and the public to co-develop effective tools for combatting this threat.

Faculty/School/Department represented: Department of Journalism, Department of Industrial Engineering, School of Data Science and Computational Thinking.





SCIENCE FOR JUSTICE (S4J) IN FORENSIC HUMAN IDENTIFICATION

Forensic methods of identification face complex challenges in resource-challenged and high caseload contexts. For example, the number of unidentified individuals admitted to South Africa's medico-legal laboratories is alarmingly high, with estimates ranging from 7,000 to 10,000 per year. This crisis demands urgent attention and innovative solutions to improve the identification process. Building on a host of internal, inter-institutional, and international relationships, this Public Square will take a 'forensic identification think tank' approach to identify innovative and effective solutions to improve service delivery in forensic human identification. The implementation of the identified measures can have a significant impact on South Africa and serve as a model for other countries facing similar challenges.

Faculty/School/Department represented: Department of Visual Arts; VIZ.Lab, Department of Biomedical Sciences, Division of Forensic Medicine, Division of Clinical Anatomy; Department of Pathology, Biological Anthropology Research Unit (BARU).

PUBLIC SQUARE IN GENDER RESEARCH: FORGING NONVIOLENT COMMUNITIES

Gender-based violence (GBV) remains a devastating problem in South African society, and interventions from the government are lacking. While there is now a National Strategic Plan on GBV and Intimate Femicide, it is not being rolled out successfully. GBV is a structural problem entrenched in all spheres of society, which means that addressing it requires thinking trans-disciplinarily and creatively. This Public Square in Gender Research will be a problem-focused platform of multi- and transdisciplinary research and innovation. The aim is to leverage funding to support the design of various research projects and interventions to decrease this persistent societal challenge.

Faculty/School/Department represented: Department of Political Science, Department of Philosophy, Department of Psychology.



'TRASHED AND TOXIC TRANSITIONS?' THE ENVIRONMENTAL BURDEN FROM CLIMATE AND ENERGY TRANSITIONS THAT GO WRONG

The sustainability of a just energy transition towards a low-carbon economy is at risk. Trade-offs between low-carbon but high-material, high-waste, and high-toxicity scenarios need to be critically examined in an inter- and transdisciplinary manner. This Public Square brings together an interdisciplinary core team to address this complex issue in partnership with other academics and non-academic players. Potential outcomes include (1) improved tools to measure environmental burden, (2) greater capacity in energy-economic-climate-environment modeling, and (3) responsive public policy and governance systems. Important, these potential outputs will be co-created with policy and decision-makers, and with those who are vulnerable to climate change and the impacts of transition.

Faculty/School/Department represented: School of Public Leadership, Department of Conservation Ecology & Entomology, Department of Political Science, School for Climate Studies, Environmental Management, Faculty Engineering.

EARLY INTERVENTION AND CHILD MENTAL HEALTH: COLLABORATIVE SPACE FOR THINKING FROM THE HEALTH AND SOCIAL SCIENCES

This Public Square focuses on early intervention and child mental health in Africa. Much of the existing knowledge about this pertinent issue originates from mono-lingual, high-income countries. Through an Afro-centric lens, this Public Square will bring to light the specific challenges that African families face. In collaboration with academic and non-academic stakeholders, the core research team will generate knowledge and identify ways of engaging, supporting, and intervening in this context. It will also lead to the development of impactful research projects and accessible dissemination tools for local caregivers, clinicians, educators, practitioners, and policymakers.

Faculty/School/Department represented: Division of Speech, Language and Hearing Therapy, Child Psychiatry Unit, Department of General Linguistics, Philosophy Department, Faculty of Medicine and Health Sciences, Applied Research Ethics (et al.)



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ONE HEALTH APPROACH TO FIND SOLUTIONS FOR INFECTIOUS DISEASES UNDER CONDITIONS OF RAPID ENVIRONMENTAL CHANGE

Many natural systems are experiencing environmental change at unprecedented speed due to anthropogenic climate change, pollution, and habitat fragmentation. Infectious diseases (ID) are one of the prominent negative outcomes. Emerging IDs are mostly of animal origin, which is an increasing problem for human, domestic, and wild animal health. In addition, environmental change influences the epidemiology of endemic diseases and the emergence of antimicrobial resistance. This Public Square adopts a One Health approach to investigate how infectious agents are exchanged between humans and animals directly or via disease vectors or the innate environment. The results will inform policies and measures to prevent, control, and mitigate emerging future risks.

Faculty/School/Department represented: Division of Molecular Biology and Human Genetics, Division of Medical Virology, Department of Pathology, CERI, Division of Medical Microbiology, Department of Pathology, Faculty of Medicine and Health Sciences, Centre for Sustainability Transitions (CST), Conservation Ecology & Entomology, Department of Mathematical Sciences, Public Engagement with Science, Centre for Research on Evaluation, Science and Technology (CREST), National Health Laboratory Service (South Africa), Division of Medical Virology, Centre of Excellence for Invasion Biology, Stellenbosch Water Institute (et al.).

ONE HEALTH COLLABORATIVE HUB ON RURAL-URBAN MIGRATION, LAND USE CHANGE AND DISEASE DYNAMICS IN SOUTH AFRICA



The burgeoning rural-urban migration and the corresponding shifts in land use patterns have far-reaching implications for global health. As migration accelerates and landscapes evolve, the dynamic interactions between humans, animals, and their shared environments create a dynamic nexus where diseases emerge and spread. We need comprehensive and multidisciplinary strategies to address this health risk. This Public Square adopts a One Health approach to investigate this complex issue. By fostering active collaborations between academia, industry, government, and communities, the aim is to generate innovative strategies to promote community well-being, enhance environmental sustainability, and support resilient health systems.

Faculty/School/Department represented: Africa Centre for HIV/Aids Management, Department of Animal Sciences, Division of Health Systems and Public Health, CST.

METAL PRODUCTION FROM PRIMARY AND SECONDARY RESOURCES: TECHNOLOGICAL, ENVIRONMENTAL, SOCIAL AND GOVERNANCE STRUCTURES TOWARDS SUSTAINABILITY AND CIRCULARITY



The South African mining and metallurgy sectors are strongly influenced by declining ore grades, evolving regulatory requirements, and a shift towards sustainability. This aligns with the global move towards circularity in the metals industry, which promotes recycling from industrial and consumer waste. Balancing technical, operational, and socio-environmental aspects is crucial for sustainable operations. However, information on secondary metal production impact and regulation is lacking. Moreover, there is a need for the development of recycling technologies and comprehensive legislation. This Public Square will advance interdisciplinary research and collaborations between academia, industry, waste facilities, and policymakers. The goal is to contribute to improved environmental, social, and governance practices in metal production.

Faculty/School/Department represented: Chemical Engineering, School of Public Leadership, Department of Philosophy, Industrial Engineering, Earth Sciences, Chemistry & Polymer Science, Business Management, and Mercantile Law.

FOR MORE INFORMATION ON THE PUBLIC SQUARES INITIATIVE CONTACT:

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Training Programme

We drew on the results of the needs assessment to design a training programme to be delivered in collaboration with leading internal and external subject specialists. The programme consists of a series of hybrid lectures, which are open to SU staff and collaborators, and interactive workshops that are for the Public Squares consortium only. Please see further details in Table 1 below.

The full training programme has been shared with the Public Squares Consortium and each event is advertised approximately one month ahead.

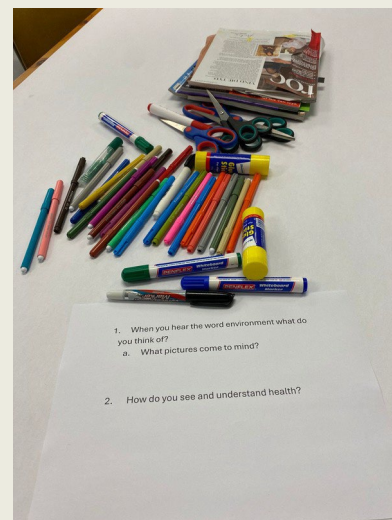
EVENT TIMETABLE

Event (Lecture followed by targeted workshop)	Facilitators	Venue	Date & time
<u>Building a Successful Team</u> —	Dr. John van Breeda	BMRI	16 Jul. 12h00 – 16h00
<u>Stakeholder mapping</u> —	Dr Gill Black & Dr. Astrid TG	STIAS	23 Jul. 12h00 – 16h00
<u>Research impact</u> —	Prof. Heide Hackmann	STIAS	19 Aug. 12h00 – 16h00
<u>Engaging Policy Makers</u>	Dr Gill Black & Dr. Astrid TG	BMRI	10 Sept. 12:00-16h00
<u>Grant writing: Expert tips</u>	Prof. Tulio de Oliveira	STIAS	15 Oct. 9h00 – 13h00
<u>Engaging Policy Makers</u> —	Dr Gill Black & Dr. Astrid TG	STIAS	19 Nov. 12:00-16h00
<u>Communication of Science</u>	Prof. Marina Joubert	STIAS	04 Dec. 09h00 – 13h00
<u>Brainstorming sessions</u>	Dr Gill Black, Dr. Astrid TG, & Sarita Groenewald	Various	Ongoing

Brainstorming sessions

List of Brainstorming Sessions (March to August 2024):

- **25 March 2024:** Break Free, Grow Tall, Reach Far, Facilitated by Dr. Sarita Groenewald on Campus in Stellenbosch.
- **19 April 2024:** Early Intervention and Child Mental Health, Co-facilitated by Dr. Sarita Groenewald and Dr Astrid Treffry-Goatley at the BMRI Building.
- **19 April:** SEDOH, co-facilitated by Dr. Gill Black and Dr Astrid Treffry-Goatley at the BMRI Building.
- **22 April:** One Health approach to find solutions for infectious diseases under conditions of rapid environmental change. Co-facilitated by Dr. Sarita Groenewald and Dr. Astrid Treffry-Goatley at the BMRI .
- **15 July:** SEDOH, co-facilitated by Dr. Gill Black and Dr Astrid Treffry-Goatley at the BMRI.
- **8 August:** One Health Collaborative Hub on Rural-Urban Migration. Co-facilitated by Dr. Sarita Groenewald and Dr John van Breda



Above: Art materials and prompts for the SEDOH brainstorming workshop on 15 July



Above: Prof. Lynn Hendriks opening the brainstorming workshop on 15, 2024. We had over #50 academic and nonacademic stakeholders in attendance

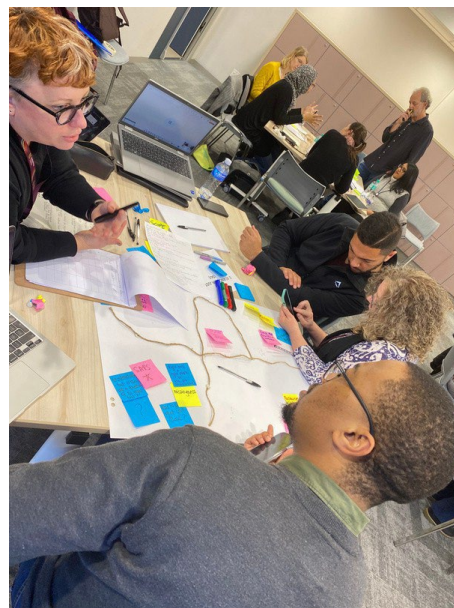
Lectures and Workshops

Transdisciplinary Research Teams

Lecture: On July 16, Dr John van Breda presented our first Public Square lecture at the BMRI.

We had approximately 26 attendees (some online and some in person).

Workshop: On 16 July van Breda facilitated a hybrid interactive workshop where members 5 Squares worked through a rigorous 12-step process for team formation. Below we share some visual highlights of the workshop.



Above: Members of **Science 4 Justice** Team engaged in the Team work activity;



Members from the **Early Intervention and Child Mental Health** Team engaged in a discussion with Dr van Breda

Stakeholder mapping

Lecture: On July 23, Dr Gill Black presented an informative lecture on stakeholder mapping. We had about 18 attendees for both events

Workshop: This lecture was followed by an interactive, hybrid workshop co-facilitated by Dr Black and Treffry-Goatley.



Above and Below: Members of the One Health Approach to find solutions to infectious diseases.. at the two training workshops



left: Members of **Science 4 Justice** Team engaged in the Team work activity;



Monitoring and evaluation

Summary: In these first six months, our focus has been on setting up the project and refining the training program to meet the research development needs of the respective teams. During this period, we have also encouraged the teams to get to know each other and to start developing a more concrete idea to write up in a funding proposal. This has proven more complicated than we anticipated and although several teams have engaged in the brainstorming sessions, only one team has finalised a concept note.

Feedback: We have received positive responses from most of the evaluation forms submitted for the recent training events, however completion rates have been low. Several scholars have approached the project team directly to inform us of their progress, or to share good news. We share two anonymous quotes from emails received in recent months.

Looking ahead: In the second half of the year, our goal is to help the teams firm up their project ideas and start connecting them to potential funding opportunities. We will also work on making the Public Squares initiative more visible through our new website and social media channels.

The Public Squares Training Programme looks brilliant. I am very excited to participate – you have honed the programme expertly to our needs.

We also have exciting news – following our planning meeting, we piloted joint writing with a small number of us. We're delighted to let you know that the Lancet Child & Adolescent Health is going to publish our comment on 'Infant mental health: opportunities to accelerate' and it is scheduled to go live online at 23:30 BST on Monday the 10th of June.

This is a direct result of the Public Square kick off meeting – thank you!

With warm regards and very best wishes,

I have been approached by the ICRC / Central Tracing Agency to assist with a research project for which they have been awarded an innovation grant. This is a direct outcome of our Public Square, where the ICRC's regional forensic delegation is a partner, which led to the introduction to their colleagues internationally and consulting on this grant application, which is an African regional count of the missing as a result of (armed) conflict.

Above: Two examples of positive feedback received in recent months

Contact Us



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[Click here to go to the website \(in development\)](#)



above: Members of the Early Interventions and Child Mental Health Public Square, presenting the results of their stakeholder mapping workshop on 23 July