

4S 2017 abstracts on African STS

Judge Dredd's Armor and The Gunslinger's Gun: Movie Magic and the many lives of filmic weaponry in South Africa

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This paper investigates “the movie prop” as a particular regime of objects from an ethnographic perspective. Siegfried Kracauer wrote of the film-studio in his Weimar Essays, stating “here all objects are only what they are supposed to represent at the moment: they know no development over time” (282). In contrast to this perspective I appeal to Arjun Appadurai’s notion of the “social life of things” to think about the many lives of movie props: from their making for a particular purpose—creatively crafted with materials at hand—to their salvage and radical re-contextualization for subsequent film-projects. By tracing the histories and trajectories of two movie props featured in “Hollywood” Sci-Fi films produced at The Cape Town Film Studios in South Africa, I illuminate their roles in the social processes of filmmaking at a particular site of international culture production. Judge Dredd’s body-armor from *Dredd 3D* (2012) and the Gunslinger’s gun from *The Dark Tower* (2017) provide two examples of objects created for science fictional violence and adventure; two technologies for men fighting imaginary battles cast against the trending sci-fi aesthetic of the Euro-American apocalyptic—an aesthetic now increasingly being Made in South Africa. I investigate the circumstances of these props’ creation, their material inspirations, their filmic representations and re-presentations, to show how these objects are re-made and re-framed for South African films. What stories do these objects tell about artistry, scarcity, labor and creation in this postcolonial context of production that is increasingly recognized in the popular imagination as “the look” of a post-apocalyptic ethic.

Indigenous Knowledge as Local Response to Globalization and Climate Change in Nigeria/Africa

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Indigenous knowledges and technologies are a marginal topic in STS, with few studies, articles, and books being published on the topic despite the array of experiences and approaches from other fields such as media studies, visual anthropology, telecommunications, human rights, to mention a few. In its early years, STS focused mainly on scientific knowledge, particularly on controversies and on the construction of scientific facts. In the mid-1980s it expanded its focus to the construction of technology with the emergence of SCOT and other research programmes. About the late 1980s and early 1990’s, a turn towards the science-policy interface brought new attention to local knowledges and expertises in the field. Nowadays, citizen and open science are popular research topics and receive growing attention from STS scholars. However, indigenous knowledges and technologies remain marginal. STS appears still to be in need of a

process of decolonisation, as to a large extent it is still insensible to knowledges, technologies, and epistemologies that have arisen from indigenous, aboriginal or native peoples around the globe. This panel seeks to bring together researchers interested in topics related to indigenous knowledges and technologies, including, but not restricted to: a) appropriations of indigenous knowledges and technologies; b) indigenous knowledges and biopiracy; c) indigenous knowledges and technological policymaking; d) uses and developments of information and communication technologies (ICT) by indigenous peoples; e) decolonial and postcolonial indigenous STS; f) clashing ontologies between indigenous and modern societies.

Interrogating Presence and Absence in South Africa's Cervical Cancer Crisis

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On any given day, it is estimated that 20 women die of cervical cancer in South Africa. It is the most common cause of cancer mortality for South African women. It is also preventable, treatable, and fundamentally synergistic with HIV infection. Yet, the places where South Africans can access life sustaining antiretroviral therapy rarely offer cancer screening for common HIV related malignancies. Why isn't cervical cancer screening and treatment deeply embedded in antiretroviral treatment programs? The relationship between cervical cancer and HPV as STD is part of the answer, but it is not sufficient to explain this extreme fragmentation. Apartheid era health systems, which were highly segmented and organized along racial lines entrenched inequalities. Global health regimes, which prioritize pharmaceutical technological fixes over robust investments in public health systems, also shape the context. This paper incorporates methods from STS, African history, and critical medical anthropology. I focus on the presence, absence, and distribution of a biomedical objects embedded in cervical cancer care as a way to bring longstanding "follow the object(s)" methods in STS to critical studies of health systems. I situate the contemporary presence and absence of cervical cancer screening practices and technologies within the broader history of race, gender, and inequality in South Africa. I trace where how and why speculums, smears, labs, and hysterectomies were available or not across this landscape and how it changed after the end of apartheid. Why there isn't a speculum at every HIV clinic for cervical cancer screening cannot be separated from this longer history of systemic fragmentation.

The Care of the World: Maintenance Practices in the Pan-African e-Network

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This paper aims to examine how maintenance practices contribute in the emergence of new medical spaces — fragile, immanent spaces, molded out of seemingly stable yet uncertain, erratic connections. To do so, I will draw on an ethnographic study of the Pan-African e-Network, or PAN. PAN is a transnational eHealth network connecting health centers located across the African continent with tertiary care hospitals in India. Put simply, PAN aims at caring for patients at a distance. PAN is a private and centralized infrastructure, extending over thirty countries. It was designed to be delivered as a "turnkey solution," self-sufficient and transposable in potentially precarious conditions. Central to such a standardized solution is the

work of a dozen “engineers,” who were dispatched across India and the African continent to ensure proper maintenance and operation of PAN. The infrastructure of PAN is thus sustained by boring, mundane work done behind the scenes. For engineers, things like technical glitches, failures to communicate, wasted time, and routine maintenance are not external to, but rather constitutive of PAN’s network connectivity and indeed of its digital clinic. Engineers execute a range of tasks such as managing bandwidth, transferring data, and perfecting image and sound quality. Engineers manage medical data, and play a key role in patient care. As an engineer located in India liked to remind me while referring to his own sensibility towards careful maintenance: “We are taking care of the world, Mr. Vincent.” In examining practices of maintenance and care, this paper shares now widespread claims about the indeterminacy, radical openness, and vitality of matter and things. In virtue of its design, however, the challenge is to think vitality with exertion, openness with enclosure, and indeterminacy with the antagonistic forces that effectively constitute PAN’s world. Ultimately, by bringing the maintenance of PAN into the open, this paper aims to give the network back some volume—to bring them back down to Earth, we might say, in all its turbulence, splendor, and inadequacies.

Research Excellence in Africa: Policies, Perceptions and Performance

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Research excellence (RE) has become a fashionable policy-relevant concept in the world of science funding and assessment. Globally, and in the African continent, there has been increasing interest in research excellence, geared towards creating an enabling environment to groom and attract high-quality researchers. Top performers are strategically identified by public sector agencies and funding organisations. The meaning of research excellence and its implementation in practice is influenced by political considerations as well as social, cultural and organisational environments in which researchers function. Scientific performance is of course also affected by economic conditions and the availability of human resources. With demands increasingly outstripping the supply of available resources, thus driving pleas for more selectivity in resource allocation and transparency in decision-making processes, the need for defining, identifying and operationalising research excellence is becoming increasingly urgent for all stakeholders concerned. Our paper discusses various features of research excellence within Africa, framed within the context of government research initiatives, science granting councils and other public sector funding agencies. Our survey, collecting responses from 106 researchers and research coordinators throughout sub-Saharan Africa, highlights the diversity of opinions and preferences with regards to Africa-relevant dimensions of research excellence and related performance indicators. The results of the survey confirm that research excellence is a multidimensional concept that ought to be contextualised in order to be responsive and useful to beneficiary communities. Our analysis shows how some of those dimensions can be operationalised into quantifiable indicators at may suit evidence-based policy discourses on research quality in Africa, as well as research performance assessments by research funding agencies. Our case study on top 1% most highly cited research publications identifies several niches of international-level research excellence in the African continent, while highlighting the role of (inter)national cooperation. To gain a better insight and deeper understanding of

indigenous determinants and local driving forces, it is important to discuss the complementarities and tensions emerging from a distinction between excellence in the context of Africa and 'global excellence'. Our paper presents concrete suggestions on how to operationalise, measure and assess research excellence within African science.

Expanding Ethical Sensibilities in Agricultural Biotechnology: Regulating Socio-Economic Considerations in Kenya and South Africa

Koen Beumer

Article 26 of the Cartagena Protocol on Biodiversity provides countries with the option to include socio-economic considerations in decision-making about genetically modified organisms. Considerations such as religious concerns, farmers profits, employment effects and cultural uses of biodiversity have been shared under this banner. Whilst Article 26 has been hailed as a triumph of developing countries over neoliberal trade laws whose sensibilities are restricted to normative considerations related to human health and the environment (Kleinman & Kinchy 2007; Kinchy, Kleinman & Autry 2008), both academics and policy makers are struggling with the question how socio-economic considerations can be included in decision-making.

This paper therefore investigates the various ways in which Article 26 has been made operational in two countries that have been particularly advanced in these efforts: Kenya and South Africa. I will draw upon an extensive body of written sources as well as on twenty-five semi-structured qualitative interviews with key actors involved in drafting, executing, and contesting biotechnology laws and regulations in the two countries.

Based on these sources, I found that there are considerable differences (1) in the type of socio-economic considerations that are taken into account, and (2) in the ways Kenya and South Africa operationalize socio-economic considerations. I thereby highlight different sensibilities to what counts as a legitimate concern are present in different contexts. This highlights how the Cartagena Protocol on Biodiversity, itself an instance of expanding international jurisdiction aimed at convergence, nevertheless gave rise to greater divergence in regulatory practices.

Design and Making of Competitiveness in West Africa: Following World Bank "Experts" and "Technical Assistancess"

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This paper analyzes the production and circulation of knowledge and expertise in the development aid world, following interventions led by the World Bank, a major international organization of the field that has received considerable public and scholarly scrutiny. It explores the roles of World Bank consultants and staff as both "producers" and "brokers" of knowledge, the production and dissemination of reports, and the way this knowledge circulates internationally and is appropriated "locally". These analysis offer empirical pathways for a study

of the “Knowledge Bank” that the organization claims to be. As all those activities relate to “competitiveness”, the meanings and effects of such a concept will be discussed with particular focus. This paper uses a 8-month fieldwork related to two World Bank interventions, called “technical assistances”, dealing with the competitiveness of the construction sector in Mali and Cote d’Ivoire. Using ethnographic materials and interviews with consultants, world bank officers, government officials, and construction sector stakeholders, the paper argues that a focus on “technical assistances” (which are activities occurring before or in parallel to development projects) offers a renewed understanding of both knowledge-production activities undertaken by the World Bank, and of the politics of international intervention based on knowledge production. The paper shows how technical, policy-oriented knowledge and international expertise are authorized to circulate within specific boundaries and legitimize such concerns as “competitiveness”, resulting in interventions that contribute to reshape the relation between two poles of the concept, understood within the organization as pertaining to a unified national economy but also to some specific entities – firms or entrepreneurs – inside it.

Bridging STS and Innovation Systems Approaches to Knowledge-based Development in Africa: Towards an Endogenous Systems of Innovation Framework

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There is a growing body of social science research on the role of innovation in socio-economic development in Africa. However, two main approaches can be identified that ought to be complementary, but whose synthesis remains markedly elusive. One approach is the Systems of Innovation (SI) framework, which is becoming increasingly influential in the Global South, and whose insights predominantly provide strategies for upgrading and acquiring technological capabilities from outside sources for the purpose of economic development. Unlike the progenitors of the original framework, however, only a few of these studies have attempted to ground that perspective in Africa’s historical experience, or to critically appraise its social and political context. The other perspective, broadly defined as the Science and Technology Studies (STS) tradition tends to be more critical, and displays a deeper appreciation for Africa’s intellectual heritage. Conversely, STS studies do not typically emphasize the mechanisms that might facilitate a more effective diffusion of innovations that emerge from the indigenous knowledge base. This paper, therefore, provides such a reflection, and offers a theoretical framework that is grounded in the concept of Endogenous Development as advanced by the late, eminent Burkinabé historian, Joseph Ki-Zerbo, in his 1992 book, “La natte des autres”, and combines it with selected analytical tools from the SI approach. The resulting Endogenous Systems of Innovation (ESI) framework is then applied to two Benin-based, innovation award-winning organizations, namely the Songhaï Center, which promotes “authentic technology” based on sustainable agro-ecology, and Api-Palu, which encourages “medicinal sovereignty” based on indigenous pharmacology. It is hoped that the findings from the analysis will stimulate lively discussions about how the two component perspectives could be more fruitfully integrated into a coherent framework.

The “Western Disease”: Epistemic Contestations over Autism in the Somali Diaspora

Claire Decoteau

Over the past twenty years, public awareness of Autism Spectrum Disorder (ASD) has grown alongside increasing rates of diagnosis. Work by social scientists has demonstrated how various social and professional groups employ different epistemologies and ontologies of ASD when they explain the causes, treatments, identities, and social consequences of this condition. Epistemologies of ASD are located in practices of knowledge making from genetics and neuroscience to diagnostic tools and treatments. Our understanding of autism also comprises alternative ways of knowing that have often been excluded from dominant accounts of autism, including the concept of neurodiversity and other sensibilities that comprise local forms of knowledge. This open panel aims to bring together STS scholars investigating different epistemologies or ontologies of ASD, to identify and articulate how STS has grasped and responded to this growing social phenomenon, and to address the limits of our analyses thus far. We seek papers exploring the tensions between dominant frameworks of ASD and sensibilities that are less known, imagined, or considered in current STS accounts. These sensibilities could include but are not limited to: implicated actors in autism whose voices are often left out or only discursively present across situations; gendered dimensions of autism diagnosis, treatment, or care; global and/or cross-cultural perspectives; relationships between human and nonhuman animals in autism science; and others. The panel will explore the sensibilities at play in perceptions and experiences of autism and aim to inspire new directions in STS research on autism and related categories of disability and difference.

Curing Pharmaceuticals: Healing and Relational Ontologies in Pharmaceutical Use in Tanzania

Laura Meek, University of California, Davis

While Western biomedicine perceives pharmaceuticals as cures for disease, in Tanzania, such medicines are understood to be volatile and potentially dangerous substances- one among many unpredictable, fluctuating, and highly contemporary forces from outside, whose potentials are at once positive and negative. In my dissertation, based on over 30 months of ethnographic fieldwork in the Southern Highlands of Tanzania, I explore how pharmaceuticals are understood as ethically ambivalent and argue that much of Tanzanian practice around their use is aimed at enabling these drugs to heal by placing them within relational ontologies in which they act outside the logics of biomedicine. I build on post-colonial Africanist science studies work which has show how even the notions of “medical pluralism” and “hybridity” are insufficient to capture the ways in which healing regimes comingle and produce new entanglements (Stacey Langwick, Helen Tilley). I also draw from philosopher of science Isabelle Stengers’ notion of the “placebo” as the cure which cures for the ‘wrong reasons’, due to the biomedical assumption that pharmaceutical effectiveness can reside only in its chemical ingredients. Through an extended case study on the use of phenobarbital, I argue that while biomedicine perceives cures that cure ‘for the wrong reasons’ (ie- placebo effects) as insensible, much of everyday Tanzanian pharmaceutical practices attempt to resolve the insensibility of cures that do not

heal. In such cases, pharmaceuticals are unable to heal until their potentials are activated by placing them into the 'right relations', thus remaking these drugs within relational ontologies.

Appropriating Mobile Phones for Livestock Production and Marketing: The Case of the Maasai and Wasukuma Pastoralists in Tanzania

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This paper discusses the rapid uptake of mobile phone by pastoral communities in Tanzania and its use as a tool to tackle herd management and especially marketing challenges. Applying the concept of 'appropriation', the paper examines the extent to which the mobile phone is changing how livestock keepers interact in the livestock market and how this is affecting their livelihoods. The methodology involves an interregional comparative analysis of two key production regions: (the Lake Zone and Arusha) and two respective groups of livestock producers the Wasukuma— who keep livestock under the extensive (pastoralist) system and the nomadic Maasai pastoralists. We introduce the idea of a spectrum of appropriation. The pastoralists have found the scope offered by mobile phones for remote communication readily helpful in coordinating their nomadic herds. The agro-pastoralists have however embarked upon a more extended appropriation of the mobile to support more organised systems of livestock transport and marketing. We also report on the relative failure of a government/donor sponsored attempt to introduce an information system to support livestock marketing. The paper discusses the role of Information and Communication Technologies for Development (ICT4D) as tools for poverty alleviation, examining whether it is better to design systems dedicated to particular contexts and purposes or flexible general-purpose tools that can be appropriated by local users.

Sacred Acoustic Inspectors: Ghanaian State and Noise-Abatement during the Homowo Festival

Mariam Goshadze, Harvard University

Every summer indigenous deities visit Ghana's capital, Accra. To create peaceful environment for the guests, Ga indigenous priests introduce a "ban on drumming and noise-making". Almost overnight, sacred silence blankets the city as nightclubs and dance halls close down and Pentecostal Churches subdue their services.

The role of organized religion in the contemporary nation state remains an object of scholarly scrutiny. Since secular discourse takes the impotence of deities for granted, religious institutions are always represented by the "people of god/s" rather than the god/s themselves. Seeking to subvert these categories, this paper focuses on interreligious conflict in Ghana where the postcolonial state has become implicated in the subjection of Christian god to scientific scrutiny and has vouched to serve as the ears of Ga indigenous deities. Building on sonic theologies of the two religions, I argue that production and restriction of sound is determined by and performed for the involved deities. Hence, the complicity of the Ghanaian state in the management of the ban - particularly, decibel-based and health-oriented regulation of Christian worship, represents an instance of the state appropriating self-regulating power of religious institutions via scientific lexicon, and more importantly, subjecting the involved deities to civil

control. This intervention has ambivalent implications: on the most basic level, the state seems to employ science as a tool of secularization; on the other hand, however, the Ghanaian state is starting to speak for the gods in technoscientific lingo, thus contributing to their authority and relevance in the contemporary context.

"Do they want to kill us with Ebola?" Vaccine Trials and Risk Communication in Ghana.

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Channels of communication to the public are critical for risk communication in disease epidemics. The same can be said for vaccine trials where appropriate and trusted channels of communication are used to duly inform the public of the risks and benefits of vaccine trials. Employing the semiotic-method (Actor Network Theory), and focusing on Ghana, a country without a single case of Ebola, yet attempted to undertake vaccine trials, this paper utilizes a comparative approach in analyzing the actors/actants involved in the channels of communication during the recent outbreak and the botched vaccine trials. Data was collected through in-depth interviews with 90 respondents. Preliminary findings indicate that first, compared to the actors involved in the channels of communication during the peak of the ebola outbreak, very little was done to incorporate these actors during the vaccine trials. Second, the media, mobile phones and social media greatly influenced the behavior of community members in the face of being misinformed about the vaccine trials. Third, the experts and the community members had different perceptions of risk associated with the vaccine trials. The paper argues for the need to involve multiple actors in the appropriate and trusted channels of risk communication during vaccine trials.

Alternative Medicine Diagnostic Equipment and the Promises of Techno-Science in Ghana's Herbal Medicine Clinics

Damien Droney, Stanford University

This paper explores multiple visions of the good life in Ghana, as expressed through engagements with alternative medicine diagnostic devices. In the last two decades, Ghana has seen an expansion of herbal medicine clinics that prominently advertise their practice of "scientific herbal medicine." These businesses are popular with patients seeking herbal medicines supported by recent scientific advances, and they primarily serve patients dealing with chronic conditions or who otherwise feel let down by Ghana's public health system. These clinics have risen in response to a rollback of state-supported public health services and a growing emphasis on market-mediated access to medicines. They therefore represent emergent, popular understandings of the duties of private medical industries and the benefits of scientific medicine. Many of these clinics used and prominently displayed expensive pieces of alternative medicine diagnostic technology. In this paper, I focus on the engagement of licensed professional herbalists and their patients to explore multiple understandings of what it means to have access to modern technoscience. I argue that both the users and patients of these technologies see the herbal medicine sector as providing the material and symbolic benefits of middle class life, including recognition as participants in the modern world, at the same time that

they experienced this as exploitation. This reveals enduring forms of attachment to technologies as symbols for technoscience, modernity, and progress even when they fail to deliver on their promises.