JARAMOGI OGINGA ODINGA
UNIVERSITY OF SCIENCE AND TECHNOLOGY

TECHNOLOGY AND MANAGEMENT
AT THE INTERFACE OF CULTURES

THEME
"Harnessing culture and technology for sustainable development, good governance and innovative technology transfer"

PROGRAMME AND ABSTRACTS

Thursday 26TH to Saturday 28TH November, 2015

JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

Main Campus, Bondo Town

BONDO, KENYA

TECHNOLOGY AND MANAGEMENT

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THEME

"Harnessing Culture and Technology for Sustainable Development Good Governance and innovative Technology Transfer"

Programme and Abstracts

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WELCOME MESSAGE FROM VICE CHANCELLOR
JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

I take this opportunity to welcome you all to the conference Technology and Management: At the Interface of Culltures starting from 26th to 28th November, 2015 at Jaramogi Oginga Odinga University of Science and Technology (JOOUST), Bondo Main Campus.

JOOUST as one of the nationally designated Science and Technology institution recognizes its important role in the enhancement of science and technology to complement the national efforts of spurring economic growth. The conference theme "Harnessing culture and technology for sustainable development, good governance and technology transfer" provides a forum for a crosssectional multidisciplinary discourse among scientists thereby advancing progress in areas that have potential to advance livelihoods, both locally and internationally.

The conference brings together research peers from local and international institutions to discuss, share and disseminate research outputs and innovations under three sub-themes namely:
1. Capacity for Governance
2. Capcity and Culture
3. Capacity and Technology Transfer

This forum is expected to create a platform for the University and like-minded institutions and their researchers to disseminate their ongoing findings and contributions for the advancement of society. Additionally, the conference will create a forum for constantly improving the University's approach to development-oriented scientific research. It is my hope the deliberations of this conference will provoke policy makers to appreciate the need for substantial and long-term investments in scientific research, innovation and industrialization.

I therefore encourage you to be proactive in the conference deliberations and make your earnest contributions for the success of this very important event in the JOOUST calendar. You are also invited to enjoy the serene environment and hospitality of this University Community and its environs. Once again, I warmly welcome you all to this conference, which is only the second in our university calender, and look forward to interactive and enjoyable sessions.

Prof. Stephen G. Agong', Ph.D, FAAS
Vice Chancellor
Jaramogi Oginga Odinga University of Science and Technology (JOOUST)

CONFERENCE PROGRAMME

THEME
"Harnessing culture and technology for sustainable development, good governance and innovative technology transfer"

HOST
Jaramogi Oginga Odinga University of Science and Technology
(JOOUST)

VENUE
Jaramogi Oginga Odinga University of Science and Technology Main Campus – Bondo

CONFERENCE DAY ONE
THURSDAY 26TH NOVEMBER, 2015
THEME: CAPACITY FOR GOVERNANCE

08.00-09.00	REGISTRATION: **JOOUST CONFERENCE SECRETARIAT**
08.30-09.00	CONFERENCE OPENING SESSION
	VENUE: EACII
CHAIR/RAPPORTEUR	**Dr. David J. Ndegwah / Dr. Darius O. Andika**
	OPENING PRAYER
09.00-09.10	**OPENING REMARKS:** Prof. Benson B.A. Estambale Deputy Vice-Chancellor, Research Innovation Outreach (JOOUST)
09.10-09.20	**WELCOMING REMARKS:** Prof. Stephen G. Agong' Vice Chancellor (JOOUST)
09.20-09.40	**SPEECH BY GUEST OF HONOUR** Prof. Colleta Suda Principal Secretary - Ministry of Education
09.40-10.10	GROUP PHOTO / HEALTH BREAK

KEYNOTE SPEAKER – Prof. Jesse N.K. Mugambi

Topic: Technology and management at the interface of cultures: The integration of the tribal systems in Africa into a system of the rule of law, transparency and civil society as a prerequisite for development.

VENUE: EACII

CHAIR/ RAPPORTEUR	**Dr. Henry Ogola / Dr. Lorna G. Okotto**
10.15-10.45	**Keynote Sub Theme 1**
10.45-11.45	Plenary Session with Keynote Speaker
11.45-12.15	HEALTH BREAK

12.20-12.50	**Otto. J. Kroesen** State and civil society as an enabling environment for economic growth: A historical and contemporary perspective
12.55-13.55	Plenary Session with presenter
14.00-15.00	LUNCH BREAK
15.05-15.20	**Dr. David J. Ndegwah** The role of religion and culture in promoting capacity for governance in the age of Globalisation
15.25-15.40	**Maurice Mashiwa** Rethinking Neo-liberalization of Governance for Inclusive Development in Kenya: A Critical Analysis of Public Participation in the Devolved Units of Government.
15.45-16.45	Plenary Session with presenters
16.50-	**EXCURSION AND BONDING TRIP** Visit to Jaramogi Oginga Odinga Musoleum **(Ka Jaramogi Kango)**
	END OF DAY ONE
	CONFERENCE DAY TWO **FRIDAY 27ᵀᴴ OCTOBER, 2015** **THEME: CAPACITY AND TECHNOLOGY TRANSFER**
0800-09.00	REGISTRATION: **JOOUST CONFERENCE SECRETARIAT**
	KEY NOTE SPEAKER – Prof. Badru D. Kateregga **Topic: Technology and management at the interface of cultures:** The impact of technology advancement to Christian-Muslim cooperation and relationships in Eastern Africa. **VENUE: EACII**
CHAIR/RAPPORTEUR	**Dr. Otto Kroesen / Dr. David J. Ndegwah**
	PRAYERS
09.00-09.30	**OPENING REMARKS:** Prof. Washington Olima Deputy Vice-Chancellor, Planning, Administration and Finance (JOOUST)
09.30-10.00	**Keynote Sub Theme II**
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11.15-11.45	HEALTH BREAK
	PRESENTATION OF CONFERENCE PAPERS
11.50-12.15	**Beatrice Churu** Cultural identity and education for innovation: inalienable rails for sustainable development and social transformation.

12.20-12.35	**Philip Wambua Peter** Performance Contracting and Community Service Participation for Innovation and Academic Development in Kenya
12.40-13.40	Plenary Session with Paper Presenters
13.45-14.45	LUNCH BREAK
14.50-15.05	*Simone Reinders and Courtney L. Vegelin* A Culture of Innovation: Contributions to the Process of Knowledge Transfer and Policy Implementation from the Perspective of Ethiopian Engineering Students
15.10-15.25	*Irene Wanjiru Waweru and Jane Nyambura Ngunjiri* Indigenous knowledge and modern technology in disaster management: Exploring the linkages.
15.30-16.30	Plenary Session with Paper Presenters
16.35-	**EXCURSION AND BONDING TRIP** Visit to Mama Sara Obama Home **(K'ogelo)**
	END OF DAY TWO
	CONFERENCE DAY THREE **SATURDAY 28ᵀᴴ NOVEMBER 2015** **THEME: CAPACITY AND CULTURE**
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KEY NOTE SPEAKER – Prof. Albert-Léonard Kabeya Tshikuku **Topic: Technology and management at the interface of cultures:** Application of modern farming technology and the struggles of small scale farmers in Congo. **VENUE: EACII**	
CHAIR/ **RAPPORTEUR**	**Dr. Lorna Okotto / Dr. Henry Ogola**
PRAYERS	
08.30-09.00	**OPENING REMARKS:** Prof. Joseph Bosire Deputy Vice-Chancellor, Academic Affairs (JOOUST)
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	PRESENTATION OF CONFERENCE PAPERS
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12.05-12.20	*Anne Kamau, Mary Mutiso et al* Adoption of Eco-Friendly Dry-Land Agriculture and Water Technologies in Kitui

	County, Kenya
12.25-13.25	Plenary Session with Paper Presenters
13.30-14.30	LUNCH BREAK
14.35-14.50	***Margaret Moraa Nyakina*** Assessment of Technology on Declining Family Values on Sexuality in Kenya.
14.55-15.10	***Joseph M. Wanjao*** Alternate Techno-Reality: Envisioning African Techno-Feminist Hermeneutic Discourse from Margins.
15.15-16.15	Plenary Session with Paper Presenters
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16.20-16.50	**CLOSING SPEECH** Prof. Stephen G. Agong', Ph.D, FAAS **Vice Chancellor** ***Jaramogi Oginga Odinga University of Science and Technology (JOOUST)***
16.55-17.35	**VOTE OF THANKS** **Dr. Otto Kroesen,** Co-Chairman, Conference Organizing Committee
	END OF CONFERENCE and COCKTAIL PARTY

ABSTRACTS

SUB THEME 1 – CAPACITY FOR GOVERNANCE

Topic: Priorities and timeliness in intercultural management and governance.
Author: Dr. J. Otto Kroesen (j.o.kroesen@tudelft.nl)
Key words: Priorities, timelines, intercultural management, interculture governance.

Abstract
For entrepreneurship to flourish an enabling institutional and cultural environment is required. On the surface of things entrepreneurship is dependent on initiatives of daring and competitive individuals, but implicitly in the notion of entrepreneurship there are also assumptions about cooperation and regulation, without which it cannot deliver on its promises. The combination of a strong state governed by law and an open civil society is therefore researched, since it should provide the institutional and moral basis for effective economic development. It is necessary to get a better understanding of the process of state formation and of the connection between state and civil society, as a historical project. In this contribution some of their historical origins will be traced, in order to draw some lessons for contemporary economic development and entrepreneurship. Besides the role of the state and civil society also attention will be given to the role of a particular mindset and value set by which these institutions are supported and maintained. The focus is on the theoretical framework Rosenstock-Huessy offers on state formation in the West, in co-evolution with society and social values. His insights will be related to more recent work on the interconnection of state, civil society and development. The insights gained from that exercise will be applied to the interconnection of state and civil society in present-day Africa.

Topic: The role of religion and culture in promoting capacity for governance in the age of Globalisation
Author: Dr. David J. Ndegwah
Key words: Religion, culture, capacity, governance, globalization.

Abstract
The question of development in Africa has become a thorny one, as the continent lags behind other parts of the world, in spite of the fact that Africa is the richest continent in the world, in terms of natural resources. Among the issues cited by many writers on development as responsible for this state of affairs include civil war (Calderisi, 2006) bad governance, lack of appropriate development model (Nyasani, 2010), corruption (Odhiambo, 2011) and mismanagement of resources (Veen, 2004). Indeed others think that Africa is poor just because it is poor and has found itself entangled into what they refer to as poverty trap (Sachs, 2005). Collier (2006) refers to other traps that include the civil war trap, and the natural resources trap. Other authors (Wanyama, 2011, Matanga, 2011) have surveyed existing dominant development theories and models and concluded that these are not suited for Africa, because they only perpetuate the dominance of Western countries on Africa. Indeed Dambisa Moyo (2009) has averred that development aid will never develop Africa. It is for this reason that Fitzgerald (2011) invokes what he calls 'a phenomenological hermeneutics of development', distinguishing between conceptualising development and understanding the process of development. He gives an example of positivist and historicist conceptions of development; both of which do not properly account 'for how understanding development both constitutes, and is constituted by development'. "That is, neither properly accounts for how such understanding is immanent in its historical context, yet also transcends it (Fitzgerald 2011: 97)." He suggests that "a phenomenological hermeneutic approach to development is a way to grasp how the possibility of the unprecedented is constitutive of historical singularity, and thus to grasp how 'the history we ourselves "are"' is both constituted by historical context and involves understanding it." The argument, according to this approach is that the germs for future development and change are part of the development process itself. The thesis of this paper is that, whereas it is a

good thing to approach development as a 'phenomenon' from a phenomenological sense, this does not tell interested observers the actual trigger for development or what these promising germs are in terms of content. Hence, the paper argues that insight is the trigger for the germs of development but it cannot be achieved without creating and healing our common history as human beings; an endeavour that is only possible if we embrace both intellectual and moral conversion. In most cases culture stands on the way to this conversion, impacting negatively on political govenance through major issues like ethnicity, corruption and dictatorship, to mention but a few. However, globalization can be a boost to the process of cultural turn-around and good governance that can lead to sustainable development in Africa.

Abstract
This paper is about development failures, as has been experienced in Kenya, given the broader context of cutthroat competing political and economic typologies that has little in common with specific development needs of the people. In many ways, the process of development has by and large been removed from the local people and instead controlled by state functionaries and apparatus. This state of affairs can be attributed to the destructive nature of extractive politics practiced all over Africa that equally creates extractive economic institutions that are not pro-poor in outlook. This paper contends that there is need to seriously re-evaluate the critical input and participation of the public in determining their development blueprints and address priorities accordingly, as enshrined in our constitution. Governing from below is candidly a better viable option to make the much needed difference across the counties in Kenya, which was envisaged by the writers of this beautiful document. However, the practice up to now betrays a gaping discrepancy between the ideal and the real, between what should happen and what actually happens, and between what our politicians promise and what they do. This is the gap that needs to be addressed, based on the paradigm of public participation, which is anchored on the African spirit of communitarianism.

The idea of development is political because it relates to the allocation and distribution of resources, and reflects the impact of past and present policy choices. And like politics, there is no clear-cut formula for allocating development resources, because politics deals with matters of opinion as opposed to matters of fact. That means that for every good development idea, there an equally good but opposed development opinion. The dominant neo-liberal mode of governance has led to predatory politics with a chronic disease of 10 millionaires for every 100, 000 poverty stricken paupers in Africa that even the SAPs antidote from IMF and World Bank could not cure.

This paper contends that pursuing a development paradigm from below is a better and more viable option to realising the much need qualitative, quantitative and mixed progress within the Kenyan polity and indeed the rest of Africa. In this line of thought, Kenyans have identified devolution as the new route to implement and institutionalize development, which is in line with the sustainable development goals that were ushered in during the UNGA meeting in New York. Public participation is an essential tool to advance the core theme of the Kenya 2010 Constitution's Bill of Rights which revolutionises the culture of governance, as the right to development. The constitution seeks to rally the clarion call on development practitioners and the public to constantly keep vigil and protect the excellent ideals espoused by the constitution if they are to take the drive to realize development for all rather than just for a few greedy people.

Topic: Implementing social entrepreneurship in Africa in a globalized neo-liberal context: reflections from the Tanzanian jatropha biofuel sector

Author: Henny Romijn, Associate Professor in Technology & Development Studies, School of Innovation Sciences, Eindhoven University of Technology, The Netherlands, h.a.romijn@tue.nl

Abstract

Social entrepreneurship – entrepreneurship that balances economic, social and environmental concerns by "doing well as well as good", has recently attracted a lot of attention in development and business circles around the world, raising high expectations, also in Africa. Could this be the right way for modernization in Africa? In this contribution it is argued that social entrepreneurship suits Africa much better than conventional narrow focused business models, as its principles are more in line with traditional African values of community, traditional long run perspectives on how to live in harmony with nature through shared resource use, and respecting values and practices of previous generations.

However, what can business people operating in Africa – whether of domestic or foreign extraction – realistically be expected to deliver on this score in the current-day neoliberal policy setting that has been forced upon the African continent through decades of structural adjustment, international aid conditioned by Poverty Reduction Strategy Paper formats, forced prescriptions of World Bank-style 'good governance', and stringent WTO trade and foreign investment rules? And what about the current economic governance climate in the western countries, from where many foreign investors into Africa emanate, which shares many similar neo-liberalistic features? One can expect to encounter big tensions and contradictions between success requirements for social entrepreneurship in Africa on the one hand, and the practical reality of this neo-liberal context on the other.

The purpose of the paper is to explore these tensions and contradictions by means of an in depth case study of a biofuel producer operating in Tanzania during 2005-12. The company was designed and operated as a social entrepreneurship venture from the start, in contrast with many other biofuel companies that were started about 2005 when the prospect of making biofuels from the tropical jatropha curcas plant seemed to signal a golden future for African countries. However, after some years, when the jatropha hype was over, this company as well ultimately succumbed.

This company became essentially a victim of a governance climate in which ostensible concerns for social benefits prove to be wafer thin. Social business requires trustful 'patient capital' (as also argued by the American Acumen fund) and investment in building up the technical, managerial and organizational capabilities of the workforce and trustful relations with business partners in a society where generalized trust is not the norm. A serious engagement with stimulating social entrepreneurship will require not only extraordinary individuals who feel the call to work for a higher social goal, but also a change of societal mindsets more broadly – to start with, from parties in the global North - so that human capacity can be nurtured and empowered in African societies so as to entwine the best from their own cultural values and practices, combined with the requirements of a modern business environment for responsible societal development.

SUB THEME 2 – CAPACITY AND CULTURE

Topic: Cultural identity and education for innovation: inalienable rails for sustainable development and social transformation.
Author: Beatrice Churu
Key words: African identity, value system, reawakening, education, innovation, sustainable development.

Abstract.
The African person will awake and make his/her contribution to own and world development only if s/he reawakens to the African identity and value system to which s/he belongs. Reawakening is more than intellectual accession. It is a complete orientation to life in favour of African foundations, that validates own perspectives, questions and hypotheses vis-à-vis existential questions. This paper will refer to renowned scholars who underscore this fundamental truth, notably Cheikh Anta Diop, Asante Kete Molefi and Ama Mazama among others. Science is a systematised expression of tradition, and this intellectualisation produces innovation. Without systematic intellectualisation of tradition, societies suffer cultural decline, but science that is disconnected from tradition is lame, and unsustainable; it does not belong, and cannot transform. The paper emphasises the place of a practical education that enables family and community participation, solidifies rootedness in traditions, and engrains critical and creative reflection and appropriation, thus promoting creative thinking and nurturing innovation. Communities have stakes in and responsibilities towards their youth for whom they must hold the common goal of educating authentically, in the ambit of their shared values. These responsibilities call for a shift in consciousness in favour of Africa's own development determined and measured in African terms. Success stories of African cultural re-insertion and its resultant fruitfulness will be cited with a view to demonstrate the path to African cultural reconstruction as consubstantial with sustainable development.

Topic: Performance Contracting and Community Service Participation for Innovation and Academic Development in Kenya
Authors: Dr. Philip Wambua Peter
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Key words: Performance contracting, community participation, innovation, academic development

Abstract
Performance contracts can be made to work, but there are numerous pitfalls along the way which can punish innovation, success and can erect complex barriers to effective implementation. Performance contracting has largely been considered as the remedy to the quality of service delivery in public universities in Kenya. However this has not been the case. The fundamental principle of performance contracting in these institutions of higher learning is the devolved management style. The study was mainly concerned with collecting empirical evidence linking teaching Academic staffers' performance contracting and community service participation. Descriptive research design was used to highlight specific descriptions in respect of fundamental aspects of performance contracting and give directional predictions on its influence in community service participation by university lecturers. The study was done in view of a total population of five thousand six hundred and thirty (5630) teaching academic staffers from seven public universities. Three (3) public universities, namely Kenyatta university, Maseno university and Moi university comprising eight hundred forty eight (848) lecturers were purposefully chosen due to geographical dispersion to provide empirical evidence by way of collecting data through drop and pick later questionnaire administration and semi structured interviews, where a total number of one hundred forty two (142) staff members were randomly selected as respondents.

Descriptive findings indicated that most of teaching academic staffers were aware of performance contracting but understood it differently in versions and terminologies. Results of the F test confirmed that there was a positive relationship between teaching academic staffers' performance contacting, participation in community service and the level of service delivery at the selected Kenyan public universities. Different tests of between-subjects effects established at least at 90% confidence interval that the level of service delivery was significantly reliable on the participation by the universities teaching academic staffers in community service. The study concluded that the university tangibles, and reliability of the lecturers as well as their responsiveness, assurance and empathy significantly depend on their participation in community service and involvement in organizational matters. Hence, it recommends that there should be stakeholders' consultation and involvement, proper management by objectives practices and setting of challenging and attainable targets. The universities should endeavor to engage academic teaching staff in designing the targets of performance contracting to create their awareness and train them on the same. The universities should also provide some socio-economic incentives to motivate academic teaching members of staff improve the quality of their services. The management of universities should establish a body to develop, sustain, monitor and evaluate the performance contracting practices across public universities and that the universities management should also extend their resources towards establishing causes of weak participation in community service.

Topic: A Culture of Innovation: Contributions to the Process of Knowledge Transfer and Policy Implementation from the Perspective of Ethiopian Engineering Students

Authors: Simone Reinders
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Key words: Social innovation, culture of innovation, capabilities, knowledge transfer, engineering, Ethiopia

Abstract
Innovation offers opportunities for modernization and development. In recent years it has become a buzzword in the world of NGO's, IGO's and governments in developing countries and is featured in the proposed UN Sustainable Development Goals. Different types of innovation are increasingly recognized, complicating the classic notion of innovation as a tool for high-tech advancements of the market. We now see the benefits of social innovations, user innovations and inclusive innovations emerging in both developed and developing countries. Nonetheless, this paper argues that there are two significant knowledge gaps relevant for innovation in the African context. Firstly, there is a lack of knowledge about the interface between different types of innovation and culture, specifically in terms of what influence cultural notions of innovation have on the innovation process. Secondly, a knowledge gap exists in the way policies and programs facilitating different types of innovation should be implemented. The implication of these gaps is that beneficial innovation may be inhibited by misinterpretations of its value and be undermined by inappropriate development policies and programs. With a focus on Ethiopia, this paper explores these gaps in two ways. Firstly, it introduces the notion of a culture of innovation present in society as a factor with far-reaching influence on the way the innovation process takes shape. Secondly, this paper provides insight into the innovative capabilities among engineering students at the Addis Ababa Institute for Technology as moulded by their specific cultural context. Engineering students, being the future engineers and innovators of the country, articulate the nature of present and future innovative processes in the country. A series of interviews and visual material

shows their understanding of innovation, how it takes shape, and their individual and collective aspirations and expectations of using innovation as a tool for the development of their country. By contextualizing these findings within broader development policy frameworks, this paper provides insight into what kinds of innovation are relevant and feasible and in what way these could and should be used to promote national development. Moreover, these findings contribute to a "rest-to-the-west" approach that supports local and national knowledge creation and can be used for future endeavors by NGOs, IGOs and government.

Topic: Indigenous knowledge and modern technology in disaster management: Exploring the linkages.

Authors: Irene Wanjiru Waweru and Jane Nyambura Ngunjiri

Key words: Indigenous knowledge, modern technology, disaster, disaster risk reduction, disaster management

Abstract

The Red Cross and Red Crescent societies define disaster management as the organisation and management of resources and responsibilities for dealing with all humanitarian aspects of emergencies, in particular preparedness, response and recovery in order to lessen the impact of disaster. The increasing frequency of disasters, coupled with a number of emerging threats and trends, are leaving more people vulnerable to the effects of disasters and inflicting greater damage, loss, and dislocation on vulnerable people worldwide. According to the Centre for Research on the Epidemiology of Disasters (CRED), in 2008, more than 235,000 people were killed by disasters, 2.14 million affected, while the cost of disasters was over 190 billion US$.[1] In developing the Hyogo Framework for Action 2005-2015, a review of progress made in implementing the Yokohama Strategy adopted in 1994, stressed the importance of disaster risk reduction being underpinned by a more pro-active approach to informing, motivating and involving people, in all aspects of disaster risk reduction in their own local communities. After the 2004 Indian Ocean Tsunami, two success stories emerged, bringing new interest to the concept of indigenous knowledge. The Simeulueans living off the coast of Sumatra, Indonesia and the Moken, living in the Surin Islands off the coast of Thailand and Myanmar used knowledge passed on orally from their ancestors to survive the devastating Tsunami[2]. The importance of invoking the indigenous knowledge is anchored on the fact that losses continue to mount in spite of increased investments in the area of disaster management in recent decades (Shaw et al (2008). Thus there is an evident gap between policy and practice. The need to bridge this gap with adequate recognition of the domain of indigenous knowledge and local coping capacities is very urgent. Shaw et al (2008), aver that there is a strong need to recognize the potential of community knowledge and actions, and of switching to a bottom-up approach that uses appropriate community practice as the basis for policy formulation. This paper will review secondary sources of data related to areas such use of modern technology in disaster management and indigenous knowledge among others. The relationship between indigenous knowledge and natural disasters has developed more interest in recent years. The new discussions around indigenous knowledge highlight its potential to improve disaster risk reduction policies, through integration into disaster education and early warning systems. The modern technology has also been employed in disaster risk reduction with its own level of success. However, the issue that this paper wishes to explore is the linkage between indigenous knowledge and modern technology in disaster management. This paper argues that application of modern technology and indigenous knowledge can present itself as a viable option and effective approach to disaster management.

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[1] Disaster management and risk reduction: strategy and coordination- International Red Cross 2010 -201

[2] Indigenous Knowledge for Disaster Risk Reduction: Good Practices and Lessons Learned from Experiences in the Asia-Pacifi c Region

Topic: Adoption of Eco-Friendly Dry-Land Agriculture and Water Technologies in Kitui County, Kenya

Authors: Anne Kamau[1], Joseph Ngeranwa[2], Dickson Ombaka[3] and Mary Mutiso[1]
Institute for Development Studies, University of Nairobi
1.   Department of Bio-Chemistry & Bio-technology, Kenyatta University
2.   Department of Sociology, Kenyatta University
3.   Department of Geography, Kenyatta University

Abstract
Attaining food security is critical in enhancing the wellbeing of individuals and communities in a country. Whereas access to adequate and quality food is considered a basic human right, it remains a challenge in Kitui County, Kenya. This is a semi-arid area, inhabited by the Kamba people, and grouped under ASAL, because it is characterized by severe water stress, food shortages and related poor health. Many households in the area have resorted to using environmentally depredating and unsustainable activities such as charcoal burning and sand harvesting which are a threat to freshwater bio-diversity. The use of innovative, environmental and eco-friendly technology can boost food production in the area and improve people's livelihoods. There is therefore need to identify programs that can be implemented in the communities to arrest the situation. In Kitui, one initiative, the Children of God Relief Institute (COGRI) – Nyumbani, has risen against odds to adapt eco-friendly dry land agriculture and water technologies to address the food situation. The Nyumbani village is green through-out the year and it is able to produce adequate food for the village residents and excess for sale. The main objective of this study was to assess and explore the potential for replication of these COGRI-Nyumbani climate change technologies for improvement of food security and community health in Kitui County. This study was informed by the cultural ecology, green economy and diffusion theoretical approaches in exploring the research objectives. It applied a cross-sectional study design whereby twenty-five household interviews and four focus group discussions were held with beneficiaries of COGRI-Nyumbani village. In the surrounding community, thirty case studies and key informant interviews were conducted and direct observations made to establish the key technologies used in the village. The study also assessed the level of technology replication in the neighboring community as well as the successes and challenges encountered. Results showed that only a selected type of the Nyumbani climate change technologies had been adopted by individual households within the village. Moreover, only a small number of the surrounding community members and groups had adopted these technologies. The adopters were mostly non-locals with agricultural background, while the indigenous, who were traditionally pastoralists, resisted the new technologies. Non-adoption can therefore be attributed to cultural factors relating to their being traditionally pastoralist communities, as they continued with their traditional practices which included rearing of goats. This paper concludes that it is important to align new technologies to the local knowledge and to engage the local actors in the design and implementation of new technologies in order to boost the level of acceptance and uptake. Further, instead of designing completely new technologies, it is important to understand the existing local technologies and together design the alternative technologies that best suit the situation.

SUB THEME 3 – CAPACITY AND TECHNOLOGY TRANSFER

Abstract
Hunger is a global shame and an impediment that hinders the world from reaching millennium development goal number one, of halving extreme poverty and hunger by 2015. Currently, an estimated 70% of the global population is fed by small-scale food producers, who use no more than 30% of the world's arable land. And yet the small holder farmers especially those from developing countries face some of the world's most difficult agricultural challenges as they strive to grow food. These challenges include erratic and unreliable rainfall as a result of changing weather patterns due to climate change, poor soils, poor quality seeds and other farm inputs, limited access to farmer friendly credit facilities and poor access to modern agricultural technologies. This results in low yields and although there are other contributing factors, their low yields are a root cause of poverty, hunger, and malnutrition that afflicts more than a fifth of the world's population. Further, despite the hard work and ingenuity of smallholder farmers, about 30-40% of their harvests get lost due to poor post-harvest management, needless to mention the impact of pests and disease damage, like aflatoxin, that they cannot control. This happens in spite of the fact that the global agricultural community has a long history of sharing knowledge, expertise, enthusiasm, and ingenuity with smallholder farmers for a common cause such as introduction of inorganic fertilizers, hybrid seeds, pesticides and artificial insemination to mention but a few. This means that together with smallholder farmers, innovative solutions can be discovered, nurtured and applied so that such farmers can grow more and better food and fiber. Such a partnership can also help them care for the land, enhance their economic future, and protect as well as preserve the environment for generations to come. These farmers are eager for change and ready to make new choices, new knowledge, and want a chance to help solve the agricultural problems that stand on their way. Through sharing their knowledge of the land, local growing conditions, and cultural preferences with their corporate partners, this class of farmers can also help in ensuring that new technologies and products are adopted, adapted, and made practical and effective for their needs. This paper, therefore, explores the elements that need to be put in place in order to strengthen public-private partnerships, in terms of sharing expertise, knowledge, skills and resources, through technology transfer, in support of agriculture in order to promote food security, through technology transfer. This will help in addressing the challenges faced by smallholder farmers, with references to the specific experience of the World Vision on farming activities in Kenya.

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[3] Lawrence Kiguro is the Associate Quality Assurance Director for Livelihoods and Resilience at World Vision Kenya and currently a PhD Student in Development Studies at Jomo Kenyatta University of Agriculture and Technology (JKUAT).

Topic: Assessment of Technology on Declining Family Values on Sexuality in Kenya
Author: Margaret Moraa Nyakina
Key words: Technology, family values, sexuality, African culture, gender differentiation, social dilemma.

Abstract

Technology has influenced the society socio-economically in both positive and negative ways. The world has become a global village, making Kenya a Multi-cultural society, hence formation of modern families, with an erosion of core African values. To that effect, what the society viewed as indigenous norms is extinct. The family institution as the basic unit of the society is on the decline, with no gender differentiation that determines social roles and practices. This is an indication that the society is in a social dilemma and that its future is doomed. Both men and women have become breadwinners and joined the workforce, sometimes spouses operating in workstations far away from their homes. This state of affairs has become a big economic boost to families, but it has also led to rampant sexual infidelity. Michael (1994) and Wiederman (1997) affirmed that, roughly 20-25% of men have engaged in extra marital sex during their marriage. Moreover, a 1994 survey shows that an estimated 21% of men and 11% of women in North America are unfaithful to their spouses at some time in their lives. In South Africa, Population-based survey in 2005, showed that 40% 0f men and 25% of women aged 15 and 24 have more than one sexual partner. Reports also show the rising rate of infidelity between couples in Nigeria is a course for concern with many marriages having been dissolved as a result of promiscuity among married couples (Chalya, 2012). In Kenya, a survey on infidelity, indicate that, 76% of individuals in relationships in the Rift valley confessed to having caught their spouses cheating on them, Nairobi ties with Coast at 67% of couples having caught their marriage partners cheating on them, while 63% from the seven counties that make the former Eastern Province admit to catching their spouses cheating on them. Indeed most parents keep themselves busy with the mobile phones and internets, accessing face books and WhatsApp instead of bearing attention to their families. The traditional family as we know it of "one man one woman" has broken apart, due to the influence of modernity and technological advancement. Research by Pew Research Centre, shows that, there is a growing number of governments debating over the issue of legalising Gay marriage (same-sex marriages), as quite a number of countries have lawfully allowed it. This deviation has resulted in high divorce rate, injuries and deaths, single parenthood, blended children, abortions, child headed families and sexually infected diseases such HIV/Aids. Therefore, this paper is focussed on the position of Technology in developing and promoting the African culture, particularly on sexuality. The Scope of the paper involves determining the impact of Technology on families, and what can be done to ensure that technology does not destroy the African culture. It should instead take it to the level of entrepreneurship and help contextualize all technology transfer so that it bears the marks of all cultures that it gets embedded in.

Topic: Alternate Techno-Reality: Envisioning African Techno-Feminist Hermeneutic Discourse from Margins.
Author: Dr. Rev. Joseph M. Wanjao
Key words: Alternate techno-reality, techno-feminism hermeneutic, globalized technology, decolonization, macro technology.

Abstract

Despite the on-going development of globalized technology and its vast range of organizing, interpreting and delivering new products in Africa, the modern African techno-hermeneutic thinking, action, and interaction are yet to be integrated into women friendly products, plans or structures of micro and macro-technology. The lack of formal completion of the process of decolonization in Africa opens the African woman to deep-seated techno-gender dislocations and disorientation of their old technological

inventory. Women are technologically rendered unsuited and unavailable by hermeneutical stalemates and deadlocks whose choices, trade-offs, patronage and dependence becomes a stumbling block to the unlocking of African Woman's potential. As a result, the African woman is forced to embrace alien patriarchal fixed-centers through unfriendly usage of alien hi-tech solutions, policies and regulations. Besides, the explosion of hi-tech gadgets triggered sharp polarizations, technological turmoil and prolonged economic recessions by scuttling the possibility of gender-based techno-interpretations in Africa. The skilled manpower in the scientific and technological industries is a reserve of African male technocrats who happens to unconsciously perpetuate the patriarchal techno-oppression and mismanagement. They give African women a low status to technology through alien embrace of antiquated hermeneutical lenses of Western patriarchal techno-scripts. The nostalgia for the lost indigenous techno-scripts raises new issues and problems that demand for fresh analysis of oppressive techno-scripts whose intercultural settings depend on the techno-existential attitude of African woman's right to fight for equal techno-gender affirmations. The indigenous techno-scripts that make the African woman understand what the dominant techno-powers of this age are and how they operate exposes African women to hermeneutical repudiations of the colonial techno-bequeaths that identify the African woman as subordinate to man. Indeed, the indigenous techno-script stands as an interpretable organism whose audit of divergent techno-customs and practices are placed at the heart of African collective conscience. Techno-feminist hermeneutics calls for fresh, stable and cohesive reading of techno-scripts within a collective and innovative location where local people validate the underlying techno-thinking from a feminist perspective and lived experience. The techno-script resilience points to creativity enjoined to effective transfer of technology through cultural trends that constitute diverse techno-analytical tools. This paper claims that in the traditional African society women were technologically more equal to men than under colonialism; and that this claim might provide a new hermeneutics for addressing traditional African woman's perspective of modern techno-flow in terms of creativity, innovation, and political mobilization. The guiding question thus is: In which way can the egalitarian and initiative taking role of women in the old tribes contribute in transforming the new era of civil society, modernity and technology in Africa? This question is answered and the ultimate goal hopefully achieved through our 1) description of the traditional role of women from different parts of Africa, 2) analysis of colonialism and postcolonial patriarchal influences and attitudes toward the present role of women and finally 3) proposals for future dealing with the role of women in technological contexts of a fully techno-feminist society that tackles modern technology issues from an equitable gender perspective.

Topic: The role of Internet in the Transformation of Cultural Value chains amongst the Luo of Western Kenya.
Author: George Odhiambo Okoth
Key words: Internet, Transformation, cultural values chains, cultural systems.

Abstract
Cultural values are historically believed to be embedded in the primordial value chains of societies in the world but many observers have proclaimed the dawning of a new age–known as the new knowledge world in which society itself is on the verge of transformation through the use of internet technology. Cultural system of the Luo community in western Kenya is one of the cultures which have been transformed. The Luo cultural systems is a broad reflection of a variety of beliefs and practices which are held together through a chain of value systems. Globalization and its agent internet technology with its instantaneous capability of providing immense online amount of information relating to culture has contributed to the transformation of cultural value chains, beliefs and practices amongst the Luo. Key cultural values amongst the Luo of western Kenya that have been transformed include, sense of community; sense of good human relations; sense of sacredness of life; sense of sacredness of religion and sense of respect to authority. Controversial debates about Globalization and internet technology

have stated that there is a rise of a global culture which is driven by symbols, images, and anesthetic of the lifestyle and self-image. This new knowledge world and global culture has emphasized a call for rapid pace in innovation and the far-reaching impact of the development of digital information and communication technologies hence perpetuating the new concept that technological knowledge has become the most important resource in today's world thus undermining cultural value chains. However, regardless of this shift of belief in the "traditional/ primordial cultural values" to the "digital information and communication technologies" culture still remains as a value that is to be acquired and an ongoing process of social construction and collective action embedded in societal tasks, relationships and tools. This paper therefore endeavors to measure the various perspectives of transformation on specific cultural values in Africa taking the case of the Luo community of western Kenya. The analysis is based on critical interpretation of different theories that have been raised to define culture and explain its historiographical transformation which includes humanist, anthropological and the essentialist concepts of culture.

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