Triangular Partnership: the Power of the Diaspora

By Enawgaw Mehari MD, Kinfe Gebeyehu MD, Katy Dickinson and Matt Watts,
Editors for People to People, Inc.

Pre-Publication Review

Distributed at the
5th Annual Global Ethiopian Diaspora Conference
on Health Care and Medical Education
28 September 2013 in Washington D.C.

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Foreword

By David H. Shinn
Adjunct Professor, George Washington University
U.S Ambassador to Ethiopia 1996-1999

People to People (P2P) developed the concept of the Triangular Partnership in an effort to give something back and make a difference in the Ethiopian health sector. The Triangular Partnership draws on the Ethiopian diaspora to connect western and Ethiopian health care institutions. The Ethiopian diaspora in the United States alone is estimated to number between a half million and more than a million persons. Among this number are an estimated 1,000 physicians of Ethiopian origin living in North America. Many other Ethiopians, including health professionals, have migrated to other parts of the world. While this book focuses on how the Triangular Partnership has worked in Ethiopia, it applies equally to diasporas from any country that now live in any other part of the world.

Enawgaw Mehari, the Founder of P2P and now a physician living in the United States, explains in the introduction that the Triangular Partnership endeavors to provide a framework to prioritize the interest and needs of individuals and institutions to lessen the existing knowledge gap between developing and more developed nations. The objective is to harness the imagination of local institutions and the diaspora to solve fundamental problems, especially in the fields of health care, medical education, and training. The diaspora, and its friends, is an indispensable institution that can help transfer knowledge and technology. Gizachew Beyene, P2P Vice President for strategic planning, adds that the diaspora with its vast network of professionals and specialists has demonstrated its willingness to be fully and effectively engaged in supporting this effort.

Kinfe Gebeyehu and Elias Siraj look at the prospect of constructing centers of excellence in health care and medical education in Ethiopia and other developing countries. They point out that at least ten centers of excellence have been established in a variety of countries in collaboration with institutions in the United States. Two groups in the Ethiopian diaspora are working to establish private centers of excellence hospitals in Ethiopia. The authors argue that the Triangular Partnership is an excellent way to pursue this objective.

Roman Aydiko Ayele, Heidi Busse, Akililu Tumebo, and Girma Tefera offer a micro study on implementing the Triangular Partnership. They describe innovative ways of building institutional capacity involving the University of Wisconsin, Addis Ababa University, and P2P. The specific goal is the development of emergency medicine as a specialty at Tikur Anbessa (Black Lion) Hospital.

Katy Dickinson and Ravishankar Gundlapalli discuss how professional mentoring interacts with the Triangular Partnership and the global diaspora. They also provide best practices and measurable benefits drawn from successful professional global mentoring programs sponsored by corporate business, government, and non-profit entrepreneurial institutions. They cite specific examples from Sun Microsystems' Engineering Enrichment and Development, TechWomen (an initiative of the U.S. Department of State), and TiE Silicon Valley MentorConnect program.

Stephen R. Freidberg suggests approaches for establishing sustainable programs to address certain unmet health needs. One solution is to encourage diasporas to work with high-income countries to produce self-sustaining changes in the local health care environment. He singles out training for surgery and anesthesia. He identifies a number of organizations that can help with this training.

James Conway and Anteneh Habte focus on the role of western institutions and the way diaspora health care professionals can mitigate the brain drain and serve as the bridge between health care institutions in their countries of origin and those of the developed countries in which they reside. The chapter also examines the increasing interest and new initiatives by Western academic institutions to channel their global engagement through health care organizations such as P2P. The authors describe the diaspora as the third leg of the developmental stool.

Bezawit Tekola, Jan Edwards, and Mallory Taylor address the role of social media in Triangular Partnership and how it can make the most significant possible impact. They include Facebook, Twitter, YouTube, LinkedIn, blogs and two-way mobile messaging in their analysis. Many hospitals and healthcare organizations are transforming the use of social media and becoming key players on the social web. The expanding access to the Internet in developing countries provides a growing opportunity for the use of social media as a disseminator of health care information.

Ahmed A. Moen gives us another micro-study of the Triangular Partnership, citing collaboration between Howard University in Washington, D.C., and P2P. Howard University and P2P have assembled diverse talent through a two-way, cost-effective exchange of human and material capital to support graduate medical education and capacity building at Addis Ababa University and the University of Gondar. The project received funding from the U.S. Agency for International Development and the World Bank.

Costantinos BT Costantinos argues that the billions of dollars in international aid pumped into Africa have been largely wasted based on the poor development performance of nations receiving the assistance. Efforts at development in Africa have been marked by a tendency to narrow development aid theory and practice to immediate,

not-very-well-considered aid and social action. Structural adjustment programs mandated by the international aid community contributed to the challenges. The United Nations Millennium Declaration has helped to redress the problem. The author believes that Triangular Partnership offers the possibility for a more constructive philosophy of international aid. He emphasizes that democratic institutions in the recipient country will help ensure that the state works on behalf of the population.

Tumul Chowdhury, Belachew Arasho, Nora Sandu, and Bernhard Schaller inform us about the application of information and communication technology (ICT) to medical education and the role and challenges ahead for Triangular Partnership to facilitate the use of ICT. The authors discuss ways that P2P has effectively used telemedicine and the e-library. They suggest a variety of easily accessible health care ICT resources. They also mention the barriers to the implementation and proper utilization of ICT in health care and conclude that the utility of ICT has yet to be proved in the developing world. Triangular Partnership can help mitigate the barriers and expand the use of ICT resources.

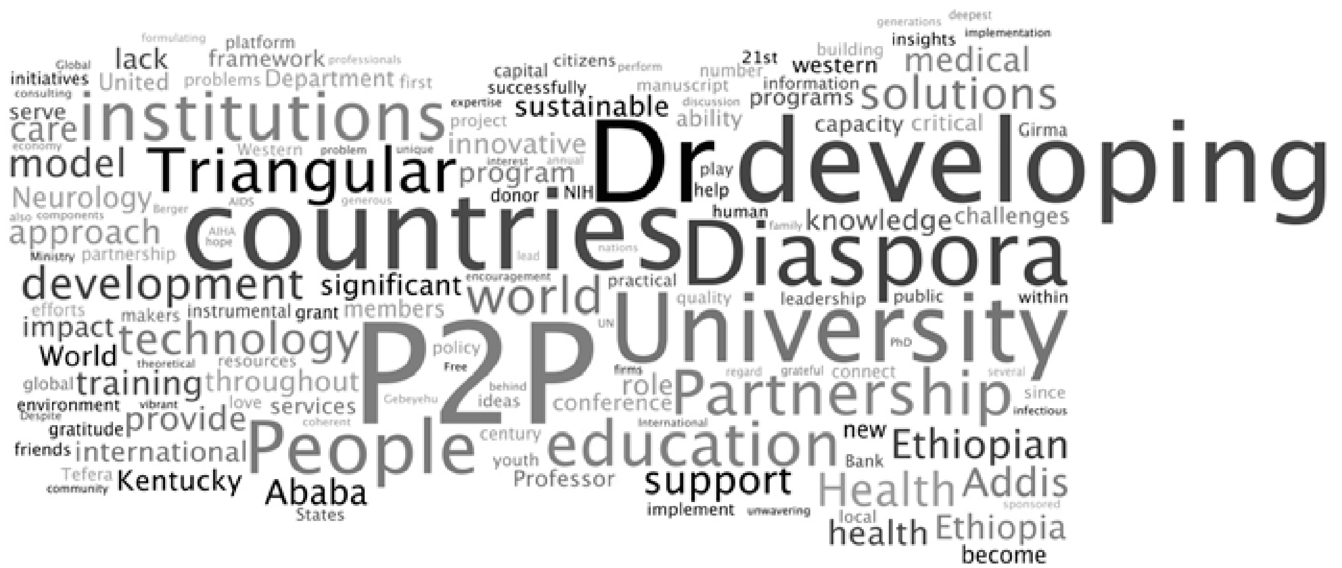
Tassé Abye investigates the level and modalities of Ethiopian migrants' involvement in development projects and particularly the development of higher education. The author examines the impact of the Ethiopian brain drain, especially the relationship between the knowledge and skills possessed by the Ethiopian diaspora and unmet human resource needs in Ethiopia. In addition to P2P, the study discusses the role of organizations such as the Ethiopian Scientific Society, Association for the Development of Higher Education, and the Ethiopian Scientific and Academic Network. The author concludes that well-structured organization of diaspora contributions can produce important results for Ethiopia and its development.

Bishwa Acharya, Teferi Tsegaye, John Rutan, Buddhi Gyawali, Hari Prasad, Suraj Shrestha, and Tilak Shrestha deal with a topic that often gets omitted from a discussion of health care—geospatial information technology (GIT). GIT has been institutionalized in few African countries. GIT has, however, important implications for quality of life and climate change and hence for health care. The authors describe the tools of GIT and urge that it be optimized to act as early warning systems, forecast extreme weather, assist in containing the spread of disease, and help predict and allow humanity to adjust to a rapidly changing climate. Experts in the diaspora are in a strong position to help developing countries make effective use of GIT.

Egbe Osifo-Dawodu, Enoma Alade, and Olusheyi Lawoyin conclude the book by making the important point that a Triangular Partnership is only sustainable if it meets the needs of the three legs of the stool. The authors explain the changing needs of African institutions, drawing on the examples of Rwanda and Ghana. They also note that as African countries change, global development assistance from western institutions is changing. They ask if African diasporas might be the missing link. If the diaspora leg of the Triangular Partnership is to succeed, the authors believe the project must be something the diaspora excels at and has a passion for.

These essays on the Triangular Partnership by a group of esteemed health professionals and a few from outside the field should encourage the expansion of this concept in Ethiopia and beyond. Thanks to the efforts of P2P and other Ethiopian diaspora organizations, Triangular Partnership has an established track record that diaspora groups from other parts of the world can draw upon. The concept works and has considerable potential throughout the developing world. All of the authors of the chapters in this book have contributed in their own way to its success.

I was invited to write the Foreword because I have served as an informal adviser to P2P since its inception in 1999. It has been my pleasure to be associated with such a practical, productive, and self-effacing organization. I wish P2P every success in the coming years and look forward to seeing it help a growing number of people in Ethiopia and elsewhere in the developing world.



Acknowledgements

By Enawgaw Mehari, MD
Founder and President of People to People, Inc.
Consulting Neurologist at St. Claire Regional Medical Center in Morehead, KY
Neurology Course Director for University of Kentucky College of Medicine's RPLP Program

In April 1999, with the establishment of People to People (P2P), we embarked on an extraordinary journey, and were able to accomplish an amazing feat. This feat would not have been possible without the support and love from family, friends, a number of our closest colleagues, and the network of P2P with its generous volunteers and donors.

I would like to extend my deepest gratitude to my wife Aelaf Felleke, and to my daughters Elleni and Makda Mehari for their unconditional love, support, and encouragement in all of my endeavors. Their unconditional support of P2P's mission and vision is the principal source of my unwavering commitment to the organization, which continues to grow and evolve on a daily basis.

I would be remiss if I did not acknowledge the unflagging support of Katy Dickinson, Dr. Knife Gebeyehu, and Matthew Watts for the countless hours they devoted to editing and configuring this manuscript. My deepest gratitude also goes to the publisher for affording us an opportunity to share our thoughts and experiences with the world. Throughout this project, I have received encouragement from a significant number of P2P board members, P2P senior leadership, P2P Annual Diaspora health and medical education conference committee P2P family members, friends, and several Ethiopian and United States institutions. We are deeply humbled and grateful for your unbelievable support.

People to People, Inc. is blessed to have a significant number of generous donors and supporters. The following organizations have had an indelible impact on People to People's ability to deliver services and training with excellences.

St. Claire Regional Medical Center has been an incredible partner and supporter, specifically in the areas of sponsoring the first Hospice Care training in 2005, Horn of Africa Journal of AIDS publication since 2006, and the People's Free Clinic in Morehead, KY, since 2005.

The Pfizer foundation has been instrumental in P2P's efforts to inform the broader public about HIV/AIDS by providing a literacy grant in 2006 and a Free Fluconazole donation for Ethiopia.

We are very grateful to **Professor Alice Johnson and her team** at the University of Illinois, who have been integral members of P2P's efforts to introduce masters and PhD social work programs at Addis Ababa University. Under Professor Abye Tassee's leadership at Addis Ababa University the program further expanded to bear its fruits of graduating the first PhD candidates.

People to People have worked closely with **War Child Canada** to established vocational training programs for AIDS Orphans who completed grade 12.

P2P's partnership with the Neurology Department at **Mayo Clinic** was instrumental in the development of Neurology residence program at Black Lion Hospital.

In 2008, the **World Bank** partnered with P2P to mobilize the Ethiopian Diaspora in health care and medical education. Dr. Kofi Anani was the chief architect of the project.

In 2008, the **Packard Foundation** provided P2P a grant to connect the Diaspora youth with the youth in Ethiopia. Mr. Sahlu Haile's passion for the youth program has been extremely infectious.

In 2009, **NIH and International Society of Neuro-Virology** sponsored a 4-day CME conference on infectious disease of the nervous system in Addis Ababa, Ethiopia. Dr. Gene Major from NIH, Dr. Avi Nath from Johns Hopkins, Dr. Joseph Berger from University of Kentucky, EMA and Ethiopian Ministry of Health, played critical role for the success of the program.

In 2010, the **Department of Neurology at The University of Kentucky** initiated a weekly broadcast that was integrated into The Neurology Department of Addis Ababa University's ground round series. Professor Joseph Berger has been a visionary leader with respect to this project and others, as the head of The Neurology Department at University of Kentucky.

In 2010, the first **Triangular Partnership** was initiated amongst **Wisconsin University**, **P2P**, and **Addis Ababa**

University through a grant supported by the **American International Health Alliance (AIHA)**. Professor Girma Tefera, Gizachew Bizuayehu, Dr. Milliard Derbew, Dr. Kinfe Gebeyehu, Dr. Aklilu Azaj, Dr. Dawd Siraj, Dr. Getachew Teshome and the Honorable Dr. Tedros Adhanom, Minister of Foreign Affairs, were instrumental in supporting the implementation of this important program.

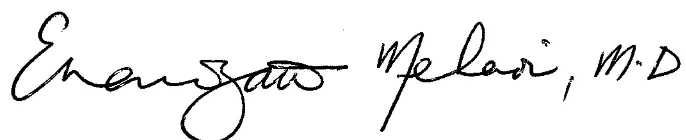
In November 2012, a Triangular Partnership symposium organized by P2P was launched at the **University of Kentucky**. Dr. Susan Carvalho and Dr. Matheny were the principal coordinators from the University of Kentucky. The university President, CEO, and the Dean, attended the event.

In March 2013, Dr. Bezawit Tekola and Dr. Girma Tefera joined me as coauthors for a poster presentation at the **Consortium of University Global Health (CUGH)** on the innovative approach of Triangular Partnership.

Since 2008, the **Global Ethiopian Diaspora Health Care and Medical Education Conference** has been an annual conference. This has become a platform to connect policy makers and leaders from Ethiopia, the Ethiopian Diaspora medical community, academia, and others from prominent Western institutions. Dr. Elias Siraj, servers as the outstanding chair of this conference, the all-volunteer organizing committee are the power behind.

An additional list of friends and partners of P2P include: Ethiopian Airlines, Intercontinental Addis Hotel, Dream Liner Hotel, Pfizer, the U.S. National Institutes of Health (NIH), World Bank, AIHA, Addis Ababa University, Ethiopian Federal Ministry of Health, Mekele University, Bahir Dar University, Gondar University, Howard University, P2P Canada, P2P Sweden, P2P Finland, P2P Switzerland, and P2P Ethiopia, and MRC Holland which has been supporting the girls boarding school for several years.

Finally, I would like to thank Ambassador David Shinn, our patient and wise associate editors, the authors of each section of this book for their wonderful contributions and insights and Michael Howard and Shalon Lester. I will always remain indebted to all of the contributors to this manuscript. We all can acknowledge that the end product is a result of love, understanding, and unwavering support. This book is dedicated to the People to People network with appreciation and gratitude.



Introduction

By Enawgaw Mehari, MD
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Consulting Neurologist at St. Claire Regional Medical Center in Morehead, KY
Neurology Course Director for University of Kentucky College of Medicine's RPLP Program

Triangular Partnership is founded on the genesis of the Diaspora through an evolutionary approach encompassing theoretical and practical inputs. This approach is designed to provide a bridge for native professionals to apply their expertise, and to cultivate an environment for western institutions to engage with the developing world. This approach employs a knowledge management process predicated on science and technology. The Triangular Partnership endeavors to provide a framework to prioritize the interest and needs of individuals and institutions to lessen the existing knowledge gap. The premise is to institute a stable environment to nurture human capital, quality medical care, education, and innovation.

The 21st century will comprise of global citizens that have increased mobility to travel throughout the world, which has afforded individuals the necessary freedom to secure employment in new geographies and meaningfully engage different cultures. This has been principally a result of technology and the advancements in aviation. Triangular Partnership possesses unique potential in terms of formulating invigorating strategies to fulfill the known and unknown gaps in the developing nations.

Concerns are growing amongst the donor communities, World Bank, World Health Organization, and Group of Eight (G8) due to the persistent deficiencies related to development, health care, and medical education within developing countries. Despite these concerns, initiatives such as the Millennium Development Goals (MDGs)

sponsored by the United Nations (UN), Bill Gates Anti-Malaria Project, and PEPFAR offer a glimmer of hope for citizens residing in developing countries.

The UN has recognized that a well-structured, transparent, and ethical platform is required to successfully connect various institutions and industries. People to People (P2P) possesses a similar vision, which is reflected in the Triangular Partnership model. P2P is a diaspora not-for-profit organization located in the United States, and has had a great deal of success implementing this sort of model throughout Ethiopia. This model comprises of three components: Western Institutions, Developing Countries, and the Diaspora. The principal objective of this model is to harness the imaginations of local institutions and the Diaspora in a coherent manner to solve the fundamental problems impacting developing countries, such as health care, medical education and training.

Triangular Partnership can play a critically important role in the rebuilding efforts in developing countries, while simultaneously raising the international profile of each country through shared solutions and a coherent problem-solving framework. The innumerable achievements by the Diaspora substantiate the Triangular Partnership model validity, and demonstrate that it is feasible, and can serve as framework for developing countries.

We hope this manuscript will illuminate the opportunities and challenges that exist in developing countries, while stimulating discussion that lead to new strategies and insights. We intend to foster capacity building through networking, interactive discussion, and leadership training. Triangular Partnership can play a pivotal role in this regard.

Pioneering Efforts and Building Blocks

As global citizens, we are confronted with the negative consequences of preventable man-made disasters that have an endemic impact on health inequalities throughout the world. In the 21st century, innovative technology, globalization, and the increase of wages throughout the vast majority of the world underpin the importance of quality health care, education, and workforce training. The solution to these challenges is rooted in theoretical and academic approach encompassing indigenous ideas and practical solutions. Solutions cannot be imported, they must emanate from within. Grassroots initiatives in education and development will be the central crux of the triangular partnership. P2P has been able to successfully leverage and implement indigenous ideas, whereas other African institutions still struggle to unearth these types of solutions. P2P fundamentally believes that under-resourced countries will continue to fall behind if an environment is not cultivated to fund and commercialize domestic ideas and products. In fact, international aid would be better served if it were employed for sustainable business and human capital development instead of short-term remedies with no long-term sustainable impact.

Changing the Rules of Engagement

Since the Second World War, the donor community has allocated significant aid to developing countries, but has under invested in capacity building, resulting in significant equality gaps. There have been encouraging initiatives in the past ten years, however, if we harness the intellectual capacity and expertise of the Diaspora in conjunction with policy makers in the developing the future could be more promising. This could help address the brain drain by initiating a brain-sharing framework.

In the 21st century, poor countries' problems will no longer be their own: they will also be the problems of developed countries. In this regard, the Triangular Partnership can serve as a primary catalyst, and provide a vital link between western institutions and the remainder of the world.

The Power of the Diaspora

The Diaspora is an indispensable global institution that can serve as a conduit to transfer knowledge and technology through brain-sharing and fostering connections with its mother countries. It can bring together scholars and policy makers to interface and research innovative solutions to promote sustainable development. It has the ability to provide a powerful catalytic role in addressing some of the critical challenges and help accelerate growth. There is widespread recognition that the Diaspora's reach and influence has permeated countries throughout the world through the billions of dollars provide through remittance.

The United States convenes annual meetings to facilitate dialogue with the Diaspora, and governments to address the concern of brain drain and capable human capital in the developing countries. The migration of highly intelligent professionals outside their home countries has had a devastating impact on developing countries ability to develop sustainable local institutions and a vibrant economy. Moreover, this has had an adverse impact on public education and governmental services, resulting in anemic infrastructure development, inadequate government services, and low graduation rates. Consequently, developing countries have become heavily reliant on international consulting firms to implement critical donor programs and to perform the basic functions of public services. This has lead to a disjointed and protracted implementation process, since international consulting firms typically lack sufficient knowledge of local factors. P2P's unique approach is predicated on proactive engagement with the Diaspora, and its members to successfully frame and implement practical solutions.

Paradigm Shift

A significant paradigm shift is imperative to alter the status quo. This undertaking will be incredibly challenging, given the longstanding perceptions developing countries accumulated over generations. Health care and education are indispensable components of a thriving and vibrant economy, and currently, in the developing world they lack the proper resources to perform at a level consistent with international standards. With respect to education, developing nations have neglected this area for generations, and have become reliant on solutions from the outside. But these solutions have to come from within. We have to move beyond the mentality of dependency and instill a mindset of independence. The triangular partnership model has the potential to serve as a platform for effective coordination, planning, and innovative solutions. The model recognizes the importance of strategic collaborations, particularly with western institutions in developing countries that have expressed an interest in partnering and offering resources to advance capacity building and development.

Technology and Innovation

Despite varying perspectives on information and technology, the principal challenges in developing countries are lack of information, lack of access to technology, lack of technical knowledge, and quality education, and inadequate resource allocation. These are the root of the problem. This problem has become generally accepted instead of pride in development. Undoubtedly, technology can play a critical role in addressing these issues and help usher in a new era of enlightenment and insights. The Diaspora is technologically savvy and intellectually capable of formulating collaborative approaches to facilitate sustainable change through continuous external support from western institutions. Western institutions have the ability to avail their e-learning resources to developing countries through new innovative technology platforms, such as e-library, e-medicine, telemedicine, and med-exchange programs. Sharing the latest research and information in such a way can provide a promising example for duplication and expansion in the developing world.

Bibliography

1. Chinua Akukwe (2006a) Editor, Healthcare Delivery in Africa: Issues, choices, Challenges and opportunities. Special Edition. African Renaissance I, Volume 3, Number 4, July/August edition
2. African Union (2007). Africa Health Strategy: 2007-2015. Third Session of the African Union Conference of Ministers of Health, Johannesburg, South Africa. April. CAMH/MIN/5(III). Addis Ababa, Ethiopia.
3. World Health Organization (2007). Health Financing Available at www.who.int/trade/glossary/story047/en/print.html
4. World Health Organization (2006). World Health Report 2006: Working Together for Health. Geneva, Switzerland: Author.
5. World Bank, World Health Organization, United Nations Development Program, UN Economic Commission for Africa annual reports and indices that includes information on Africa and African Countries, 2005 and 2006 data.
6. Ober, J, 2008. Democracy and Knowledge. Princeton, NJ: Princeton University Press

The Conceptual Underpinning of Triangular Partnership: A Perspective of People to People

By Gizachew Beyene
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Concept

The concept of the Triangular Partnership was developed by People to People (P2P) based on an empirical evidence of partnership that endured for more than a decade now. P2P emerged as a pioneer organization in the diaspora entangled with the give-back mission to the motherland of Ethiopia, at a time when the HIV/AIDs pandemic and brain drain took their toll on national capacity building, and when the perceived role and potential of the diaspora was misconstrued, even politicized. In the late 1990s, P2P was established to tackle these challenges and has since been involved in mobilizing the Ethiopian diaspora and western institutions to make a difference in the area of health care and medical education in Ethiopia.

By building a bridge connecting the diaspora with western and Ethiopian institutions, P2P believed that action in these areas would help make a significant dent in the socioeconomic development of the country. Accordingly, P2P integrated these areas as part of its vision and mission. The concept of triangular partnership is anchored in the willingness of the Ethiopian diaspora to take the initiative, to participate in the provision of multifaceted support to build the capacity of institutions in their country of origin through training, consultancy and service delivery. The diaspora members who are working in resourceful western institutions can tap financial, material and professional support from these institutions to be directed to the capacity building efforts of targeted institutions in Ethiopia. In that context, a triangular relationship emerges that involves P2P as an institution in charge of mobilizing and coordinating diaspora resources, the western institutions which are pools of medical and scientific knowledge and Ethiopian, by extension, African Institutions as beneficiaries of capacity building support.

Over the past decade, it has become increasingly evident that the Ethiopian / African Diaspora with its vast network of professionals and specialists has demonstrated its willingness to be fully engaged in effectively supporting such efforts. P2P regards partnership with western universities, for example, as an opportunity for both institutions to pursue their missions and objectives in a mutually beneficial manner, where western universities will have a venue to expand their Global Health Initiatives as well as have a role in strengthening faculty of medicine in the local Universities and hospitals through collaborative research, education and training. P2P believes that twinning arrangements between Ethiopian and western universities can be sustained by the support of the diaspora ensuring maximum impact in achieving the desired objectives of the parties. The involvement of the diaspora ensures impact and sustainability since diaspora support will continue indefinitely.

Practice and Evidence

Beyond the theoretical and conceptual dictum, the efficacy of triangular partnership can be illustrated well by reviewing the achievements of a set of exemplary projects that have been so conceived and practically implemented. The following two successful projects that were conceived within the framework of the triangular partnership should help us understand and lend credible evidence that the framework has been effective not only in the building the capacity of existing institutions but also of creating new or additional segments.

Emergency Department and Training Center

In March 2009, the American International Health Alliance (AIHA) had announced a request for a proposal in support of establishing a new volunteer-based partnership between Addis Ababa University School of Medicine and an institution with expertise in supporting emergency medical training and institutional and administrative capacity strengthening emergency services within the context of HIV/AIDS. P2P took extraordinary initiative by inviting the University of Wisconsin to jointly prepare a proposal and submit it to AIHA. The joint proposal passed the test of scrutiny by the AIHA.

P2P and the University of Wisconsin were awarded a grant amounting to $200,000. P2P in partnership with the University of Wisconsin and the Black Lion Hospital (BLH) in Addis Ababa have successfully established the

first emergency department attached to a hospital and an emergency training center both of which are operational. Again, a good number of Ethiopian diaspora healthcare professionals, professionals from the University of Wisconsin and the Black Lion Hospital had devoted time and resources to make the triangular partnership work.

Creating a Neurology Fellowship Program

The high demand on the medical faculty of Addis Ababa University (AAU) served as the impetus for initiating a Neurology Fellowship Training Program at the institution in 2006 through a collaborative effort P2P facilitated. The department of Neurology at AAU has been operational for several years now. More than ten residents have benefitted from the program and new batches of students are joining.

The department activity includes, but is not limited to, morning sessions, seminars, clinics, bedside instruction, and continuing medical education (CME). At any given time, P2P has had dozens of physicians and other professionals working diligently to contribute to supporting post-graduate medical education and helping to strengthen health systems in Ethiopia that benefit pivotal institutions, hospitals, and medical schools throughout the country, all of which benefits through the triangular partnership one way or the other.

The Concept of Triangular Partnership Model Contrasted with the Concept and Practice of Traditional Capacity Building.

What the last tumultuous fifty-plus years of social and economic development showed is a significant stride in terms of the development of educational institutions in Ethiopia, measured by the increasing number of higher education graduates in almost all sectors. Many of the public institutions from their formative years benefited from the technical assistance extended to them through projects funded by donors and creditors, largely in the form of the provision of expatriate personnel attached to beneficiary institutions where local counterparts would be assigned to work together.

While such undertakings were very important in bridging the initial demand for qualified professionals, over the years it has been a very expensive venture in that salaries paid to expatriates were determined by the market rate of professional fees in western countries. In fact, expatriates assigned to work for institutions in developing countries find their remunerations much more attractive than what could be secured for working in comparative positions of many institutions in the west. While the expatriates were paid at international standards, the local counterparts earned extremely low wages with unacceptable living conditions. This often created tensions affecting the work environment.

Aid Watch, which is an independent monitor of Australia's Aid and Trade, summarizes this grim reality as follows (aidwatch.org, P.1):

> As at 31 July 2010, there were 1,204 technical advisers in the aid program. According to AusAID, the average cost for long-term expatriate advisers was $20,015 per month and for short-term advisers, $1,618 per day. Salaries of this magnitude are unattainable for the local staff in aid recipient

> countries, who work alongside these consultants. TA pay disparities can cause resentment amongst local staff as well as privilege western "expert" advice over local knowledge and experience.

The nature of technical assistance from other U.S. Organization for Economic Co-operation (OECD) member countries is very similar.

As hiring was expensive, countries were forced to limit the number of expatriates to be recruited and the duration of their assignment. This situation had a negative effect that frustrated capacity-building efforts and contributed to perpetuating capacity gaps. An ever-increasing migration of qualified personnel to the west has further widened the gap.

From the P2P's perspective, the traditional approach of capacity building, albeit its inherent problems, is here to stay. It is sponsored and funded by powerful international financial institutions like the specialized agencies of the United Nations and the World Bank. Equally, the migration problem has had no easy fixes. In that context, P2P believes there needs to be a mechanism of mobilizing the diaspora members to give back to the country that has done so much for them. The triangular partnership approach is an effective mechanism to consider as a complement if not as a substitute of more traditional forms of capacity building.

The Diaspora – the Bedrock of the Partnership

Understanding the merits of triangular partnership requires realizing the actual and potential capacity of the Ethiopian diaspora. To begin with, the Ethiopian diaspora embodies intense commitment and organic relationship that comes with a sense of deep closeness and belongingness to the homeland. The diaspora members are highly educated and equipped with innovative ideas, valuable trans-national networks, knowledge and expertise, values and attitudes, and new technological skills. The diaspora's gratitude to Ethiopia can be translated through individual and collective sacrifice of time, skills and financial resources.

There is no official census of the whole Ethiopian diaspora group that is uncontroversial, credible, and acceptable. Statistical clues on the size of the professional diaspora are even scantier. The best figures are estimates made by knowledgeable individuals but such estimates are not produced by rigorous statistical techniques. There is, however, a general agreement that the measurements of the Ethiopian diaspora in the west are significantly understated in the various official statistical sources (World Bank, US Government sources, the Ethiopian Government, Organization for Economic Cooperation and International Organization for Migration).

Frustrated in the search for a reasonable estimate of the Ethiopian diaspora living in the U.S., Tasse Abye (PhD) has noted:

> During several trips to the US, I have questioned multiple persons regarding their estimates of the number of migrants in the country. Invariably, the estimates that individuals questioned gave ranged from 500,000 to over a million migrants... qualified migrants of Ethiopian origin by close to 50% compared to the data available at the World Bank. (Tasse Abye, 2013:3).

Supported by preliminary surveys, P2P's own estimate of the number of physicians operating in North America is 1,000. This figure is sufficient to warrant the launching of the triangular partnership.

In discussing the role of the diaspora, one should not lose sight of the fact that any significant impact on development in a given country is primarily a function of the quality of policies and strategies put in place by responsible governments, the capacity of implementation and the availability of sufficient budgetary resources. The quality of the policies and strategies is given whether the development actors come from within or outside of the country, but one should hope these policies and strategies would not be imposed from above and will only be developed with the direct participation of all stakeholders.

The role of the diaspora should then be to extend its support and complement the implementation process at the local level. It is unrealistic to assume that the support that may be provided by the diaspora will at any moment be significant enough to outweigh or substitute the local efforts. On the other hand, from the local actor's point of view, there is the temptation to undermine or belittle the value or significance of what the diaspora may produce. First, the contribution of the diaspora is voluntary and a net addition to the local resources. Second, the professional diaspora is highly connected to the institutions in which they are working. This results in transfer of best practices and technical understanding from those institutions. From the perspective of P2P, any support that may be secured from the diaspora, irrespective of size, should be judged by how much it complements the efforts of local institutions, even if that at times might look like marginal.

Conclusion

People to People is proposing that the triangular partnership approach be reviewed in the light of its merits as an effective module of complementing the capacity-building process of local institutions. It is hoped the different diaspora organizations and beneficiary institutions in developing countries will critically review the concept and find it as an important modality for the delivery of support from the diaspora, particularly as it relates to education and health care development in developing countries.

Bibliography

1. www.peoplepeople.org
2. Abbye,Tasse (PhD) (2013: 3), "Ethiopian Diaspora, a missed opportunity?"
3. Aid watch, Action on Aid, Trade and Debt, Where is your money going? (2010)(in www.Aidwatch.org.au)
4. The American International Health Alliance/AIHA/,(2009) - a request for proposals for a partnership to increase Ethiopia's human and organizational capacity to deliver emergency medical services

Development of Centers of Excellence

in Health Care and Medical Education in Resource Limited Countries

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Introduction

The degree of interconnectedness our world has attained in the last fifty years is beyond measure. Though development of physical amenities and acquisition of material wealth have eased interconnections, change in human behavior and development of higher emotional intelligence must have prevailed for the decisive roles of world interconnectedness achieved. It is highly likely also that several other factors preceding the era of interconnectedness such as the devastating world wars and the long colonization of defenseless nations have played triggers for changes in emotions the world has seen. If we add to these, intended and none intended mutual benefit factors, we can say we have had most ingredients for creating an interconnected world. The world's interconnectedness has brought

about tremendous changes in health for low-income countries. Material, knowledge, resource and technological support rendered have contributed to the prevention of communicable diseases and diseases ushered in by poverty and nutritional inadequacy. The work in the prevention and treatment of HIV, malaria, tuberculosis, and multiple other infections and vector born diseases in the last five decades through international aid that low income countries have received must be credited for achieving much. Research in identifying and preventing or effectively managing emerging infectious diseases somewhere in remote corners of the world and minimizing its spread is one benefit that interconnectedness can also be credited for. Likewise, the building of medical knowledge and skills, technological know-how and transfer of valid information from developed nations to developing nations including assistance in establishment of Centers of Excellence in resource limited countries are outcome of healthy connections that started to move our world in a track to development.

A few members of Diaspora health professionals settled and established themselves in Western countries have been making and continuing to make efforts to see this happen by their involvement and participation. In the U.S., it is estimated that out of the total physician force of just over a million, nearly one quarter (or close to 260,000) are foreign medical graduates, the overwhelming percentage out of this contributed by the Diaspora from developing resource limited countries. It is believed that assistance western institutions, western governmental and non- governmental organizations and foundations render to low income countries to help them develop and improve their health care systems including establishing and running Centers of Excellence (COE) hospitals and health care establishments can be well facilitated and grounded if the Diaspora form the third arm of the triangle in a Triangular Partnership to assist developing nations.

Definition of Center of Excellence Hospital

A Center of Excellence hospital is a hospital or medical center recognized as providing high quality health care in one or more specialties. The designation can be given to a hospital by

- Peers and professional associations
- Accreditation and regulation bodies
- Government
- Different health care programs and health insurance programs

The term connotes different levels of structure at different institutions. Generally, the term is used in reference to a specific package of services aimed at treating a specific disease. Various accrediting bodies have created specific and measurable criteria that programs, hospitals and physicians must meet to receive official COE designation. The criteria include existence of specific pieces of program infrastructure, physician training and hospital experience levels as measured in volumes, achievement of clinical quality requirements, and data submission to an outcome monitoring database.

A Center of Excellence essentially means that a hospital specializes in the treatment of a certain illness or specializes in particular treatments.[1] Centers of excellence can be anything from heart or cancer care to neurosurgery or organ transplants. Some hospitals offer a variety of Centers of Excellence whereas other hospitals might just offer one or two.

How does a hospital claim the distinction of having a Center of Excellence? In most instances, each individual program and treatment has particular criteria that need to be met in order for the hospital to state that their program is a Center of Excellence. This might require that a certain type of doctor perform treatments, or that certain numbers of treatments are performed annually.

Different health care and health insurance programs will also designate a program of a hospital as a Center of Excellence based on their own criteria. This might mean that they are more likely to recommend this hospital as opposed to another hospital. They do this as a service to the patients who have their insurance to help them make an informed decision about which program is right for them.

In the United States, the Joint Commission standards address the hospital's performance in specific areas, and specify requirements to ensure that patient care is provided in a safe manner and in a secure environment. The Joint Commission develops its standards in consultation with health care experts, providers and researchers, as well as measurement experts, purchasers and consumers.[2]

A government designated and recognized Center of Excellence, beginning in the mid-1960s, is a facility or organization that creates healthcare value above the average found in a specific location. They make up the "best" healthcare providers in their cities and states.[3]

In the late 1990s, the U.S. Health Care Financing Administration (HCFA) began to examine and compare treatment outcomes among hospitals paid by Medicare. Other divisions of government, as well as the private sector, have developed their own systems for rating and/or developing Healthcare Centers of Excellence. In a nutshell, even though various institutions and bodies may use varying determinants to define COE, most are essentially measuring high quality care.

In a setting of developing countries, a Center of Excellence hospital should be able to provide quality care in various specialties that are not offered by the majority of other public and private hospitals. If possible, international accreditation bodies should also accredit such hospitals. It is hoped that such Centers of Excellence hospitals in developing countries will have the potential to attract patients who have been traveling abroad for high-end medical care and that way save foreign exchange expenses for the countries. In addition, they can also attract patients from neighboring countries that could be additional source of income from foreign currency exchange.

Center of Excellence Medical Schools

The term Center of Excellence is not commonly used in the setting of Medical Schools. When it is used, it usually means the school provides a much higher quality medical education for undergraduate medical students. In addition, partnering with a Center of Excellence hospital, it provides a higher quality residency and fellowship training to produce well-trained specialists and subspecialists.

In developing countries, it is expected that an opening of a Center of Excellence hospital will lead to an opening of Center of Excellence Medical School. This is a natural outgrowth of the potential of such hospitals and their highly trained staff to educate a new generation of medical professionals in a good educational environment.

The chapter on COE aims at exploring progress made in establishing centers of excellence in man power building in health care, and in health care service improvement in resource limited countries with special interest on collaboration with targeted institutions in high income and developed countries. Because of the ever growing number of doctors and nurses migrating from developing countries to the U.S. and Europe to further train and or practice in their professions, a pondering into the benefits these Diaspora groups have been rendering in their professions and that they can even be tapped as strong assets in initiating and strengthening such collaborative link is the second and critical objective of the chapter.

Many Diaspora health professionals have over the years been giving back in service or knowledge transfer as organized associations; examples of which are served by People to People (P2P), Ethiopian North American Health Professionals Association (ENAHPA), Gemini group and a few others or individually through arrangements made with institutions they chose to work with in their home countries. Enough experience has been drawn over the years from the Diaspora's willingness to aid their home countries in their professions and skills acquired that institutions in developed countries linking with programs in developing countries can advantageously and more effectively utilize a triangular arrangement with the Diaspora as the third arm of the triangle for a much better and further enhanced development of Centers of Excellence.

Many high income countries, for reasons of making a better quality care service available in their own countries have been competing and standing out with prominence in specialized health care services readily meeting rigorous requirements of accreditation standards. Such outstanding, developed medical care provision programs for which in present day parlance the term centers of excellence is used are mushrooming in present day medical services. Development of centers of excellence in medical care and medical education in institutions in developed countries have traditionally focused on diseases or conditions that are most prevalent, most critical in terms of mortality and morbidity and have significant impact on quality of life, and cost of delivery. It is not unusual therefore to notice that medical care institutions in the U.S. identified to operate recognized centers of excellence have most such centers in the fields of cardiology and cardiac surgery, cancers, neurology and neurosurgery, orthopedics and orthopedic surgery, chronic and metabolic diseases, transplant medicine and of course the high in demand plastic surgeries of various body parts. Several other specialties including specialties in addiction medicine, endocrine, auto immune, infectious, nutrition and travel medicine are also tracking along to have their institutions justifiably labeled and visibly identified as centers of excellence.[4]

Historically, it is interesting to know that the U.S. government was the one that started designating centers of excellence based on performance of medical institutions serving Medicare patients. Other divisions of government and the private sector soon started developing their own systems for rating and establishing health care centers of excellence. In recent times, one of the institutions that advise and guides in quality of health care development is the American Society of Quality (ASQ). The Malcolm Baldrige performance excellence program of the ASQ has published five key characteristic health care criteria for assessing performance excellence and quality of care, the first one of which focuses on results in organizational performance. In the summary it states that in order to attain excellence in quality, 5 outcome areas must be targeted.[5,6,7]

1. Health care delivery and process outcome
2. Customer focused outcome

3. Workforce focused outcome
4. Leadership and governance outcome
5. Financial and market outcome

Each and every one of the outcomes is expected to be assessed and evaluated in an organized consistent manner using either numerical or other measurable means of evaluation.

Evaluation for Excellence

The U.S. government and its health care administration along with private health care establishments and training institutions continue to more objectively assess medical care and medical education programs often assisted by companies that use numerical grading systems. The Joint Commission for Hospital accreditation (JCHA) in the U.S. though has set its primary goal in assessing and guiding health care delivery institutions to meet set standards of quality of care, strives for health care institutions to aim for excellence. Various evaluation criteria and guidelines established either by the joint commission or the institutions themselves place emphasis on determinants of quality. Whether numerical valuations are used or not in assessing quality of care, the ultimate goal remains that institutions make progressive improvement in quality of care aiming at exceeding the basic required standards for a designation of center of excellence. In more specific terms a designated center of excellence must have achieved the following:[5,6]

1. Higher accuracy of diagnosis
2. Higher survival rates
3. Well planned coordinated service involving teams of experts
4. Initiate and provide appropriate therapy
5. Incur fewer or no complications
6. Shorter hospital stay
7. Decreased cost both in total and out of pocket payment for the patient
8. Made a difference in the quality of life for the patient

Development of Centers of Excellence in Health in Low Income Developing Countries:

Centers of excellence in more specialized fields of health care have been growing rapidly both in North America and Europe though the quote "all centers of excellence are not equal" can be safely used any time.

It will be interesting to look into what is going on in developing countries as to the interest and more so of the support and collaboration they receive in working towards acquisition of centers of excellence. The concept will certainly be more complex in limited resource countries as a narrow definition of center of excellence may be construed an ivory tower and misplacement in the priority list of health care service in limited resource countries. The reality and persisting concept that diseases of poverty identified by preventable infections, poor sanitation and sub optimal nutrition though dominant are almost in the cross roads with heart diseases, metabolic diseases such as diabetes and its complications, various types of cancers, vehicular and multiple other injuries in these countries. Arguments that are

not open to the realities of changes in complexities of demography of illnesses in many developing nations may have missed the true epidemiologic facts in modern day planning of medical care and medical education. A few survey data and related studies may help to shade more light for a better understanding of patterns of causes of mortality and morbidity in developing countries.

Cause specific mortality / 100,000 deaths, Ethiopia — WHO statistics report of 2009

Maternal per 100,00 Live Births	HIV / AIDS	Malaria	TB	TB & HIV	Non-communicable	Cardiovascular	Cancer	Injury
720 (2005)	81	51 (2006)	64 (2007)	28 (2007)	817 (2007)	384	142	105

The table above taken from published data by the World Heath Organization (WHO) in a 2009 mortality statistics report for Ethiopia shows deaths attributed to certain illnesses in adults and children in Ethiopia. Even though a ±15% to 20% uncertainty is estimated in the figures and other infectious causes are not also shown, one would certainly get the picture that non-communicable causes of mortality the likes of which is contributed by diabetes and other metabolic diseases, hypertension, heart diseases, cancer and injuries cannot be over looked in a plan for building centers of excellence and in training medical specialists.[8]

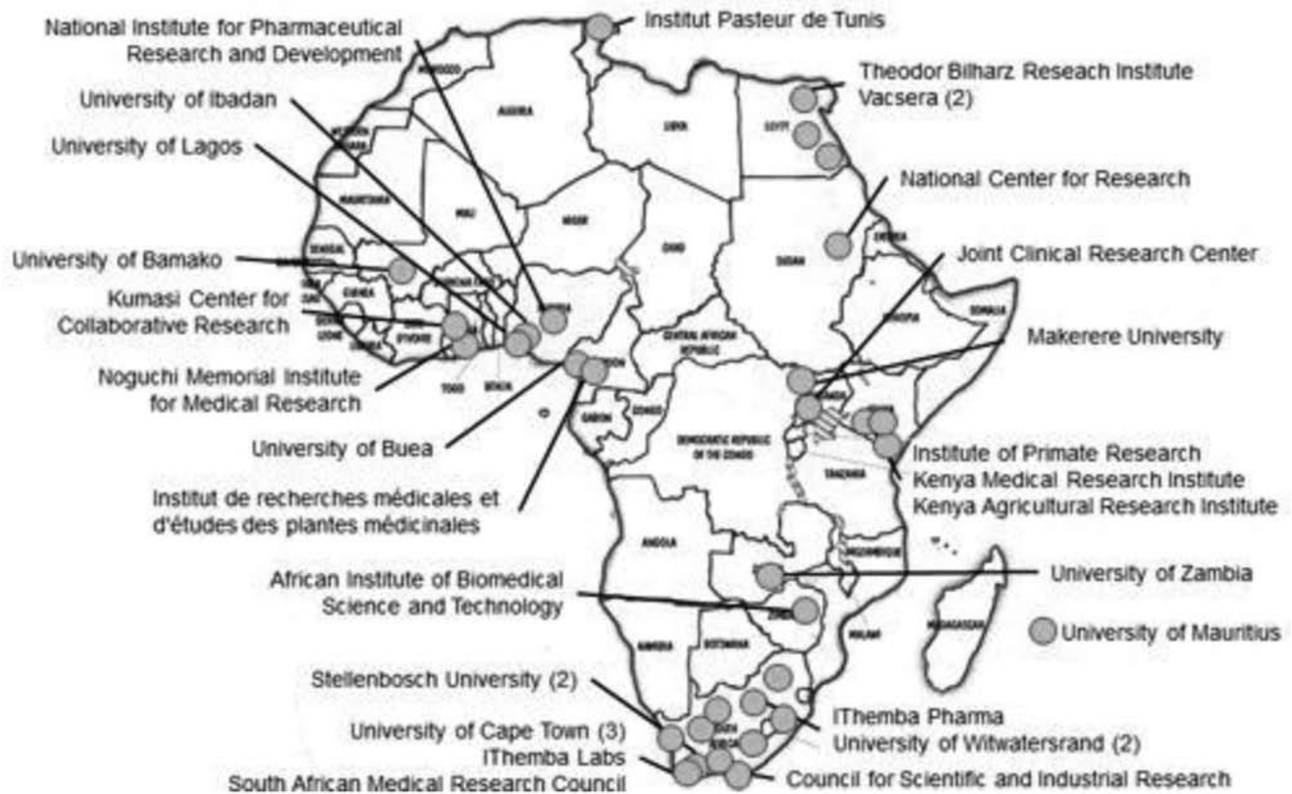
Another interesting study titled "The Double Mortality Burden Among Adults" in Addis Ababa, Ethiopia by Awoke Misganaw, Damene Hailemariam and others (based on burial surveillance of 58,000 deaths of 2006 through 2009), indicates that 51% of deaths were attributed to non-communicable causes, 43.8% to communicable, and 6% to injury.[8] It cannot however be denied that these and many other similar survey studies have consistently indicated that younger persons in low resource countries die more often of infectious causes and older persons die more often of non-communicable causes with a highly significant skewing of distribution of years of life lost by younger persons on account of communicable diseases. It is understandable therefore that even though productive ages and preventable illnesses are to be entered in the formula of budgetary priority setting, the very soon to catch up non-communicable and more mature adult targeting diseases and conditions should not be left out of the equation in health care and specialty training policies in developing countries.[9]

It appears likely that it is this understanding that urged a good number of countries in the developing world to strive at establishing centers of excellence in specific medical specialties, a few totally on their own aided and guided by accreditation agencies such as the International Joint Commission of Accreditation (JCI)(9). The head office is of JCI (located in Oakbrook, Illinois) posted in its website that it provides its service to more than 500 health establishments worldwide in areas ranging from primary care to academic medical establishments, specialized clinical

services, laboratories and of course hospitals. It is interesting to note that at the time of this writing in 2013, out of the nearly-sixty international countries that sought and received JCI's accreditation assistance, over 50% are in developing countries including Bangladesh for one hospital, China for twenty-one hospitals, Egypt for four hospitals, Ethiopia for an international clinical laboratory, India for nineteen hospitals, Kazakhstan for two hospitals, Mauritius for one hospital, Nigeria for one hospital, and Pakistan for one hospital.[10] This may not mean that the desire and initiative to seek guidance for improvement of services in health care would by itself move organizations to excellence but it sure begins with such thoughts and realization of current and future state of health of each nation and a planning that goes with it.

Of much significant note in this line of progress, the African Network for Drugs and Diagnostics Innovation (ANDI) is exerting a good deal of efforts in the development of centers of excellence in the continent through research and innovation in the area of drugs, diagnostics, vaccines, medical devices and traditional medicine. ANDI states that its primary objective is to promote and support health product research and development led by African institutions for diseases of high prevalence in the continent. The expected outcome is the discovery, development and delivery of affordable new health tools including those based on traditional medicine, as well as the development of capacity and establishment of centres of research excellence. The program was first launched in 2008 in Nigeria supported by WHO, World Bank, and other international agencies and holds its annual meetings in various selected African cities. The meeting of stakeholders that was held in 2011 in Addis Ababa, Ethiopia selected thirty-two institutions as ANDI Centres of Excellence shown in the map below.[11]

ANDI approved Centers of Excellence- 2011



The Role the Diaspora has Played in Healthcare Service Development and Training Medical Professionals

A significant proportion of highly trained medical professionals in developing countries, particularly from Africa, migrate to the developed world seeking better life and educational opportunities. Approximately 65,000 African-born doctors and 70,000 African-born professional nurses were working abroad in a developed country in the year 2000, representing about one-fifth of African-born physicians and one-tenth of African-born nurses in the world.[11,12,13]

Recognizing this fact, the African Union designated the Diaspora as the sixth region of the organization in 2003 to sustain political, economic, social and cultural relationships across the Atlantic. It also launched the Africa Diaspora Health Initiative to link specific health expertise within the African Diaspora with specific health needs in specific geographical locations in Africa.[14]

As they got established in the developed world, medical professionals from the African Diaspora have been increasingly giving back to their countries of origin over the last two decades. Most of their support has been focused on public institutions of health care and medical schools. In addition to personally participating in the medical delivery and medical education, they have also created viable connections between institutions in the developed world and their countries of origin. Within the Ethiopian Diaspora, examples of such efforts include People to People (P2P), which is a non-governmental organization (NGO) established within the U.S. by Ethiopian Diaspora Health Care Professionals. P2P has mobilized a tremendous number of professionals and facilitated their collaboration in supporting institutions of health care and medical education in Ethiopia.[15]

A more recent trend of medical professionals in the Diaspora starting to come together in various ways and to open private hospitals and institutions in their countries of origin has started developing. In particular high quality Center of Excellence hospitals have been established in some countries with significant participation of the Diaspora. Within the Ethiopian Diaspora, at least two groups of Diaspora professionals have come together and are working on establishing private Center of Excellence Hospitals.

The issue of establishing Center of Excellence hospitals by African Diaspora has become very timely. The medical professionals in the African Diaspora have a huge capacity and potential to establish COE hospitals for several reasons. Here are some factors that make them a powerful force in this regard. The medical professionals in the Diaspora:

- Are emotionally connected to their country of origin.
- Have significant financial strength to invest in such COE activities.
- Include significant number of highly qualified medical specialists who can participate in providing high quality medical care in the COE hospitals.
- Include significant number of highly qualified medical educators who can participate in providing high quality medical education in the COE hospitals and medical schools.
- Have the potential to create collaboration between their institutions in the developed countries and the new COE in their country of origin.

- Have the potential to bring connections with international funding agencies that may help in supporting the establishment of the CEO.
- Because of their exposure to the developed world as well as their understanding of their developing country of origin, they are in the best position to help in the design of appropriate COE for their country of origin.

It is with those factors in the background that the Diaspora can play a major role in the establishment of COE hospitals.

Within the framework of the Triangular Partnership, the Diaspora will have a key role to play as the bridge between Developing and Developed Country institutions. The presence of the Diaspora in this formula will strengthen and cement the relationship and make it viable and long lasting. It is within this framework that the issue of Center of Excellence Hospitals in Developing Countries has to be explored. Funding agencies should also understand the intrinsic value of the Diaspora in this Triangular Partnership in making collaborative efforts more successful.

Centers of Excellence Developed in Low Income Countries Through Collaboration with High Income Countries

Many medical, health care and academic institutions and organizations have for some time established collaborative work with health care institutions in low resource countries to help develop centers of excellence often in targeted specialty areas for better mortality and morbidity outcomes. In more recent years, the National Heart, lung and Blood diseases institute (NHLBI) of NIH together with United Health have collaborated with 10 medical care institutions in low income countries to establish centers of excellence.[16,17]

In her video address on the objectives of establishment of centers of excellence in developing countries Dr.Rabadan-Diehl from the division of cardiovascular Sciences of NHLBI made the following statement:

> Prevention is a cornerstone to any program dealing with chronic diseases. And we know that with respect to prevention of chronic diseases worldwide, we really need to pay attention to three risk factors. Those risk factors are: improving diet, increasing physical activity, and eliminating tobacco and smoking. If we pay attention to those three risk factors, we will prevent or eliminate 50 percent of chronic diseases worldwide. That's a dramatic effect.
>
> We hope that each Center of Excellence will be deeply engaged in their local community, that they will understand the risk factors for heart disease [and] lung disease within their community, that they will develop measures for assessing those risk factors in the community, that they will develop intervention programs by which they cannot just identify the risk factors, but intervene to modify the risk factors.
>
> We want to develop the next generation of global health leaders in chronic diseases. Each of the Centers of Excellence has a training program. Those training programs are linked with training programs in a developed country, often to a school of public health here in the United States.
>
> We know that one of the additional impacts that the NHLBI Global Health Initiative will have will be to accelerate knowledge [and] accelerate research discoveries. So, a research discovery that

is made in Africa or India or China will undoubtedly benefit Americans here at home. This is really the nature of the global community today, that there's a dramatic sharing of information and progress on a global scale.

The 10 Centers of Excellence Developed in Low Income Countries in Collaboration with Institutions in the U.S.

Country	Center of Excellence	Developed Country Partner	Objectives
Argentina	South American Center for Cardiovascular Health (SACECH). Institute for Clinical Effectiveness and Health Policy (IECS)	Tulane University School of Public Health and Tropical Medicine (SPHTM), New Orleans, Louisiana, USA	Establish a Center of Excellence in cardiovascular health for the Southern Cone of Latin America focused on research, training, and health education for the prevention and treatment of cardiovascular diseases in South America.
Bangladesh	International Centre for Diarrheal Disease Research, Bangladesh (ICDDR, B)	Institute of Developmental Studies, University of Sussex, Brighton, United Kingdom	Conduct new research into the epidemiologic, medical geography, social and health systems correlates of chronic cardiovascular and pulmonary diseases
China	China International Center for Chronic Disease Prevention (CICCDP)	Duke Global Health Institute, Durham, North Carolina, USA	Implement targeted translational health care research projects that will have a measurable impact on important health outcomes in local communities.
Guatemala	Institute of Nutrition of Central America and Panama (INCAP)	Johns Hopkins University, Bloomberg School of Public Health, Baltimore, Maryland, USA	To reduce the burden of CVD in Mesoamerica by establishing a Center of Excellence to carry out research, training, and capacity-building for prevention and management of CVD and related risk factors.

Country	Center of Excellence	Developed Country Partner	Objectives
India - New Delhi	Center for cardiometabolic Risk Reduction in South Asia (COE-CARRS)	Emory University, Atlanta, Georgia, USA	Establish a Center of Excellence for prevention and control of cardiometabolic diseases in South Asia for population-based applied research and training.
Kenya	Moi University, School of Medicine	Duke University Medical Center, Durham, North Carolina, USA	To establish the American/Sub-Saharan Africa Network for Training and Education (ASANTE) Center of Excellence in Eldoret, Kenya. The ASANTE center will provide clinical, research, and training leadership in cardiovascular and pulmonary diseases.
Peru	CRONICAS Universidad Peruana Cayetano Heredia	Johns Hopkins University, Bloomberg School of Public Health, Baltimore, Maryland, USA	The primary objective is to build a long-term sustainable research infrastructure in Peru, with a focus on clinical research in non-communicable chronic cardiovascular and pulmonary diseases.
South Africa	University of Cape Town	Harvard Medical School, Brigham and Women's Hospital, Boston, Massachusetts, USA	The goal is to promote the development, evaluation, and implementation of an evidence-based and sustainable multi-faceted model of care that will result in the reduction of the burden of chronic diseases and risk factors among underserved populations in sub-Saharan Africa.
Tunisia	Department of Epidemiology, University Hospital Farhat Hached	Department of Chronic Disease Prevention and Health Promotion, National Public Health Institute of Helsinki, KTL, Finland	Determine the effectiveness, feasibility, and necessary cultural adaptations of evidence-based interventions directed at tobacco use, unhealthy diet, and physical inactivity in adults and children.

Country	Center of Excellence	Developed Country Partner	Objectives
Mexico	Center for Health Promotion of Northern Mexico	University of Arizona Mel & Enid Zuckerman College of Public Health, Tucson, Arizona, USA	Contribute to the construction of healthy conditions of the population in Northern Mexico at the individual, family and social-ecological level from the perspective of the social sciences, public health, and socio-cultural epidemiology.

A similar arrangement of collaboration for a center of excellence development between Hamilton Health Sciences at McMaster University in Canada and St. John's Research Institute in Bangalore, India has been initiated by NHLBI of NIH with more than $34 million grant for all the eleven centers, including the ten in the table above. Similarly, it is notable that several other similar developed and developing country links for building centers of excellence are popping up. The University of Liberia in partnership with Indiana University and the University of Massachusetts Medical School has launched the center of excellence in the Health and Life Sciences. The posting reads that the program is a $7.2 Million U.S. Agency for International Development (USAID) higher education Development Grant that is aimed at improving the quality of preclinical curriculum at the University of Liberia Medical College.

Among sizable private or non-governmental agencies that had made some impact in assisting developing countries in specified and targeted treatment projects, Pfizer pharmaceutical company can be mentioned as an example. In 2005, when P2P had its hands full with HIV/AIDS work including the care of AIDS orphans, and when AIDS defining illnesses and AIDS complications with fungal infections were rampant, Pfizer supported P2P's request for Fluconazole and approved indefinite amount of the drug for indefinite period of time. Arrangements were made for the medicine to be delivered to the Ethiopian Ministry of Health for patients with systemic fungal infection. Pfizer has collaborated also with P2P in its HIV/AIDS awareness and prevention activities including projects that involved high school students and teachers performing shows with a central message of HIV prevention.

Pfizer has widely published its community participation in health related activities in many developing countries and that it has appropriated millions of dollars world-wide for the treatment of various infections. More recently its wide supply of Zithromax to many countries suffering from trachoma (infection of the eyes) which if not treated subsequently would lead to blindness or at least to much compromised vision, has been a major public health benefit. In 2000, when a gathering of global leaders met for the United Nations Millennium Summit and established a new partnership that has become known as the Millennium Development Goals (MDGs) to address poverty and hunger, diseases, maternal health, child mortality, gender equality, education, environmental sustainability and the need for a partnership to advance global development, Pfizer committed to continue to play a role towards helping the MDGs in its capacity to move ahead in all of its community support activities in developing countries.[15] For countries that are striving hard to cut down infant-, child- and maternal mortality and to increase life expectancy by improving standard of life and quality of living that are relative measures of excellence in a broader sense, a good

number of international governmental and non-governmental agencies have and are continuing to make impacts in developing countries. The maternal and child health, the HIV/AIDS prevention and the general preventive programs by such foundations as the Bill & Melinda Gates, the Clinton and Carter are significant health and quality of life improvement support programs for low income countries which by making measurable differences meet the broader definition of excellence.

Conclusion

Developing nations have been losing their educated human resources to developed countries for many years. The trend that had little significance in colonial times in Africa, partly because only a few were given opportunities to attain higher levels of education and training, has multiplied many fold in the last six decades. Political hardships where there was instability compounded by economic calamities were most frequent causes for Africans to leave their countries of origin in the last fifty years. Until about early- to mid-1970s migration and a one-way flow to other countries for permanent residence was almost a taboo for almost all Ethiopians and Ethiopian professionals. Until about that period every student sent abroad either on a private institution scholarship or governmental or international educational support returned home upon completion of the educational or training program to a job waiting. Many in the generation that are witness to the experience not only mentally rerun the nostalgic sentiment of home sickness of the time but do enjoy to bring it up again and again in social and patriotic conversations and interviews. Such deep sitting emotional bonding to a native land and country is unique to overwhelming number of Ethiopians residing in foreign countries. Similar sentiments are heard from colleagues and friends from other countries in Africa who trained and spent most of their professional lives in the U.S.

These sentimental feelings in most of the Ethiopian Diaspora are being expressed in many tangible and practical ways among which forming various associations by the Diaspora with a primary mission to organize to help improve health and social lives of Ethiopians and to contribute to human resource building of medical professionals to serve their people is well founded. Much has been said and written about brain drain, but based on the universal inherent reaching out spirit stated above and glaring evidence of lack of the severance of the umbilical cord in terms of Diaspora professional participation and of course also of economic gain estimated in the billions, it is hard to underestimate the gain. In the last four years, P2P has been organizing what it termed "Global Ethiopian Diaspora Health care and Medical Education conference" with slightly different themes each year but with one objective of how best we as Diaspora medical and public health professionals can impact the state of health and social life Ethiopian people in Ethiopia are presently in. Between 150 to 200 health professionals most of whom are physicians in different specialties attend the day-long conference, traveling to Washington DC from all over the U.S. to discuss and plan on what would work better to make the difference the Diaspora professionals want to achieve. Much has been done by various Diaspora associations including establishment of center of excellence that made the difference for many persons and institutions in Ethiopia. The nearly fifteen years experience P2P has gained as an organization of the Diaspora triangulating with western institutions such as the World Bank, university medical schools and programs, US-aid twinning programs, Pfizer pharmaceutical company and many more is compelling and worth writing a book about. Western institutions, governments, and NGOs in the developed world planning to assist a developing country to establish programs to serve the public including development of Center of Excellence will advantageously triangulate in partnership with organized Diaspora in the developed country.

Bibliography

1. What are Centers of Excellence at Hospitals? http://ezinearticles.com/?What-Are-Centers-of-Excellence-at-Hospitals?&id=499545
2. The Joint Commission: Facts about Hospital Accreditation. http://www.jointcommission.org/assets/1/18/Hospital_Accreditation_9_17_12.pdf
3. United States Medical Centers of Excellence. http://pattyinglishms.hubpages.com/hub/United-States-Medical-Centers-of-Excellence.
4. Developing Centers of Excellence- key concepts, strategies and tactics/ Becker's Hospital Review, April 6, 2009/ Scott Becker et al. http://www.becker'shospitalreview.com/news-analysis/developing-center-of-excellence.
5. Baldrige performance excellence program, American society for quality (ASQ) administration http://www.asq.org; http://www.nist.gove/baldrige
6. Optum health stringent evaluation criteria, controlling cost and quality through specialized care management. http://www.optumhealth.com
7. Stacey Paris McCuthcheon, Transforming health care. Stanford Social Renovation review. http://www.ssireview.org/blog/entry/transforming/healthcare May 10, 2013.
8. WHO statistics 2009 cause specific mortality, Ethiopia
9. Awoke Misganaw, Damene Hailemariam et al. The double mortality burden among adults in Addis Ababa, Ethiopia 2006-2009. Preventing chronic diseases, public health research and practice policy http://dx.doi.org/10.5888/pcd9.110142
10. JCI accredited organizations http://jointcommissioninternational.org/jci.accredited-organizaitons
11. http://www.andi-africa.org/index.phplactivities/centers-of-excellence
12. Franklyn Lisk, Centre for the study of Globalization and Regionalization, University of Warwick, UK. The role of Europe-based Diaspora Health Professional Organizations in Strengthening Health Systems Research and Service Delivery Capacity in Sub Sahara African Countries. The 6th Conference on Global Health and Vaccination Research and The Norwegian Medical Association's 125th Anniversary Conference, Oslo, Norway 12-13 September 2011.
13. African Union: African Diaspora Health Initiative. http://www.au-adhi.org/
14. People to People, Global Network. http://new.peoplepeople.org/#
15. Joseph A. Michelli, "Prescription for Excellence", (leadership lessons for creating a world class customer experience from UCLA health system) 2011 p. 128
16. NIH Awards Emory and global partners India and Pakistan 3 million for cardio-metabolic research, June 11, 2011 http://emoryhealthblog.com
17. J.K. Browne, University of Liberia launches center of excellence in health and life sciences. http://www.allafrica.com/stories/201203280786.html

Recommended Reading: A book by Phillip Longman, "Best Care Anywhere" (Why VA healthcare would be better for everyone.) Berrett-Koehler Publishers, inc. 2012

Triangular Partnership:

Innovative Ways of Building Institutional Capacity, the Ethiopian Experience

By Roman Aydiko Ayele, MPH
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Understanding the Gap

Education is the most valuable ingredient to secure advancement in a community, society and country at large. As reported by UNESCO, 25% of Sub-Saharan African primary school age children were out of school in 2007 where as 33% of African Scientists and technologists live and work in developed countries. (UNESCO Science Report 2010). Moreover as discussed by Kevin Watkins from Brookings institute, there is a severe mismatch between the skills of young educated African workers and those needed by employers. In other words the problem is compounded by the fact that there are few skilled professionals and those few trained can not find a job and those highly trained are out of the continent. In most sub-Saharan African countries, about two-thirds of all young workers in the labor market— 95 million people —lack the basic skills needed to be competitive in the labor force (World Bank, 2008). The education gap between the developed and underdeveloped countries at higher education level is widening. To

improve access to and the quality of post-primary education, countries such as Ethiopia are doing their best however it is very expensive. On the other hand, aid to sub-Saharan Africa remains primarily focused in the area of the Millennium Development Goals and basic universal primary education only. The UNESCO report summarized the grim picture: The Africa Learning trend shows unequivocally an education and learning crisis. Over one-third of the pupils covered in the survey—23 million in total—fell below the minimum learning threshold. In the cases of Ethiopia, Nigeria and Zambia, the share was over fifty percent. Over the past decades, development assistance for basic education in sub-Saharan Africa has remained at less than two billion annually (UNESCO, 2011).

With regards to health care workers in Sub-Saharan Africa, the shortage of trained health care professionals has become more critical than the material needs; moreover Africa's overall disease burden of about 25% has only 3% of the professionals (WHO report 2006).

The human resource challenges facing Africa may seem insurmountable, particularly with the substantial emigration from the continent of educated healthcare professionals. As indicated by Tedla W. Giorgis, there is also growing recognition that skilled migrants and Diasporas make meaningful contributions to development efforts in their countries of origin through donations of their time, talents, and resources. Diasporas frequently have the contacts, knowledge, and personal commitment to undertake sustainable efforts. (From: Giorgis, Tedla W. and Aaron Terrazas. 2011. Mobilizing Diaspora Volunteers for Public Health Capacity Building: Lessons Learned from the Ethiopian Diaspora Volunteer Program. Washington, DC: Visions for Development, Inc.)

According to the 2008 U.S. Census Bureau, there were 137,012 Ethiopian immigrants in the United States, and about 30,000 native-born U.S. citizens claimed Ethiopian ancestry. The Ethiopian immigrant population in the United States has grown dramatically over the past three decades from 7,516 in 1980 to 34,805 in 1990 and 69,531 in 2000. Although the exact number of health care professionals of Ethiopian origin in the diaspora is not known, it is expected to be two to three times more than the current number of physicians in Ethiopia.

Diaspora engagement programs from the Ethiopian federal ministry of health, as well as the Ethiopian ministry of foreign affairs, have become a priority. However, Diaspora engagement is a tricky business. There needs to be a coordinated effort to bring together goals, visions and aligning efforts. Trust has to be built and partnerships created and nurtured. Partnerships that are built with common interest, mutual respect and equal participations will last longer and will be productive

In this chapter we will describe Innovative ways of building Institutional Capacity through the development of a Triangular partnership between Addis Ababa University (AAU), the University of Wisconsin-Madison (UW), and the non-profit organization People to People (P2P), to develop emergency medicine as a specialty at Tikur Anbessa Hospital and discuss the results achieved thus far.

What is Twinning or Triangular Partnership?

A twinning partnership happens when two or more academic institutions or community organizations share collective knowledge and resources to address issues and concerns (Council of European Municipalities and Regions 2010). They are based on peer-to-peer relationships among health care (or another discipline) professionals to de-

sign technologically- and economically-appropriate solutions to problems in the host country (Einterz et al. 2007). It works when goals are shared and depends significantly on volunteerism of individuals. The Twining partnership process has six distinct phases. Each phase described below is a critical step that should be accomplished to proceed to the next phase

Phase 1: Initiation- Assemble a committed, experienced team of people with common goals, considering the time they can commit and institutional support/resources they bring to program activities over the duration of the partnership. Leaders with vision and shared goals are vital during the initiation phase. The involvement of diaspora professionals can help bridge the cultural awareness and understanding between the two groups. Individual Diaspora members who have fostered relationships and trust may facilitate this phase. It is important to make sure that the priority for the partners is respected, that the idea has a broad institutional support and political will behind it.

Phase 2: Develop a Work Plan- This provides the blue print for the work to be done during the defined period. This document includes details of the planned activities with associated accountability of individuals or groups assigned to the tasks. It is very important to find out if other similar partnerships with identical goals exist. Joining forces will avoid duplication of efforts and optimal resource utilization. The work plan document should be considered a dynamic document in that ongoing assessment and modifications should apply. Developing priority list before work plan meeting saves time and prepares both parties for a productive discussion.

Phase 3: Implementation- When developing training programs for adult learners, create the educational objectives and competencies with partners at the table. Ownership of the training modules / programs by all involved is very important. Training programs should meet students' personal and professional needs and be appropriate to the local context. Take time to assess local resources and make adaptations. Keep in mind how knowledge and leadership will either be transferred or sustained in the local community. This may require adjusting expectations or the speed implementation of the program. The pace of change will be different for each person or institution.

Phase 4: Monitor Outcomes- Monitoring and evaluating outcomes can be based on existing metrics developed by agencies such as CDC, WHO etc. However partnerships should incorporate Quality Improvement program development as part of the required educational activity that all participants should be familiarized. Through QI programs the educational objectives include:

1. Definition and dimensions of quality
2. Standards development through participatory processes
3. Measurement of compliance with standards and outcomes
4. Team strategies
5. Leadership in developing a culture of quality

Phase 5: Evaluation of Programs- Utilize program evaluation surveys to gather feedback from all stakeholders, document unanticipated program achievements, and examine the strengths and weaknesses of the program. Communicate and discuss the results with all program staff to ensure recommendations are implemented, improvements are made, and information is transparent to everyone.

Phase 6: Disseminate information- Celebrating and sharing successful completion of the planned objectives helps move the broader strategy forward. The use of media including Television, Radio and the Web is important. Dissemination of the programs achievement will help with recruitment of new trainees into the program. It is important for the partners to communicate how the project fits into broader strategies of the country so that the support from policy makers such as federal ministry of health, transportation etc. continues. In general effective communication and willingness to collaborate will help marketing of program achievements. Ultimately, this will serve as a potential modality for advocacy guarantees and sustainability.

Addis Ababa University – People to People, Inc. – University of Wisconsin Triangular Partnership Achievements

The twinning partnership between Addis Ababa University (AAU), the University of Wisconsin-Madison (UW), and the non-profit Diaspora organization People to People (P2P), was initiated to strengthen the existing emergency medicine service at Tikur Anbessa Specialized Hospital (TASH), assist in the development of new academic programs including Emergency residency program, launching of an Emergency Medicine training Center, improve medical care including patients affected with HIV / Aids and introduce concepts of Emergency medicine preservice training. The results of this are as follows:

A) Faculty Development in Emergency Medicine for AAU Faculty:
The partnership activities started with bi-directional exchange trips, and an initial development of a condensed fellowship program in emergency medicine for four senior Ethiopian physicians from four different disciplines (Medicine, OB-Gyn, Surgery and Anesthesia). These physicians were exposed to Emergency medicine and other leadership training through mini fellowship programs. Four Ethiopian nurses were also invited to Wisconsin for further professional development in Emergency department nursing and leadership. During the first year of partnership Emergency Medicine residency Program Curriculum for Ethiopian context was developed. This was primarily the work of the Ethiopian colleagues with some support from the University of Wisconsin faculty.

B) Launch of Emergency Medicine Training Center:
About six months into the partnership, we were able to launch the first Emergency medicine training center for the region. This center was used to develop and provide several training modules in Emergency medical skills. Initially faculty from the U.S undertook training of the trainers. Ethiopian Faculty provides currently over 90% of the training at the center. The following list includes the trainings offered at this center:

Module 1 –Cardiac Resuscitation
Module 2 – Advanced Life Support for Obstetrics™
Module 3 – Ethiopia Trauma Resuscitation
Module 4 – Introduction to Life Support
Module 5 – Pediatric Resuscitation
Module 6 – Acute life support in Infectious Diseases
Module 7 – Pre-Hospital Services
Module 8 – Emergency Ultrasound
Module 9 – Quality Improvement

C) Start Residency Program in Emergency Medicine:
The Emergency Medicine training curriculum that was developed in year one was approved by Addis Ababa University senate and the first batch of Emergency medicine residents were admitted in September 2013. This remains a major milestone and a historical moment, as this was the very first program in Emergency Medicine for the country and for the region. Currently, there are five third-year, six second-year, and seven first-year residents. The final exam and graduation for the first group of residents is scheduled in October 2013. The partnership is looking forward at scaling up the training program by expanding to other regional hospitals.

D) Pediatric Emergency Medicine Fellowship:
Based on the success of the initial work, the partnership was charged with initiating a Pediatric Emergency medicine and critical care training. Two experienced pediatricians were identified. A two-year training curriculum that included bilateral exchange visits, didactics, and simulation was designed. The two physicians have completed successfully the Emergency medicine training and are embarking on critical care component of their training. Pediatric faculty and residents at large have also benefited from the wider activities of the partnership as they were all trained in emergency medicine modules. All pediatric residents and Master nurses were trained in basic pediatric life support and trauma.

E) Masters in Emergency Medical Nursing:
This is the equivalent of Nurse Practitioner in the United States system. Task shifting in health care providers is a common phenomenon. In a country where there is significant shortage of physicians, developing and training nurses as providers is very important. The leaders at Addis Ababa University had this vision and developed Master Nurses in emergency medicine training program. Nursing faculty from the U.S. and Canada were involved to support and train the nurses. The first group of twenty has graduated and group two will complete in about six months.

F) Research and Mentorship:
Introducing research and mentoring is considered the Achilles Heel for sustainability of an academic program. Abbreviated three day training in basic research methodology and introduction of mentoring was undertaken for both faculty and residents. Residents are assigned one local and one US mentor to assist them with research. This process is expected to introduce the culture of mentoring across the medical school campus and additional programs to support mentorship are under way.

Summary

The model for building a Triangular partnership is grounded in shared guiding principles that emphasize the importance of strengthening relationships among partners. These principles include:

1. Community involvement and volunteerism, with partners on both sides making significant in-kind contributions of staff time, materials, and resources, and demonstrating investment in the process.

2. Broad-based institutional relationships, where partners commit the resources of entire organizations or institutions, include contributions of the time, knowledge, and clinical expertise of their individual members.

3. Peer-to-peer collaborative relationships, where partners work together as equals, finding mutually beneficial solutions and opportunities to establish trust and build a multidisciplinary team.

4. Professional exchanges and mentoring for transferring and sharing knowledge, ideas, and skills in order to disseminate information.

5. Non-prescriptive, demand- and process-driven partnerships that empower partners on both sides by giving them ownership of the programs being jointly created, thereby encouraging sustainable capacity development.

6. Local political support, whereby the program is a recognized activity and fits within broader programming efforts by the Ministry of Health and leverages private-sector resources.

Innovative and interdisciplinary collaborations are needed to train medical workers, strengthen infrastructure, and inform policies to coordinate efforts. The Ethiopia emergency medicine triangular partnership can be seen as a model for responding to priorities as defined both by the Ethiopia Ministry of Health as well as local partners at AAU/TASH and the Diaspora. It created an exemplary partnership where all parties involved benefited and worked together for the same goal. The process was transparent, with clear objective and personal as well as collective accountability. The program was able to effectively build relationships and systems to ensure a sustainable approach to support emergency training, faculty development, research, and infrastructure. The partners' activities also strengthened the overall organizational and management of the emergency and other hospital departments by creating local interdepartmental collaboration. The strength in this partnership lies square on the local Ethiopian stakeholders who have from the beginning owned the project. The sense of ownership is critical when planning sustainability. The short-term achievements of this Triangular model could suggest that long-term, institution-to-institution partnerships that are driven by local stakeholders is an effective strategy to create equitable relationships and build sustainable health systems, and may warrant translation to other similar environments.

Bibliography

1. Agbor, Julius, Richard Joseph, and Anne W Kamau. "Foresight Africa: Top Priorities for the Continent in 2013." (2013).
2. Assefa, Netsanet. "Social Innovation in the Provision of Health Care in Ethiopia."
3. Bene, Charmaine B. "Donor Engagement of Diasporas: Public-Private Partnerships Towards Development Effectiveness?", University of Ottawa, 2013.
4. Einterz, Robert M, Sylvester Kimaiyo, Haroun NK Mengech, Barasa O Khwa-Otsyula, Fabian Esamai, Fran Quigley, and Joseph J Mamlin. "Responding to the Hiv Pandemic: The Power of an Academic Medical Partnership." Academic Medicine 82, no. 8 (2007): 812-18.
5. Guilbert, JJ. "The World Health Report 2006: Working Together for Health." Education for health (Abingdon, England) 19, no. 3 (2006): 385.
6. Heller, Richard F, Virasakdi Chongsuvivatwong, Samson Hailegeorgios, John Dada, Perihan Torun, Rajan Madhok, and John Sandars. "Capacity-Building for Public Health: Http://Peoples-Uni. Org." Bulletin of the World Health Organization 85, no. 12 (2007): 930-34.
7. Hoffman, Claire. "Diasporas for Development Resource Guide." Institute for the Social Analysis 503: 6593.

8. Kuschminder, Katie. "Knowledge Transfer and Capacity Building through the Temporary Return of Qualified Nationals to Afghanistan." International Migration (2013).
9. Laskofski, Laura. "A Conceptual Model for Engaging the Professional Diaspora in Ethiopia's Fight against Hiv/Aids." Paper presented at the Annual Meeting.
10. Newland, Kathleen, and Erin Patrick. "Beyond Remittances: The Role of Diaspora in Poverty Reduction in Their Countries of Origin. A Scoping Study by the Migration Policy Institute for the Department of International Development." Migration Policy Institute (2004).
11. Stuart, Mary, and Deloris V Russell. "Engaging the Diaspora as Volunteers in International Development." The Philanthropist 24, no. 1 (2011).
12. Terrazas, Aaron. "Connected through Service: Diaspora Volunteers and Global Development." Migration Policy Institute, Washington, DC (2010).
13. UNESCO Institute for Statistics. Financing Education in Sub-Saharan Africa : Meeting the Challenges of Expansion, Equity and Quality. Montreal: UNESCO Institute for Statistics, 2011.
14. UNESCO. Unesco Science Report 2010: The Current Status of Science around the World: Unesco, 2010.

Professional Mentoring – Fostering Triangular Partnership

By Katy Dickinson
and Ravishankar Gundlapalli, PhD

This chapter addresses two questions: "How does professional mentoring interact with the Triangular Partnership, and with the global diaspora in particular?" and "How does professional mentoring work?". Best practices and measurable benefits are presented with detailed examples drawn from successful professional global mentoring programs sponsored by corporate business, government-sponsored, and non-profit entrepreneurial institutions.

"Triangular Partnership" is a term used by People to People (P2P) to describe the relationship between three global groups:

- Diaspora
- Developing Countries Institutions
- Western Institutions

According to Webster's dictionary, the word diaspora is defined: "people settled far from their ancestral homelands". In August 2012, at the International diaspora Engagement Alliance (IdEA) annual meeting, then-US Secretary of State Hillary Rodham Clinton described MentorCloud as "a new mentoring and networking web platform specifically for diaspora members trying to get involved and give back." MentorCloud is proud and privileged to be a strategic partner for the IdEA initiative, working with organizations such as P2P.

In “America’s Largest Diaspora Populations,” Susanna Groves wrote: “The U.S. has the largest number of global diaspora members of any country in the world. Indeed, virtually all Americans have immigrant roots — and these roots are a quintessential part of the country’s narrative.” Two organizations that have successfully supported large diaspora groups in the USA are:

- **MentorCloud** - a Silicon Valley, California, start-up company offering a peer-to-peer web-based software platform purpose-built for people to connect as mentors and mentees, share expertise and drive mutual professional growth. Mentoring success takes time so examples are drawn from many programs – not just MentorCloud’s.
- **People to People (P2P)** - a MentorCloud partner, a non-governmental, non-profit organization dedicated to improving health care, reducing the spread of diseases, and providing technical assistance in promoting and improving environmental health -particularly in Ethiopia and in diaspora communities.

How does Professional Mentoring interact with the Triangular Partnership, and with the Global Diaspora in Particular?

Three examples of successful professional mentoring programs in which the global diaspora played a key role are SEED, TechWomen, and TiE MentorConnect.

1. SEED (Sun Engineering Enrichment & Development) Mentoring, a worldwide mentoring program at Sun Microsystems. Figures 1 and 2 are pie charts showing a summary of 2001-2009 data on mentor and mentee work locations (from the Sun Microsystems Labs Technical Report: “Sun Mentoring: 1996-2009”). The largest number of both mentors and mentees were based in the USA (in green), compared to those based in APAC (Asia-Pacific region, in blue) and EMEA (Europe-Middle East-Africa region, in red). Even so, there was a disproportionate number mentors based in the USA (more than in APAC and EMEA combined). In 2009, when these data were analyzed, Sun had about 15,000 Engineering staff distributed among thirty locations around the world, including large campuses in China, India and Europe – but most of Sun’s Engineering staff was in the USA. These charts show professional mentors’ measurable willingness to engage in successful mentoring relationships beyond borders in order to build and strengthen a community. SEED’s last program year was 2010, when Sun Microsystems was purchased by Oracle.

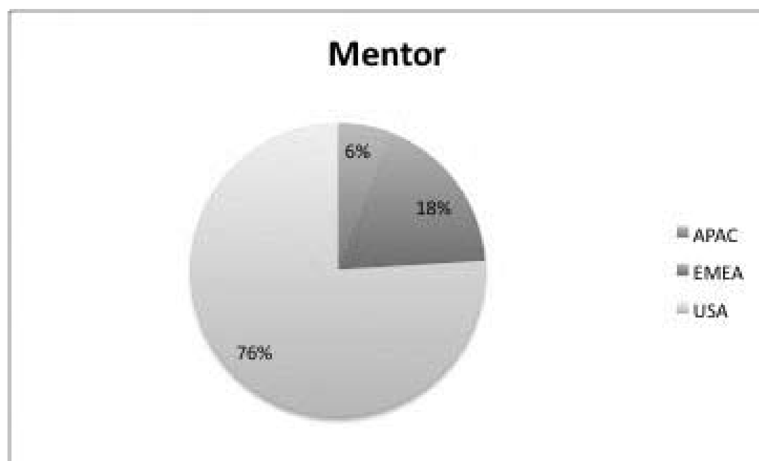


Figure 1: Sun Microsystems Mentor Location Summary, 2001-2009

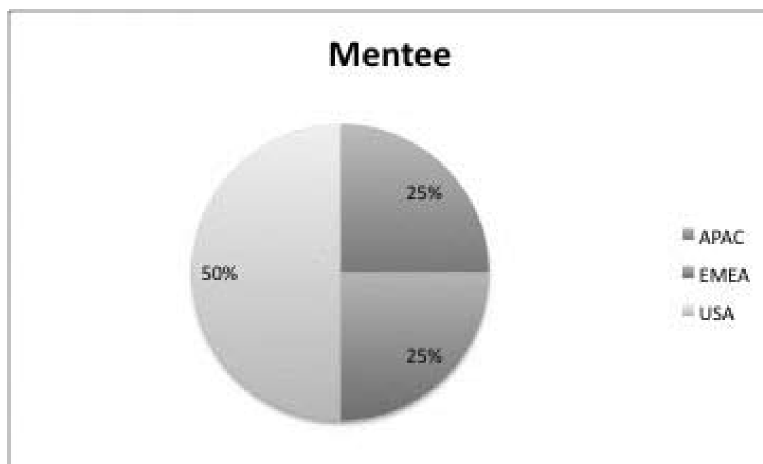


Figure 2: Sun Microsystems Mentee Location Summary, 2001-2009

2. A second example of mentors' and western institutions' willingness to reach beyond their national boundaries for a greater good is the TechWomen mentoring program, an initiative of the U.S. Department of State's Bureau of Educational and Cultural Affairs (ECA). For TechWomen 2011, there were thirty-seven mentees from six Middle Eastern and North African (MENA) countries. For TechWomen 2012, there were forty-two mentees from eight MENA countries. All mentees were hosted at Silicon Valley companies for a month while working with both Professional and Cultural mentor volunteers from over fifty companies and organizations in the San Francisco Bay Area. TechWomen has been so successful that its size was doubled for 2013 and the geographic area from which mentees are drawn was expanded to include Sub-Saharan Africa, in addition to MENA.

   Here are three tributes to TechWomen in the words of senior professional women who participated as mentees in the 2011 program.

   Dareen Alhiyari (from Jordan):

   I just want to share with you my gratitude for the TechWomen program for bringing together women in technology. The beautiful thing about TechWomen is that it never ends! It's an everlasting membership of a professional network of special women. Now I get to know those women in technology in my area and collaborate with them, and I will get to know even more with every year!

   Maysoun Ibrahim (from Palestine):

   My mentor was highly professional, supportive and a good listener. She was always willing to put the efforts needed to provide advice to her mentees to better shape their personalities and affect their professional career. She showed me through the TechWomen program that mentoring is an ongoing relationship of exchange of experiences aiming at strengthening our knowledge and achieving our dreams.

   Sukaina Al-Nasrawi (an Iraqui from Lebanon):

   Since the first TechWomen day, my mentor has been my continuous reminder of the importance of persistence, optimism, strong will to face life challenges and make a change. She strengthened my skills and introduced me to the concept of the elevator pitch, which is crucial for professional growth. She is a perfect example of a mentor. I truly appreciate her friendship, values and everything I learned from her. I am passionately looking forward to the day I can do the same for someone else.

In both TechWomen and the Sun Microsystems mentoring programs, many of the US-based mentors were either immigrants themselves or the children of immigrants. Sometimes those immigrant mentors or their families were from the same country as their mentee (a direct-diaspora connection), but most times not.

Photo 1: TechWomen in Silicon Valley 2012
Mentor: Katy Dickinson of the USA,
Mentee: Adla Chatila of Lebanon

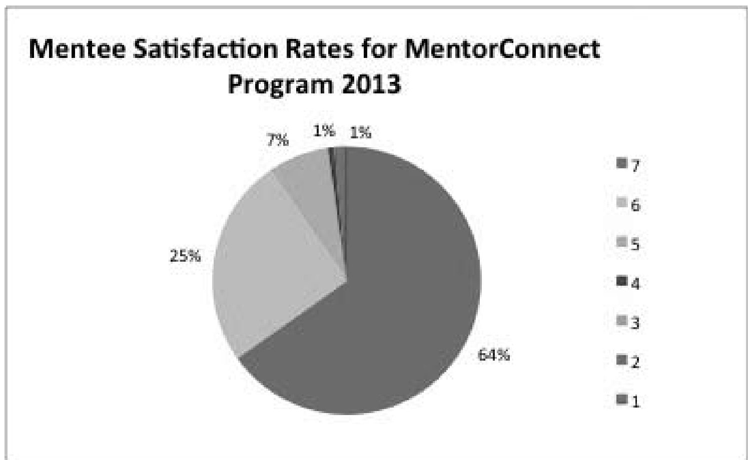
3. A final mentoring program example showing a more-direct diaspora connection is the four-year-old TiE Silicon Valley MentorConnect program. TiE SV MentorConnect has several elements, including a web-based platform (MentorCloud) and a series of speed mentoring events called Open Mentoring Sessions (OMS). Two such sessions were held recently, one in December 2012 at the TiE SV headquarters, then a much larger two-day event presented at TiEcon ("The World's Largest Conference for Entrepreneurs") in May 2013. The combination of MentorCloud's web-based platform, reinforced by regular in-person group meetings, is powerful and effective – promoting growth in both community engagement and satisfaction. TiE SV MentorConnect uses this combined structure for communication. There has been strong improvement in positive feedback from all participants, detailed below.

December 2012 OMS Metrics:

- 82% of Mentees rated the event "Highly Recommended or "Recommended"
- 90% said that the event "exceeded" expectations
- 95% said they would recommend a similar session to their friends

May 2013 Metrics from TiEcon:
Responses from 138 of the 185 Mentees:

- 98% of Mentees were satisfied with their MentorConnect experience. (64% awarded the highest possible rating of 7) - see Figure 3
- 96% would recommend a similar session to others. (70% awarded the highest possible rating of 7)
- 92% said they would like to continue conversations online after TiEcon



1 = Strongly Disagree

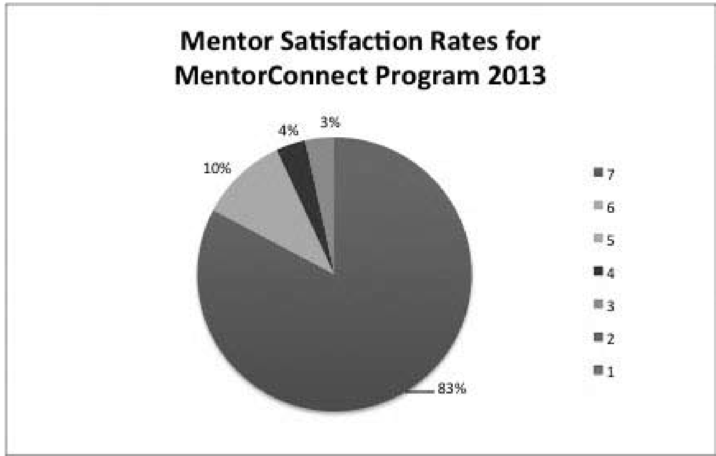
4 = Neutral

7 = Strongly Agree

Figure 3: TiEcon MentorConnect 2013 Mentee Satisfaction

Responses from 30 of the 49 Mentors:

- 93% of Mentors were satisfied with their MentorConnect experience. (80% awarded the highest possible rating of 7) - see Figure 4
- 97% would recommend a similar session to other Mentors. (83% awarded highest possible rating of 7)
- 97% felt that their time was well spent
- 93% felt that the Mentees were well prepared and asked excellent questions



1 = Strongly Disagree

4 = Neutral

7 = Strongly Agree

Figure 4: TiEcon MentorConnect 2013 Mentor Satisfaction

TiE itself is an excellent example of diaspora success:

> TiE, a not-for-profit global network of entrepreneurs and professionals, was founded in 1992 in Silicon Valley, California, USA. Although its birth name, The Indus Entrepreneurs, signifies the ethnic South Asian or Indus roots of the founders, TiE stands for Talent, Ideas and Enterprise. It is an open and inclusive organization that has rapidly grown to more than 60 chapters in 17 countries.
>
> **- from https://sv.tie.org/page/about-tie-silicon-valley**

Photo 2: TiE Open Mentoring Session 2012.

These successful examples have shown two legs of the P2P triangle – Diaspora and Western Institutions – using mentoring for community building, mutual-understanding, and professional growth. To see mentoring connections with the triangle's third leg – Developing Countries Institutions – refer to the diversity of communities listed on MentorCloud home web page. These communities are currently using the platform to connect with institutions and mentors/mentees in their countries of heritage:

- **Global Science and Technology Foundation (GSTF)** – Connecting mentors in IBM with students and faculty in Sub-Saharan African Universities
- **Indian Institute of Science, Bangalore, India - (IISc)** – Connecting global alumni with students on campus.
- **International diaspora Engagement Alliance (IdEA)** – Connecting US diaspora professionals with people and institutions in their countries of heritage
- **The SABLE (South African Business Link to Experts) Accelerator** – Connecting South African diaspora with businesses in South Africa
- **TechWadi** –Building Bridges for Entrepreneurship between US and MENA region.
- **TiE Silicon Valley** – Connecting successful entrepreneurs with aspiring entrepreneurs across USA and in 15 other countries.
- **University of the Witwatersrand, Johannesburg, South Africa (Wits)** – Connecting alumni mentors from 52 countries with students on campus

All of these examples involve cross-border interactions and promote collaborations to facilitate mentoring without borders. The context in all of these mentoring programs is professional. That is, the intended end goals are related to skills development, career growth, or entrepreneurship.

How does Professional Mentoring Work?

Someone Like Me…

Picking a good mentoring partner is important. Many mentees are looking for a mentor who is like themselves in some particular way: a person with whom they feel commonality and have potentially the same vision. Seeking

“someone like me” can cover a broad range of characteristics: age, gender, experience, nationality, language, ethnicity, rank or status, professional focus, etc.

Surprisingly, although this is a long list and covers much of human experience, it does not address a primary consideration in making a mentoring match that actually works. That is: availability. How well the potential mentor’s and mentee’s schedules match (and their flexibility to accommodate each other) is frequently a deciding factor. Time requirements are often the first issue raised by a potential mentor: How long? How often? Exactly when? A mentor who is seemingly perfect in all other respects who is not available to the mentee is a bad match.

Experience has shown that if a mentor and mentee **start their relationship with open hearts and minds and meet regularly**, they will find common ground, even if their characteristics are not otherwise aligned.

Mentoring vs. Coaching vs. Sponsorship

Mentoring, Coaching, and Sponsorship are three words often used interchangeably while in reality they are not the same. While different in many ways, each of these contains elements of the other two; however, it helps to distinguish them when deciding on a professional relationship. Key differentiating elements are:

- **Power** (positional or hierarchical authority, degree of control)
- **Topic of discussion** (specific near-term goals, or longer-term career/life change matters)
- **Duration of the relationship** (one-time, short-term, long-term)
- **Reward** (benefit or pay, particularly made to the senior member of the relationship)

Sponsorship or Patronage

The patron or sponsor is in a position of authority and willingly using their influence or senior position to advance the career and interests of their favorite subordinate (sometimes referred to as a protégé, sponsoree, or sponsee). Sponsorship can be positive (as in the development of a successor, or a talented junior associate), or negative (as seen in destructive favoritism or political corruption). The relationship is usually long-term: an extended period during which the patron protects and supports the protégé, and controls their work while the protégé grows their ability and advances through the organizational structure. The patron usually takes responsibility for the protégé and shares credit for their success. The patron will have only one or a very small number of favorites. Sponsorship is often particularly important to women executives seeking promotion to the highest leadership levels.

Coaching

Coaching is a relationship or kind of communication with the primary goal of conveying specific knowledge, training, or skills. A coach may be paid to be in the relationship as in the examples of a work supervisor to a direct employee, master craftsman to a journeyman or apprentice, or a experienced professional outside the organization who is hired by the individual or the organization to add polish. A coach may have many clients but the relationship is

usually for a specific purpose and for a limited time – the period it takes to transfer the specific knowledge or strategy to achieve a certain expected result. There are often objective measurable criteria for completion of a coaching relationship – as in an individual landing a job or passing a certification, or a team accomplishing a major victory or promoted to a new role with the newly acquired skills. The coach may or may not have any longer-term relationship with or hierarchical authority over the client.

Mentoring

Mentoring is a longer-term relationship focused on larger professional or life issues. It is a personal relationship in a professional setting. The mentor is usually more experienced and many-a-time older than the mentee, even though age is really not a consideration for being a mentor.

Harvard Business Review's article on "Mentoring Millennials" presents the developing phenomenon of "reverse mentoring" in which a senior executive learns from someone younger than them, often gaining new skills that millennial group grew up with, such as the use of social media. Direct or Reverse Mentoring may happen informally or as part of a formal program. Ideally, the mentor and mentee should not be in a supervisory relationship to make sure that hierarchical power from occupying a senior role does not come in the way of effective sharing of wisdom.

Mentor and mentee often work together long-term, build trust in each other and become friends. The mentor may advocate for the mentee but does not control the mentee and does not take responsibility for the mentee's success. Mentors serve as guiding lights but the actions need to be taken by the mentees to get closer to their goals. Mentees often have more than one mentor at a time, or a sequence of mentors over a period of years. Mentees frequently become mentors to others. An analogy commonly used to describe the role of a mentor is that of a lighthouse.

Mentors may have many mentees, sometimes in one-to-one or one-to-many structures. Mentors are usually unpaid (not in cash at least). They are professional volunteers who get satisfaction from "paying it forward" – that is, generously giving to others some of the guidance that benefited them during their own development. In many cases, mentors who have had significant success in their own careers thus repay those long-gone but wonderful people who helped them in the past.

Key contributions observed from mentors are:

- **Introductions** to experts or people with practical wisdom who can help the mentee, formal recommendations for awards or new positions.
- **References** to key resources, training, experiences which will expand the mentee's understanding, experience, or context.
- **Feedback**, where the mentor acts as a sounding board for the mentee. The mentor may offer specific advice or may only provide sufficient guidance for the mentee to reflect and figure out his or her own way.

In sponsorship, coaching, and mentoring, there is clearly a vested interest and intent of the Sponsor, Coach or Mentor to see their protégé, client or mentee (receiver) become successful. All three relationships help to accelerate success for the receiving party, and bring immense satisfaction (and sometimes material reward) to the giving party. Given the subject focus of this chapter, we will now expand further on the benefits of Mentoring.

Mentoring Benefits

Mentoring is a remarkably successful method to accelerate learning and growth, for both mentor and mentee. We grow when we grow others, and learn best when we can teach something to others. This is what makes mentoring such an inspiring and mutually beneficial relationship. Formal professional mentoring programs within organizations offer an excellent and measurable return on investment for the organization as well as the mentors and mentees. However, success of the individual mentees and mentors depends on their capabilities, commitment to the relationship, and hard work. The role of the management in providing the right tools, processes, leadership and supporting resources is critical to make mentoring programs highly successful.

A review of the extensive research on mentoring shows the following benefits often result from a formal professional mentoring program (over time, for both Mentors and Mentees, compared to a pre-program baseline):

- Improved satisfaction, higher morale, greater motivation.
- Higher retention, improved organizational and community bonding and loyalty.
- Particular value to women, minorities, and at-risk youth – can work to improve organizational variety in three areas: demographic, geographic, and professional focus.
- Broadens the diversity of innovation and ideas available to the organization.
- Improves communication between target groups (erodes organizational silos) – community establishment, strengthening.
- Improved participant performance and value-to-organization, due to initial participants demonstrating value and results
- Personal learning, professional development of the participants.
- Leadership building.

As alluded to in this section, the primary responsibility to making a mentoring relationship successful lies with the Mentee. Unfortunately, the skills of how to be a good mentee are not taught in schools or organizations, and as a result, mentees sometimes attribute the shortcomings of a mentoring relationship to their mentors, without recognizing their own missed opportunities.

Figure 5: AAUW "Mentoring, In Your Own Words" Word Cloud, 2013

Being a Good Mentee

Five suggestions from Rachel Wallace's AAUW "National Mentoring Month: 3 Tips from a Guru" (**American Association of University Women**) 2013:

- **Do your homework**. Come to meetings with your mentor prepared. Make sure you've done any readings assigned you. If your mentor makes a professional recommendation, do it — no matter how awkward it may seem.
- **Ask questions.** You want to learn how your mentor thinks and makes decisions — so ask!
- **Be respectfully persistent.** Relationships often fall apart because the mentee didn't follow up. Don't worry about hounding your mentor; you already have permission to ask.
- **Be committed.** The effort you put into this relationship will directly affect the results, so make the time needed for the relationship.
- **Be patient.** Often, the mentor learns more in the short term than the mentee will. During your meetings, the mentor may get a concrete understanding of the problems in the profession. The mentee, on the other hand, takes longer to process what she's learning. It may take years for the mentee to fully understand the lessons learned from the relationship.

Three additional suggestions from Jessica Dickinson Goodman based on a continuing mentoring program started in 2010, at **Carnegie Mellon University**:

- **Show up.** Not just physically, but mentally, to every interaction. Come with goals, come with questions, come with ideas.
- **Follow up.** If your mentor gives you a contact, send the email that day. If someone helps you, send a thank you email
- **Read up.** Constantly researching your field, your colleagues, and your competitors is the name of the game ...

Ravi Gundlapalli sharing his 2012 experiences with his mentee Srikanth Bolla, writes in "The magic of exhibiting / identifying potential" - The mentee…

> …made his potential "visible" by asking great questions, showing tremendous enthusiasm, talking with pride about his prior accomplishments, sharing his aspirations, and actively listening to my inputs. He also followed up on my recommendations and explained when he couldn't. He was accountable and very respectful of my time. All of these are traits good mentees exhibit that great mentors immediately notice and are drawn towards.

Just as a good teacher will never ignore a student who is hungry for learning, a mentor also will be motivated to make their mentees successful if mentees demonstrate all of these excellent traits. Now, what are the traits of a good mentor?

Being a Good Mentor

From "Worst Practices / Best Practices" in the Technical Report: "Sun Mentoring: 1996-2009":

- **The Fine Art of Effective Listening:** listen twice as much as you talk, problems can be more complex than you think, acknowledge frequently
- **Advice and Catalyze:** weigh options, let the mentee find the solution, discuss various actions
- **Flexibility (the Mentoring Asana):** respect the mentee's choice, accommodate changes, life happens – reschedule, don't disengage
- **Objective Support:** be a disinterested yet caring third party, safe harbor, evaluate and adjust goals, encourage risk-taking
- **Share Yourself, Be Committed:** meet regularly – it is not mentoring if the interactions do not actually happen, live or virtual.. Connect mentee with your network, share your passion and have a passion for sharing.

Ravi Gundlapalli, in his 2012 "Reflections from my meeting with the 'legendary' Bill Draper" talked about how the venture capitalist taught him that mentors help you see around the corner, based on their own experience being on a similar path as the mentee. Dr. Gundlapalli wrote: "Good mentors, who take the time and invest their Intellectual Capital in others, become Great Mentors."

Now that we have expanded on the best practices for mentees and mentors, it is important to discuss the critical role the organization and its leadership have to make these relationships thrive and be successful.

Lessons from a Corporate Mentoring Program

The following lessons are summarized from the Conclusions section of the technical report "Sun Mentoring: 1996-2009":

1. Strong and visible long-term executive sponsorship and funding are needed for mentoring to thrive and become part of an organizational culture as the community develops. Continuity builds program strength over time. Knowing that a program will continue to be available allows mentees, mentors, and managers to include mentoring in their formal and informal development plans.

2. Mentoring returns good value for the time and money it takes. The return on investment (ROI) on mentoring can be 1,000% or better, and ROI grows as the program matures.

3. Mentoring can be used for larger corporate purposes in addition to improving the performance of individuals. Mentoring has been used to bring in new or acquired individuals and groups, to improve the network between existing groups in different organizations, and to reduce isolation of those geographically distant from headquarters.

4. Mentoring and being mentored is professional work that can be done as a part of a day job, during business hours, not only during personal time. It is real work, real time. Leadership must recognize that part of their job

is motivating people - including encouraging them to participate in mentoring programs.

5. It is important to collect and analyze data routinely on both subjective (satisfaction) and objective (promotion, retention, compensation) success metrics. Make program decisions based on those data. Maintain participant data long-term to see bigger patterns.

6. A diversity of participants improves mentoring programs. Key mentoring program elements (Process, Training and Educational Materials, Management and Web Tools, and Staff) should be designed to attract and support a wide diversity of participants from many cultures.

7. Mentoring programs should be run for the convenience of the Mentors. Set up the program to make it as comfortable as possible for senior staff and executives to participate. If the program is set up to save the Mentor time and avoid mismatches, mentoring will be more valuable and enjoyable for the Mentors. The program should make clear the value of mentoring to the Mentors, the Mentees and the company.

8. A formal mentoring program should offer training that launches the relationship with clear goals and success measures so that Mentors and Mentees feel comfortable from the start and work well together for the entire term.

9. A balance must be achieved between automated tools and individualization. Automated web tools to manage a large mentoring program are essential to success, but individualization is also a key element. The size and seniority of the group involved should determine the appropriate balance.

10. The structure of the mentoring system must fit the current target group and also be designed for flexibility so that it can be modified for future groups.

11. **Don't expect or promise miracles. The goal is not perfection but improvement.**

Photo 3: Sun Microsystems SEED mentoring program, 2008

Building a Community Through Mentoring

Sheryl Sandburg (Chief Operating Officer at Facebook) wrote in her 2013 book Lean In:

> Many companies are starting to move from informal mentoring that relies on individual initiative to more formal programs. When taken seriously, these formal mentorship/sponsorship programs can be remarkably successful.

One of the sometimes-unexpected successes of formal mentoring programs is the development of a strong long-term community of mentors and mentees who know and respect each other through the program. These communities can continue far beyond the boundaries of the company or program that created them.

In conclusion, a broad variety of successful examples of mentoring programs have been discussed here, including the **SEED** corporate mentoring program, the government-sponsored **TechWomen** program, and the non-profit entrepreneurial **TiE Silicon Valley MentorConnect** programs. These programs are connected over the long term through their mentors: many SEED mentors went on to participate in both the TechWomen and TiE programs. Each has demonstrated high participant satisfaction and return on investment for the sponsoring organization. Professional trust and connections, such as those built and supported by formal mentoring programs, enhance reputation and effectiveness for both the organization and the individual mentors and mentees. Mentoring builds strong communities worldwide, with lasting, measurable, and positive benefits for each leg of the Triangular Partnership.

Bibliography

1. Chakravarthy, Pradeep, "The Difference Between Coaching and Mentoring", Forbes Infosys, 10 December 2011, URL: http://www.forbes.com/sites/infosys/2011/12/20/business-leadership-for-smarter-org-2/
2. DeLong, Thomas J., and Vineeta Vijayaraghavan, "Let's Hear it for B Players", Harvard Business Review, 2003, URL: http://hbr.org/2003/06/lets-hear-it-for-b-players/ar/1
3. DeLong, Tom, and Paul Michael "Managing B Players" Harvard Business Review Blog Network, 13 July 2008, URL: http://blogs.hbr.org/video/2008/07/managing-b-players.html
4. Dickinson, Katy, "TiE Mentoring Success Metrics" MentorCloud Blog, 30 May 2013, URL: http://www.mentorcloud.com/mentorcloud-stories/tie-mentoring-success-metrics/
5. Dickinson, Katy, "Sheryl Sandberg, Leaning In on Mentoring", Katysblog.wordpress.com, 10 April 2013, URL: http://katysblog.wordpress.com/2013/04/10/sheryl-sandberg-leaning-in-on-mentoring/
6. Dickinson, Katy, Tanya Jankot, Helen Gracon, "Sun Mentoring: 1996-2009" Sun Laboratories Technical Report, 2009, URL: http://dl.acm.org/citation.cfm?id=1698217&coll=DL&dl=GUIDE
7. Dickinson Goodman, Jessica, "3 Tactics for Being a Good Mentee", (Carnegie Mellon University – Dietrich College Career Mentoring Program), 21 January 2012, URL: http://jessicadickinsongoodman.com/2012/01/21/3-tactics-for-being-a-good-mentee/
8. The Economist, "Women in Management – A Word from Your Sponsor", 16 June 2012, URL: http://www.economist.com/node/21556963
9. Groves, Susanna, "America's Largest Diaspora Populations", 13 March 2013, URL: http://diasporaalliance.org/americas-largest-diaspora-populations/

10. Gundlapalli, Ravishankar, "The magic of exhibiting / identifying potential…", 31 December 2012, MentorCloud, URL: http://www.mentorcloud.com/things-to-ponder-upon/the-magic-of-exhibiting-identifying-potential/
11. Gundlapalli, Ravishankar, "The Power of Diaspora Mentoring", IdEA, 14 August 2012. URL: http://diasporaalliance.org/the-power-of-diaspora-mentoring/
12. Gundlapalli, Ravishankar, "Reflections from my meeting with the 'legendary" Bill Draper", MentorCloud, 16 November 2012, URL: http://www.mentorcloud.com/entrepreneur-reflections/reflections-from-my-meeting-with-the-legendary-bill-draper/
13. Hewlett, Sylvia Ann, Kerrie Peraino, Laura Sherbin, Karen Sumberg, "The Sponsor Effect: Breaking Through the Last Glass Ceiling", Harvard Business Review, 12 June 2011, URL: http://hbr.org/product/the-sponsor-effect-breaking-through-the-last-glass/an/10428-PDF-ENG
14. Holincheck, James. "Case Study: Workforce Analytics at Sun", Gartner Research, 27 October 2006, URL: http://www.gartner.com/DisplayDocument?ref=g_search&id=497507
15. Kruger, Justin, and David Dunning. "Unskilled and Unaware of It: How Difficulties in Recognizing One's Own Incompetence Lead to Inflated Self-Assessments", Journal of Personality and Social Psychology, 1999, Vol. 77, No.6. 1121-1134, URL: http://en.wikipedia.org/wiki/Dunning–Kruger_effect
16. Margolis, Jane, Allan Fisher, Unlocking the Clubhouse: Women in Computing, (MIT Press) 2003.
17. Meister, Jeanne C., and Karie Willyerd, "Mentoring Millennials", Harvard Business Review, May 2010, URL: http://hbr.org/2010/05/mentoring-millennials/ar/1
18. Murrell, Audrey J., Sheila Forte-Trammell, Diana A. Bing, Intelligent Mentoring: How IBM Creates Value through People, Knowledge, and Relationships, (IBM Press), 2008.
19. NCWIT (National Center for Women & Information Technology), "Evaluating a Mentoring Program Guide", 2011. URL:http://ncwit.com/sites/default/files/resources/evaluatingmentoringprogramguide_web.pdf
20. Okonjo-Iweala, Ngozi, "Want to help Africa? Do business here", TED Talk 2007, URL http://www.ted.com/talks/ngozi_okonjo_iweala_on_doing_business_in_africa.html
21. Pineau, Carol, ""Africa: Open for Business" (BBC World Documentary of the Year) 2006, URL: http://africaopenforbusiness.com
22. Rosling, Hans, "Let my data change your mindset", TED Talk 2009, URL: http://www.ted.com/talks/hans_rosling_at_state.html
23. Sandberg, Sheryl, Lean In: Women, Work, and the Will to Lead, (Knopf) 2013.
24. Starcevich, Matt M. "Coach, Mentor: Is there a difference?" Center for Coaching and Mentoring, 2009, URL: http://www.coachingandmentoring.com/Articles/mentoring.html
25. Wallace, Rachel, "National Mentoring Month: 3 Tips from a Guru" (interview with Katy Dickinson), American Association of University Women (AAUW), 17 January 2013, URL: http://www.aauw.org/2013/01/17/nmm-3-tips-from-a-guru/

Web Addresses for Programs and Companies Referenced

IdEA URL: http://diasporaalliance.org/
MentorCloud URL http://www.mentorcloud.com/
People to People URL: http://new.peoplepeople.org/
TechWomen URL: http://www.techwomen.org/
TiE Silicon Valley URL: https://sv.tie.org/

Triangular Partnerships:

Strategies for Scalability and Sustainability

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Introduction

Medical teams from regions and countries of higher sophistication and technology working in less advantaged regions have a long and illustrious history. In the 1760s, physicians from Edinburgh assisted in starting the School of Medicine at the University of Pennsylvania, the first medical school in what would become the United States. In 1918, The Rockefeller Foundation supported physicians from Washington University of St. Louis in founding the Peking Union Medical College. Both institutions thrive to this day.

More recently there has been a significant effort, aimed at assistance, often through missions from high-income countries (HICs) to low and middle income countries (LMICs). The most frequent sending countries are the United States, Canada, United Kingdom and Australia. The most frequent recipients are in Africa followed by Central America, Asia, South America and Asia Pacific.[22] Surgical programs dominate the roster of missions along with the recognition that surgically treated conditions rank high in the list of unmet health conditions.[5] Farmer and

Kim point out that not dealing with surgical diseases leaves the country with a severe health burden. They state that it is necessary to eliminate even the smallest fee in poor areas to allow access to the care.[13]

This chapter will discuss the approaches to establishing sustainable programs to address these unmet health needs. One approach is by encouraging triangulation, the involvement of a Diaspora to work with HIC missions to produce changes in the local health care environment, changes that will persist and be self-sustaining. These are long-term goals. Improvements will probably be incremental and not immediately dramatic.

Who Supports These Missions and What Are Their Goals?

Many university medical schools have significant global outreach programs. These programs support both residents and medical students going to LMIC areas often with a collaborative twinning arrangement with local medical facilities. The list of medical schools participating in global outreach and partnering is very long and is growing as the interest of the students increases.

The American College of Surgeons supports Operation GivingBack, which encourages and supports overseas missions.[36] The World Health Organization (WHO) has a program for Emergency and Essential Surgical Care, which includes pregnancy, related problems. Partners in Health has been a major force in improving health care in Haiti among other countries. These organizations provide a variety of programs performing medical and surgical work, lecturing and mentoring to local physicians and students and providing equipment and medication that may not be readily available in the local medical community.

The most prominent organization providing care in not only underserved but also dangerous regions is the French based, but international, Doctors Without Borders. They were awarded the Nobel Peace Prize in 1999. They provide mostly surgical care in regions threatened by man made and natural disasters.[10]

Medical specialty groups support missions to LMIC countries. Smile Train and Operation Smile have operated on thousands of children with facial clefts. Part of their mission is teaching the local surgeons how to correct the deformities.

Organizations including Massachusetts General Hospital with support from the Boston medical community and the Israel Defense Force have emergency teams that can rapidly deploy to areas of natural disaster such as earthquakes or tsunami. The United States Navy can move an aircraft carrier to coastal disasters. These ships have capability for helicopter evacuation, produce fresh water and have fully-equipped hospitals.

Religious organizations support missions to rural LMIC areas that often have virtually no medical care. Many of their dedicated physicians function with little equipment, inadequate electricity or water and care for patients who come late in the course of their diseases. The Pan-African Academy of Christian Surgeons (PAACS), which partners with Loma Linda University School of Medicine has been increasing its efforts in LMICs.

Foundations such as those started by Bill Gates and Bill Clinton have provided funds and expertise to combat diseases in LMIC countries. Since they focus primarily on infectious diseases, TB, HIV/AIDS and Malaria, government policy and allocation of resources may be determined by the foundation's focus

Bringing a global health rotation into medical school and residency curricula has developed increasing interest. Residents, as well as medical students, in HIC countries have shown an increasingly strong interest in international medicine. They have provided excellent service in some LMIC areas. An international rotation has been a significant component of some training programs. Those who do volunteer are more likely to continue to volunteer during their career.[9,20,21,26,30]

However, there have been discussions about the practicality and ethics of sending medical students or residents to LMICs for the primary benefit of the student or resident. Provenzano et.al. have discussed the problems of students using an international experience to do research projects.[29] These include the time and cost burden of the host, whose interests determine the research project and the need for informed consent. The student or resident may be going on the mission for a short time, perhaps up to a month or less, to have an experience with an exotic culture and to see medical conditions that are not seen at home. This in it self is not a bad thing. It will give the student/resident an understanding of how much of the world lives and functions. Silverberg et.al. feel that establishing a formal relationship with the developing country is essential and such a relationship can benefit both the resident and the host country.[31] Senior faculty supervision is essential for this program to function well.

There is also the dilemma that frequently arises of tailoring the treatment to the local conditions. Lack of diagnostic facilities and imaging, lack of specific equipment and lack of follow up may force the physician or surgeon to choose an alternative operation over one that would be done at home. Also such a program may produce resentment in the host country where the medical practitioners may be quite skilled in dealing with the diseases that frequently present to them.

Surgical Needs

There has been an understanding that surgical diseases as well as the nonsurgical and public health issues contribute in a major way to the burden of poor health in LIMC nations. A severe deficiency of surgical procedures is present in those nations compared to HICs.[7,28,32] Weiser et.al. have estimated this discrepancy. They note that worldwide 234.2 million major operations are performed yearly. Nations that spend less than $100 per person on health care make up 34.8% of the world population but perform only 3.5% of the operations.[34] Because of the lack and the distribution of trained surgeons there have been efforts to train rural surgeons with limited training and credentials. In some of these programs physicians with limited post graduate training or practitioners with less than MD credentials have been trained in emergency surgical procedures and may provide the basic surgical care in underserved rural communities.[19] At the meeting of the Ethiopian Surgical Society in 2006, Tedros Adhanom Ghebreyesus, then the Minister of Health, proposed a program of Health Extension Workers with surgical training to provided basic surgical, emergency and obstetrical services where none had existed.[23] These programs have been established in other African countries where they focus on maternal and woman's health. Similar program are in place in Paupa, New Guinea.

Chao et.al. have surveyed the status of surgery and anesthesia in Ethiopia. Compared to global, and certainly to HIC statistics, Ethiopia is far behind in most metrics of health care. It also falls short when compared to statistics for Africa. The authors point out the deficiency of surgeons in most areas of the country and point out the problem

of inadequate infrastructure. This includes difficulty of transportation, electricity, water, refrigeration, oxygen and basic supplies. One of the most serious deficiencies is the lack of anesthesia. There are fewer than fifteen anesthesiologists in the entire country, one of the lowest ratio per population in the world. Nurses deliver most of the anesthesia. Nurses and other mid level providers are necessary to fill gaps in medical coverage.[8]

Surgical missions caring for common but circumscribed conditions such as cleft palate and cataract have been successful in treating large numbers of patients in well-organized missions. Training local physicians is a major part of their mission. Duenas et.al. have shown that short missions dedicated to training local physicians can realize excellent skill transfer and sustainability. They donated equipment and taught neuroendoscopy to neurosurgeons in Lima, Peru.[12] Merwyn Bagan lived in Kathmandu for years and established the first neurosurgical program in Tribhuvan University Teaching Hospital in Napal.[24] There are instances where outstanding and dedicated surgeons have made major contributions to world wide medical practice. Reginald and Catherine Hamlin treating obstetric fistula and Benjamin Warf treating hydrocephalus have exported their work to the HIC world.[33,35]

Teach a Man to Fish

Give a man a fish, and you feed him for a day.
Teach a man to fish, and you feed him for a lifetime.

This proverb has been mentioned frequently in the literature on HICs working in LMICs. What then is the best approach to aiding health care in LMICs? There is no one best way. Sending a group into an underserved region is helpful and, in the case of disasters is vital. However, the unmet health burden in some underserved areas is almost infinite. Short-term missions will care for individual cases. This is important for that individual but does little to deal with overall health needs of the country. There is also the problem of a medical mission coming to a hospital, dominating the facility for a short period and then returning home, leaving the local physicians to follow up and care for complications that may arise.[18] This issue has been well described by Gosselin et.al.[14] They stress the need for the surgeon to understand the cultural and socio-economic issues in the specific country. It is necessary for the mission to provide for the follow up care of the patients after the mission has gone home. Bernstein has described the ethical dilemmas of working in an underserved region as has Isaacson et.al.[4,18] They point out that the visitor may be doing an operation that he/she is not really comfortable with. At home, where surgery is very sub-specialized, another colleague may be more expert at a specific operation. They are concerned with the lack of informed consent and with the need to operate and leave the patient when they return home. They are concerned by the lack of infrastructure, equipment, consistent electricity and reliable anesthesia.

Clearly there is a need to teach the local physicians rather than merely performing the surgery. Gruen argues that while support from wealthy countries is essential the goal is to establish a local program. This is a many year process. It will involve training the local physicians and surgeons. The certification process should be local. It is not sensible to impose the formal demands of HIC boards on local medical systems.[15]

An important problem in LMICs is the exodus of young physicians to greener pastures. Bringing local physician training toward HIC standards will go a long way to reduce the exodus of medical school graduates to more prom-

ising professional opportunities.[11] Hagander et.al. point out that the major reason for "brain drain" is professional development rather than economic issues.[17] Gosselin et.al. agree with this thesis. They stress that there must be governmental and hospital buy-in for this program to be successful. Those who complete the training must be rewarded professionally and financially.[14]

The neurosurgical community has chosen to approach the LMIC needs differently. In 1969, American neurosurgeons established FIENS (Foundation International Education in Neurosurgery). The mission of this organization is to provide education and training to local neurosurgeons around the world.[3] Specifically in Ethiopia, in collaboration with Haukeland University Hospital and the University of Bergen, Norway we have initiated and supported the Neurosurgery Training Program (NSTP) at Addis Ababa University School of Medicine. The faculty under FIENS auspices comes mostly from the United States. The Scandinavian faculty comes primarily from Bergen but also from Denmark and Sweden. There are currently three hospitals involved in the NSTP. The Tikur Anbessa (Black Lion) Hospital, a federally funded facility, is the major hospital and mentored mostly by FIENS. The Scandinavian faculty centers their work primarily at Myungsung Christian Medical Center (MCM), a private facility. A recently refurbished city facility, Zewditu Hospital, is used for less acute pediatric neurosurgery and spinal surgery.

The major function of the visiting neurosurgical faculty is to teach the residents basic neuroscience and neurology as well as operative neurosurgery. Hospital rounds with the residents are made several times a week. The faculty lectures the residents on different topics and a resident will present a topic to the department at weekly conference where members from all of the hospitals participate. The residents learn how to evaluate neurological patients by working with the faculty in the outpatient department. They learn to evaluate the various images available. X-ray, CT and MRI are available, perhaps not as readily as the faculty is accustomed to but adequate to make accurate diagnosis.

The teaching in the operating room depends on the level and skill of the resident. The more junior residents are capable of independently operating on most cranial trauma. The faculty or senior residents are immediately available if needed. The faculty is more involved with difficult surgery such as tumors. The faculty may or may not scrub into the case but will be in the operating room to give advice and scrub if necessary

Every morning there is a conference where the on-call resident presents the previous day's admissions. The pre- and post-operative cases are discussed as well as complications and deaths.

The faculty, the facilities and the equipment are not adequate to teach the residents all aspects of neurosurgery. We have, therefore, incorporated into our program rotations out side of Ethiopia. All residents spend six months at the Haukeland University Hospital in Bergen. They have spent time abroad in other countries learning spinal instrumentation techniques and plan a fellowship to learn skull base techniques. Visitors with specific skills visit for short periods. Our residents have recently been exposed to sessions on awake cranial surgery and endoscopic surgery of both the brain and spine. Angiography is not yet available in Ethiopia, therefore, neurovascular surgery is not yet routine. However, CT and MRI angiography is becoming available so this subspecialty may be performed in the near future. Adeleye et.al. have demonstrated that specialized surgery, in this case skull base surgery, can be performed in resource poor countries.[2]

Since beginning our program in 2006, we have graduated three trained neurosurgeons and have eighteen residents in a five-year program. The residents have increasing responsibility and have demonstrated good medical judgment and surgical skills. Since Addis Ababa now has the only neurosurgery capability in Ethiopia, we felt it important to bring residents from other Ethiopian medical schools and cities. Most of the younger residents come from cities outside of Addis Ababa and plan to return to their home cities when they finish training. In another ten years we will have a cadre of trained neurosurgeons in many of the medical schools and cities of the country.

Park has suggested a two-tiered training program to allow general surgeons with two years of training to get neurosurgical expertise into rural communities while allowing a five-year program for faculty-level candidates.[27] In essence, we did this in Ethiopia. Our first three graduates were trained general surgeons and went thru our training program in three years. All subsequent residents are in a five-year program. The extra training will produce neurosurgeons better grounded in basic neurology, radiology, and pathology. It will allow them time to learn subspecialty techniques. We are just about to graduate the first of the five-year residents. We would agree with Quershi, cited in Park's paper, that this is a ten-year program. Perhaps it will be a few years longer but so far this approach is proving satisfactory.

COSECSA - College of Surgeons of East, Central and Southern Africa

There is an effort to obtain specialty certification for our residents. The College of Surgeons of East, Central and Southern Africa (COSECSA) represents the nations of Eastern sub Sahara Africa, not including South Africa. Most surgical specialties are represented. The objective is to create a common syllabus of training for all of the countries and to sit for a common examination. The graduate residents will then receive certification by COSECSA.

Online

Broadband high-speed Internet access and WiFi is becoming more readily available in Ethiopia as well other areas of Africa. Most of our residents have modern laptop computers and, therefore, have access to journal articles and texts. The University of Toronto sponsors the Ptolemy Project, allowing electronic access to its library.[25]

Blankstein et.al. have written that while access to a library alone may be sufficient for the senior physician, it is not adequate for the student or resident.6 They feel that a more structured online program is necessary. They suggest that as online education progresses from the unstructured listserv to libraries to webinars to very structured and interactive and accessible online courses that the student/resident's education and satisfaction is markedly improved. The group from the neurosurgery department at the University of Toronto has put together an outstanding on-line teaching tool that incorporates interactive instruction in anatomy, neurological diagnosis and surgical judgment. There is no doubt that in the future this type of learning format will expand and bring the residents state of the art instruction. Even with a visiting local faculty, specific expertise may not be available. This tool will encourage faculty who may not want to travel to participate in the education effort.

Tripler Army Medical Center in Honolulu provides tertiary care for the United States Associated Pacific Islands. It uses the Internet to supplement the local health care on remote Pacific Islands. They base their referral/consultation service on a web based telemedicine network.[1]

Another innovative option is that of Hadley and Mars who have used recorded seminars in areas of low bandwidth.[16]

The Diaspora

Wikipedia has provided us with a definition of Diaspora. It is "the movement, migration or scattering of people away from an established homeland". Wikipedia goes on to quote the African Union, in its constitutive act declaring that it shall "invite and encourage the full participation of the African Diaspora as an important part of our continent , in the building of the African Union".

As the peoples of the world have become more and more intermingled, the Diasporas' ethnic groups have both become diluted into larger populations or alternatively have retained a strong identity to their homeland. Diasporas have been initiated by calamitous events such as war or persecution, by slavery, by famine, or by economic opportunities. This phenomenon goes as far back in history to at least the Jewish Diaspora from Israel in 587 BCE caused by the Babylonian invasion and it continues to this day. In addition to the Jewish Diaspora the world has seen major Diaspora from Ireland, China, India, central Europe, south Asia, and, of course, Africa.

Of interest is the large number of African immigrants to the United States beginning at the end of the twentieth century. This is an educated group with 50% having at least a bachelor's degree. It has been stated that there are more Ethiopian-born physicians in the Washington D.C. area than all of Ethiopia. How then can this well educated, prosperous African group of expatriates fulfill the African Union's invitation to participate in the building of physical and organizational infrastructure in Africa?

Enawgaw Mehari, MD, a neurologist in Morehead, Kentucky, is the founder and president of People to People (P2P). P2P was founded in 1999 dedicated to improving health care in Ethiopia by mobilizing the world wide Ethiopian Diaspora. The core belief of P2P is for the Diaspora physicians to "give back". In helping to arrive at solutions, P2P has been successful in pinpointing the health care needs of Ethiopia as well as fostering the development of its health care professionals. P2P organizes yearly conferences that format topical presentations but also evolve into open discussion of many problems to be addressed. The Ethiopian Minister of Health and others in the academic and administrative leadership of Ethiopian medical and public health institutions attend. Also attending are representatives of United States Global Aid, the World Bank and many representatives of medical and public health institutions in the United States. This reflects a triangular partnership to address health care issues of Ethiopia, a low-income country.

P2P has been successful in encouraging Diaspora physicians to participate in the health needs of Ethiopia, to triangulate. For example, in 2009 P2P was selected by the twinning program of the American Institutional Health Alliance to triangulate with the University of Wisconsin to establish an emergency medicine department with a residency training program at the Black Lion Hospital of Addis Ababa University. This effort was lead by Girma Tefera, a Diaspora physician. The triangular partnership was successful and it is hoped that the institution will not

only remain self-sustaining but also serve as a training center for teams of emergency care providers and leaders in other medical institutions in the country.

Conclusion

What we are discussing here is a long term and on-going solution to a long-standing problem. The obstacles to implementation are many. There are infrastructure, administrative, bureaucratic, and financial issues that must be overcome. But with triangular partnerships continuing development and with the help of various agencies from HIC nations, and with "organized give back" from the Ethiopian Diaspora great improvements can be achieved for long term sustainable health care and health professional development.

Bibliography

1. Abbas MI, Person DA (2008) The Pacific Island Health Care Project (PIHCP): experience with rheumatic heart disease (RHD) from 1998-2006. Hawaii Med J 67, pp 326-329
2. Adeleye AO, Fasunla JA, Young PH (2012) Skull base surgery in a large, resource-poor, developing country with few neurosurgeons: prospects, challenges, and needs. World Neurosurg 78, pp 35-43
3. Bagan M (2010) The Foundation for International Education in Neurological Surgery. World Neurosurg 73, pp 289
4. Bernstein M (2004) Ethical dilemmas encountered while operating and teaching in a developing country. J Can Chir 47, pp 170-172
5. Bickler S, Ozgediz D, Gosselin R, Weiser T, Spiegel D, Hsia R, Dunbar P, McQueen K, Jamison D (2010) Key concepts for estimating the burden of surgical conditions and the unmet need for surgical care. World J Surg 34, pp 374-380
6. Blankstein U, Dakurah T, Bagan M, Hodale M (2011) Structured online neurosurgical education as a novel method of education delivery in the developing world. World Neurosurg 76, pp 224-230
7. Cadotte DW, Viswanathan A, Cadotte A, Bernstein M, Munie T, Freidberg S (2010) The consequence of delayed neurosurgical care at Tikur Anbessa Hospital, Addis Ababa, Ethiopia. World Neurosurgery 73 pp 270-275
8. Chao TE, Burdic M, Ganjawalla K, Derbew M, Keshian C, Meara J, McQueen K (2012) Survey of surgery and anesthesia infrastructure in Ethiopia. World J Surg 36, pp 2545-2553
9. Chin-Quee A, White L, Leeds I, MacLeod J, Master VA (2011) Medical student surgery elective in rural Haiti: a novel approach to satisfying clerkship requirements while providing surgical care to an underserved population. World J Surg 35, pp 739-744
10. Chu K, Rosseel P, Trelles M, Gielis P (2010) Surgeons without borders: a brief history of surgery at Mèdecins Sans Frontières. World J Surg 34 pp 411-414
11. Clinton Y, Anderson FW, Kwawukume EY (2010) Factors related to retention of postgraduate trainees in obstetrics-gynecology at the Korle-Bu Teaching Hospital in Ghana, Acad Med 85, pp 1564-1570
12. Duenas VJ, Hahn EJ, Aryan HE, Levy MV, Jandial R (2012) Targeted neurosurgical outreach: 5-year follow-up of operative skill transfer and sustainable care in Lima, Peru. Childs Nerv Syst 28, pp 1227-1231
13. Farmer PE, Kim JY (2008) Surgery and global health: A view from beyond the OR. World J Surg 32, pp 533-536
14. Gosselin RA, Gyamfi YA, Contini S (2011) Challenges of meeting surgical needs in the developing world. World J Surg 35, pp 258-261

15. Gruen RL (2006) Template for surgical training in resource-poor countries. ANZ J. Surg 76 pp 871-872
16. Hadley GP, Mars M (2011) e-Education in paediatric surgery: a role for recorded seminars in areas of low bandwidth in sub-Saharan Africa. Pediatr Surg Int 27, pp 407-410
17. Hagander LE, Hughes CD, Nash K, Ganjawalla K, Linden A, Martins Y, Casey KM, Meara JG (2013) Surgeon migration between developing countries and the United States: train, retain, and gain from brain drain. World J Surg 37, pp 14-23
18. Isaacson G, Drum ET, Cohen MS (2010) Surgical missions to developing countries: Ethical conflicts. Otolaryngology-head and Neck Surgery 143,pp 476-479
19. Kingsnorth A, Gyoh S (2012) Is it possible to train surgeons for rural Africa? A report of a successful international program. World J Surg 36, pp 1439-1440
20. Leow JJ, Kingham TP, Casey KM, Kushner AL (2010) Global surgery: thoughts on an emerging surgical subspecialty for students and residents. J Surg Educ 67, pp 143-148
21. Matar WY, Trottier DC, Balaa F, Fairful-Smith R, Moroz P (2012) Surgical residency training and international volunteerism: a national survey of residents from 2 surgical specialties. Can J Surg 55, pp S191-199
22. Martiniuk ALC, Manouchehrian M, Negin JA, Zwi AB (2012) Brain gains: a literature review of medical missions to low and middle-income countries. BMC Health Services Research 12 pp 134-141
23. Medhanyie A, Spigt M, Kifle Y, Schaay N, Sanders D, Blanco R, GeertJan D, Berhane Y (2012) BMC Health Services Research 12, pp 352-358
24. Mukhida K, Shilpakar SK, Sharma MR, Bagan M (2005) Neurosurgery at Tribhuvan University Teaching Hospital, Nepal. Neurosurgery 57 pp 172-180
25. Noordin S, Wright JG, Howard AW (2008) Global access to literature on trauma. Clinical Orthopaedics and Related Research 466 pp 2418-2421
26. Ozgediz D, Roayaie K, Debas H, Schecter W, Farmer D (2005) Surgery in developing countries: essential training in residency. Arch Surg 140, pp 795-800
27. Park BE (2010) The African experience: A proposal to address the lack of access to neurosurgery in rural sub-Saharan Africa. World Neurosurgery 73, pp 276-279
28. Perkins RS, Casey KM, McQueen KA (2010) Addressing the global burden of surgical disease: proceedings from the 2nd annual symposium at the American College of Surgeons. World J Surg 34, pp 371-373
29. Provenzano A, Graber LK, Elansary M, Khoshnood K, Rastegar A, Berry M (2010) Short-term global health research projects by US medical students: Ethical challenges for partnerships. Am J Trop Med Hyg 83, pp 211-214
30. Sawatsky AP, Rosenman DJ, Merry SP, McDonald ES (2010) Eight years of the Mayo International Health Program: what an international elective adds to resident education. Mayo Clin Proc 85, pp734-741
31. Silverberg D, Wellner R, Arora S, Newell P, Ozao J, Sarpel U, Torrina P, Wolfeld M, Divino C, Schwartz M, Silver L, Marin M (2007) Establishing an international training program for surgical residents. J of Surgical Education 64, pp143-149
32. Tollefson TT, Larrabee Jr WF (2012) Global surgical initiatives to reduce the surgical burden of disease JAMA 307, pp 667-668
33. Warf BC (2010) Pediatric hydrocephalus in East Africa: prevalence, causes, treatments and strategies for the future. World Neurosurg 73, pp 296-300
34. Weiser TG, Regenbogen SE, Thompson KD, Haynes AB, Lipsitz SR, Berry WR, Gawande AA (2008) An estimation of the global volume of surgery: a modeling strategy based on available data. Lancet 372, pp 139-144

35. Wright G, Walker IA, Yacoub MH (2007) Specialist surgery in the developing world: luxury or necessity? Anesthesia 62, Supplement 1 pp 84-89
36. White RE (2009) Profiles in volunteerism: Africa and its surgical workforce crisis: defining the need for neurosurgeon volunteers. Surgical Neurology 71 pp 512-515

Western Institutions:

The Potential Within to Foster Triangular Partnerships

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Introduction

The African Diaspora population, defined as people who left their native continent in recent decades, is estimated to be more than thirty million strong. The segment of this group which is actively engaged in the development efforts of the country of origin has increased significantly over the last decade. Remittances from The African Diaspora estimated at over forty billion dollars in 2010, the last year for which data is available, now exceed official development assistance by Western donors.[1]

There are wide variations in the figures quoted for the number of African health care professionals working in a developed country. This is partly due to criteria used to define "African Diaspora". In the year 2000, there were approximately 65,000 African-born physicians and 70,000 African-born professional nurses working overseas in a developed country. This represented about one fifth and one tenth respectively of African-born physicians and nurses in the world. [2]

The overall impact of the accelerated migration of skilled labor on the already meager resources of African countries has been a topic of impassioned discussion. Some have suggested a migration policy of "medical exceptionalism" and advocate stricter control on the flow of health care professionals from Africa to Europe and North America.[3] Others refer to this phenomenon as "brain circulation" asserting that professionals who leave their country continue to make valuable contributions either from a distance or by eventually returning.[4]

This chapter will discuss the unique role Diaspora health care professionals can play in mitigating the brain drain and serving as the bridge between health care institutions in their countries of origin, and those of the developed countries in which they reside. It also examines increasing interests and new initiatives by Western academic institutions to channel their global engagement through Diaspora health care organizations such as People to People (P2P).

Development Assistance

Medical missionaries made forays into Africa as far back as the early 1800s.[5] Albert Schweitzer, probably the most famous of the early medical missionaries, spent most of his practicing life in Western Africa. Volunteer groups and faith based organizations continue to make significant contributions to health care delivery in developing countries. Since the beginning of the twentieth century, bilateral partnerships in clinical care, training and research between low and middle-income countries (LMIC) and high-income countries (HIC) grew exponentially. U.S. development assistance alone is projected to be just over one percent of the federal budget at almost $50 billion for 2014.[6] The annual budget of international non-governmental organizations now exceeds a trillion dollars.[7] The U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the largest commitment in history by any nation to combat a single disease, has a budget of $48 billion for the years 2009 to 2013.[8]

The effect of international aid in the health care delivery system of LMIC has not been proportional to the resource expenditures. Michael Clemens of the Center for Global Development, who has done extensive work on evaluating the impact of aid to Africa, argues that successes claimed in various projects may not hold up under rigorous assessment.[9] The valid questions raised about current developmental models and the shrinking resources allocated to LMIC with the recent economic downturn validate the need for a different paradigm with the potential to be cost effective, sustainable and scalable.

The Third Leg of the Stool

An increasing number of health care professionals of the Ethiopian Diaspora, either as individuals or collectively under an organization, have been active in supporting clinical care, training and research in their native country.

They straddle both worlds, that of their country of origin and that where they currently reside, and bring a unique perspective and skill set to the equation. From the Ethiopian perspective their strengths include:

- Cultural competency
- Language fluency
- Established network with their peers in country
- Extensive family ties
- Enduring commitment that is not limited to the lifetime of a project

From the perspective of the Western country in which they reside, they are:

- Graduates of a training program where they develop an extensive network
- Affiliates of an academic institution, professional organizations and societies
- Ambassadors of their native country with their peers and professional associates
- Beneficiaries of a developed health care delivery system under which they practice
- Highly motivated to "give back" to their country of origin

These attributes of Diaspora health care professionals have not been well utilized in the past.[10] However, these groups are increasingly being recognized as forces for international development. Organizations like the United States Agency for International Development (USAID) have joined the Secretary of State's Global Partnership Initiative and in 2011 launched the International diaspora Engagement Alliance (IdEA). IdEA recognizes that diaspora communities can promote sustainable change through entrepreneurship, innovation and philanthropy/volunteerism.[11]

There is now a critical mass of skill and experience gained through the years for these groups to serve as an organizational force and act as the nexus between native and western institutions, particularly in harnessing the power of academic institutions. In the fourteen years since its inception, P2P has rallied professionals both from the Diaspora and friends of Ethiopia who have forged meaningful relationships with their peers in providing clinical care, and engaging in medical education and research. The topics discussed in this book make a compelling argument that P2P and other Diaspora health care organizations should figure prominently in the quest to improve and expand all aspects of health care in developing countries. They are the common denominator between donors and recipients as they wear both hats at the same time and constitute the third leg of the development stool.

Meeting the Challenge

Ethiopia has embarked on an ambitious project to address the chronic physician shortage in the country. There are now over 3,000 medical students enrolled in the country's newly opened thirteen medical schools, a tenfold increase over just the last five years.[12] There are obvious challenges that come with such a bold move and significant effort is needed to ensure that the minimum standard of medical education is met. Issues include identifying qualified educators, developing curricula, and identifying financial resources. Critical in this is the ability to develop local expertise in order to provide sustainable solutions.

There is a critical shortage of physicians and clinical mentors to staff the medical schools in Sub-Saharan Africa.[13] The Ethiopian Ministry of Health and the individual schools have fostered partnerships with a variety of U.S. Institutions and U.S. government programs such as the Medical Education Partnership Initiative (MEPI).[14] This unique program, largely administered through the Fogarty Foundation, provides support for select Sub-Saharan countries engaged in PEPFAR projects to expand and strengthen medical education programs in the region. USAID has provided additional funding for "Twinning Partnerships" which pair western healthcare and academic institutions with sites in less resourced areas, intent on fostering programs that respond to local needs by encouraging local expertise.

Organizations like P2P have made a commitment to support these efforts through the mobilization of the highly trained Ethiopian health professionals in the Diaspora. These on-going projects are conducted through periodic visits and utilizing technology to include social media, web based learning, virtual and tele-medicine. P2P members have also been able to expand their reach by soliciting the assistance of their peers and the leadership in their home Institutions.

In addition to helping mobilize human resources, diaspora organizations have leveraged connections across larger associations to share materials and develop teaching curricula. One such example is the Global Health Education Consortium (GHEC), which was founded in 1991 as a non-governmental collective of faculty and healthcare educators, committed to global education in health professions as a means of averting the health workforce crisis. GHEC members developed high quality teaching modules that were freely available for dissemination to educational partners. This group eventually merged into the Consortium of Universities for Global Health, which now includes nearly 100 western institutions and over thirty international partners, including many in Ethiopia.[15] These collaborations are a rich source of educational materials that are vetted and tested in multiple settings, and provide teaching curricula that can be modified as needed.

Finally, these triangular partnerships provide an important means to obtain funding support. Given the global economic crisis of the past years, sources of funding are increasingly limited. While governmental grants for research and development projects still exist, there is increasing need to identify other sources for support, including pharmaceutical industry, research consortiums, foundations, and other charitable organizations. For any of these organizations, one of the critical decision points in providing financial support is the credibility and legitimacy of the partnership. Western organizations with little experience and lacking significant relationships are unlikely recipients, and resource challenged sites without established track records present significant risk. While there are many well established collaborations between large western academic organizations and larger partner schools in developing areas, there is clearly interest in expanding support and involving newer institutions. Diaspora organizations can serve as matchmakers between such potential partners, but also provide legitimacy to the relationships.

It is important to recognize that such collaborations also present ethical and logistical dilemmas once they are established. Administrative issues are quite complex and organization has to contend with language, cultural, legal, social and academic differences. Fortunately there are some recommended guidelines to suggest "best practices". The Swiss Commission on Research Partnerships with Developing Countries established a framework in 1998.

The 11 Principles of Research Partnership

1. Decide on the objectives together
2. Build up mutual trust
3. Share information; develop networks
4. Share responsibility
5. Create transparency
6. Monitor and evaluate the collaboration
7. Disseminate the results
8. Apply the results
9. Share profits equitably
10. Increase research capacity
11. Build on the achievements[16]

For clinical and educational exchanges, though, there are also potential challenges. Elansary et al have analyzed the issues that can arise for both learners and practitioners, and the issues they present for host sites. They emphasized that "North-South Institutional Collaborations" must offer development of mutually beneficial partnerships, with educational programs designed to improve the education of local health professionals through shared educational opportunities. They suggest that there needs to be appropriate compensation for hosting institutions and their personnel. Most importantly, they insist that strict and explicit expectations of responsibilities, ethics, cultural competency, local language, and local disease epidemiology be articulated.[17]

As more attention is directed to addressing inequities in healthcare, there is an expanding array of groups involved in seeking solutions. But while each country has clear governance, there is no government dictating global engagement. As Frenk & Moon have stated, this is a new reality of pluralism. And within this system there needs to be accountability, upholding the universal rights of the people, and holding non-state actors to standards. If the four functions of global health systems are to produce global goods, manage externalities across countries, mobilize global solidarity and provide stewardship, it seems obvious than Diaspora groups and individuals are likely to be the most invested in the management of these issues.[18]

Triangular Partnership is a model that provides a means to make all these efforts more structured, scalable, ethical, mutually beneficial and sustainable. In addition, Diaspora professionals can serve as participating members of these projects, but also provide a reality check in moderating between the partners to ensure that best practices for both research and clinical activities are adhered to, in order to protect both the subjects and participants. This type of supportive arrangement is more likely to offer the opportunity for long-term engagement and sustainable sources of support. P2P officially launched the Triangular Partnership initiative in November 2012 when it concluded a symposium in Lexington Kentucky, forming a consortium of U.S. and African Medical Institutions committed to partnering in medical education, clinical care and research.

Hospice & Palliative Care

Here is an example of the potential benefits of a Diaspora arrangement in a resource challenged setting. There are many lessons gained from such mutually respectful, co-managed collaborations.

Ethiopia has an estimated crude death rate of nine per 1,000 in 2013 with a rank of 70th out of 224.[19] It is also ranked 152nd out of 152 countries surveyed in per capita use of morphine. When morphine use/availability is used as a surrogate indicator for pain control, it is reasonable to assume that the overwhelming majority of patients with a life threatening illness die with unresolved pain. An African Palliative Care Association (APCA) assessment in 2008 concluded that there was no institution in Ethiopia that satisfies the minimum World Health Organization (WHO) and/or APCA criteria for Hospice/Palliative Care.[20]

In many countries, even if a physician is licensed to prescribe morphine, there are substantial impediments to administering the drug.[20] National and international drug laws tend to emphasize the potential for abuse and diversion with little acknowledgment of the effectiveness of opioids in moderate to severe pain. There is now evidence that adequate pain treatment as part of a palliative care approach actually improves survival.[22]

Hospice & Palliative Care programs in Ethiopia have had several significant milestones in the past few years. "Hospice Ethiopia" was started in 2004 by Sister Tsigereda Yisfawossen and continues to provide clinical care and basic training. The National Pain Management Guideline (NPMG) was published in December 2008. [23] The first opioid in the form of morphine syrup was formulated in-country and launched on Hospice and Palliative Care day in 2010 at Tikur Anbessa Hospital.

P2P was among the first organizations to offer training in Hospice & Palliative Care in Ethiopia with a workshop for twenty-five nurses in 2004. More recently, P2P has supported the efforts of local stake holders in advocating for a national palliative care policy, expansion of palliative care services to non-communicable diseases, availability and proper use of opioids at all levels of care, and forming partnerships with community hospice programs. Work is ongoing with several medical schools in recruiting local champions and incorporating hospice and palliative care into the curriculum. In a prototype of triangular partnership, experts in the field from consortium institutions are being assembled and organized. Practitioners from the United States and Ethiopia collaborated with the Mayo Clinic HIV global initiative in launching a web based syllabus of core topics in palliative care.[24] Annual conferences and trips to Ethiopia have provided opportunities to discuss the way forward with policy makers, educators, clinicians and other stake holders. Finally, a signed memorandum of understanding with Hospice Ethiopia to partner in their effort to promote clinical care, training and research has been formalized.

Conclusions

For many years, there has been a hierarchical arrangement in most relationships between institutions in resource-challenged regions and developed countries. Western (or Northern) organizations dictated both priorities and plans to less resourced countries. In addition, many groups have struggled to obtain support for high-quality programs due to administrative and logistical issues.

Diaspora groups offer another alternative, as organizers, facilitators, champions, donors and monitors for collaborative programs. As resources continue to be scarce, a ready source of invested human expertise is invaluable in providing guidance, advocacy, and skill in developing novel approaches to address problems that affect both individuals and the community. Engagement with western institutions of health care, education, and research, and provision of thoughtful and respectful guidance in managing these relationships, offers the best opportunity for tangible and sustainable solutions to local health challenges. By studying these collective approaches, Diaspora groups may be able to prove their critical role in establishing and maintaining respectful engagement, offering both reassurance to donor groups and recipients.

Bibliography

1. Ratha D, Mohapatra S, Ozden C, Plaza S, Shaw W, Shimeles (2011) Leveraging migration for Africa; remittances, skills and investments: The International Bank for Reconstruction and Development/The World Bank ISBN: 978-0-8213-8257-8
2. Clemens MA, Pettersson G (2008) New Data on African Health Professionals Abroad. Human Resources for Health 6:1 doi: 10.1186/1478-4491-6-1 Available on the web @ http://www.human-resources-health.com/content/6/1/1
3. Alkire S, Chen L (2004) 'Medical exceptionalism' in international migration: should doctors and nurses be treated differently?, JLI Working Paper 7-3, Global Health Trust http://www.globalhealthtrust.org/doc/abstracts/WG7/Alkirepaper.pdf
4. Le T (2008) Brain Drain or Brain Circulation: Evidence from OECD's International Migration and R&D Spillovers. Scottish Journal of Political Economy, Vol 55, Issue 5, pp 618-636
5. VanReken D (1987) The Evolution of the Medical Ministry. In: Mission and Ministry: Christian Medical Practice in Today's Changing Culture. Wheaton, Ill: Billy Graham Center. Available at http://bgc.gospelcom.net/emis/vrekenmono/vreken1.htm. Accessed June 6, 2013.
6. U.S. Department of State. Bureau of Public Affairs. April 10, 2013
7. Degnbol-Martinussen J, Engberg-Pedersen, P (2003) Aid: Understanding Development Cooperation. Zed Books, New York.
8. The United States President's Emergency Plan for AIDS Relief (PEPFAR): http://www.pepfar.gov Accessed June 10, 2013.
9. Clemens MA, Demombynes G (2011) When does rigorous impact evaluation make a difference? The case of the Millennium Villages, Journal of Development Effectiveness, Volume 3, Issue 3 Pages 305-339
10. Mohan, Giles and Zack-Williams, A.B. (2002). Globalization from below: conceptualizing the role of the African diaspora in Africa's development. Review of African Political Economy, 29(92), pp. 211–236.
11. U.S. Department of State – Diplomacy in Action. International diaspora Engagement Alliance. http://www.state.gov/s/partnerships/diaspora/ [accessed August 5, 2013]
12. Humanitarian News and Analysis. Ethiopia: Surge of Doctors to strengthen Health System. August 14, 2012
13. Collins FS, Glass RI, Whitescraver J, Wakefield M, Goosby EP (2010). Developing Health Workforce Capacity in Africa. Science 3 December 2010: Vol. 330 no.6009 pp. 1324-1325 DOI: 10.1126/science. 1199930
14. National Institute of Health. Global Health Matters newsletter: Africa transforms its medical education with Medical Education Partnership Initiative (MEPI), Sept/Oct 2012: Vol. 11, Issue 5.

15. Consortium of Universities for Global Health. Educational Modules. http://www.cugh.org/resources/educational-modules [accessed July 1, 2013]
16. Guidelines for Research in Partnership with Developing Countries. Bulletin of Medicus Mundi Switzerland No. 70, September 1998
17. Elansary M et al. Ethical Dilemmas in Global Clinical Elective. The Journal of Global Health. Available at: http://www.ghjournal.org/jgh-print/spring-2011-issue/ethical-dilemmas-in-global-clinical-electives/ [accessed August 7, 2013]
18. Frenk J, Moon S. Governance Challenges in Global Health. N Engl J Med 2013; 368:936-42.
19. Central Intelligence Agency. The World Fact Book (2013).
20. Hunt J. Rapid assessment of Palliative care provision in Ethiopia, African Palliative Care Association (APCA), Funded by True Colours Trust 19th – 28th January 2008
21. Lamas D, Rosenbaum L. Painful Inequities — Palliative Care in Developing Countries: N Engl J Med 2012; 366:199-201 January 19, 2012 DOI: 10.1056/NEJMp113622
22. Temel JS, Greer JA, Muzikansky A, et al. Early palliative care for patients with metastatic non-small cell lung cancer. N Engl J Med2010; 363:733-742
23. Federal Democratic Republic of Ethiopia, Ministry of Health. National Pain Management Guideline. December 2008

The Use of Social Media in Triangular Partnership

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The concept of Triangular Partnership is a structured, transparent and an ethical platform to overcome health challenges in developing countries. It's designed to serve as an innovative model of providing aid in the near future. The basic premise of triangular partnership is to create a network of institutions with three key elements: western institutions, institutions in developing countries, and a bridging Diaspora network.

Social media is at times portrayed as a venue for self-expression, a platform for sharing personal activities and interests. The youth and the technologically-savvy generation embrace it as a favorite pastime, or possibly even an escape from daily reality. Over the recent years the use of social media has dramatically changed, to where it is rapidly be-

coming a part of daily living for a large part of society in the developed and possibly even the developing world. For instance, the marketing and advertisement industry have successfully tapped into social media as a major resource.

The context in which social media will be addressed in this chapter is leveraging it to bridge the gap between communities and healthcare and making the biggest impact possible. Social media includes platforms such as Facebook, Twitter, YouTube, LinkedIn, blogs and two-way mobile messaging. Healthcare may not be as quick to adopt social media as some other industries, however, there are many hospitals and healthcare organizations, including those in developing countries that are quietly transforming the use of social media and becoming key players on the social web.

What Are Two Key Factors Driving the Social Web in 2013?

According to a Global Web Index study[1], key factors are:

- Global increase in mobile phone use: The number of people accessing the Internet via a mobile phone increased by 60.3% to 818.4 million in the last two years.
- Older users' adoption – The pool of social media users has dramatically increased with the addition of older users. For instance, the fastest growing demographic on Twitter is the 55 to 64 year age bracket, with 79% growth rate since 2012. The fastest growing demographic on Facebook's and Google+'s networks are the 45 to 54 year age bracket at 46% and 56% respectively.

These two key factors are keeping the social web on a steady uphill trend and are creating new opportunities and expanded reach for business and communities.

An outline follows about more popular channels now used for social media and how they can potentially be leveraged to bridge the gap in the healthcare sector, expand the reach of health care, and improve overall patient care to create a triangular partnership. These channels include: Facebook, Twitter, YouTube, LinkedIn, and blogging.

Facebook – Online Social Networking Service

Facebook continues to grow worldwide, gaining more users and acceptance within many industries. Facebook has become a common household name and the blue box logo with a lowercase f is an icon understood amongst a wide generation globally. As of the first quarter of 2013, Facebook metrics were[2]:

- Daily active users have reached 665 million
- Monthly active users have passed 1.1 billion for the first time
- 751 million mobile users access Facebook every month
- Mobile "only" active users total 189 million
- Mobile now generates 30% of its total users

With that expansive reach, Facebook is certainly a tool that is underutilized in the global aid sector. We propose a systematic use of this platform to serve as an innovative model of providing aid, in any desired sector, by fostering

networking partnerships within western institutions, institutions in developing countries, and bridging Diaspora communities

For example, patients in the U.S. and other developed countries are now using social networks, like Facebook, to refer their friends and family to their favorite physician or health care facility, much like "word-of-mouth" referrals except that it is made through Facebook. This may seem like an improbable and absurd idea in an underdeveloped country. However, even though we may be living in a time where many people may not have a home or a car, they may still have a smart phone. Facebook not only serves as an extension of traditional word-of-mouth marketing, but may also be used effectively as a way to communicate and educate people that were previously unreachable.

Facebook creates a pathway and venue to hold pertinent conversations in a desired sector, such as healthcare, education, or business. Interested individuals would participate in such forums to share information and ideas. For instance in the healthcare sector, various topics could include health education, question and answer forums, or even simply local information sharing such as location of the closest healthcare facility. Facebook can serve as a great site to build a family-like community with people that would not otherwise have access to healthcare information, and to build trust between the community and the health care workers. It's also a way to create and build relationships.

The advent of social media, allows the faceless masses to share a desired and self-controlled amount personal information without personal persecution in return receiving compassion, advice and support from strangers with similar experiences around the globe. People have come to trust these mediums to share, compare and connect with one another in a way that has never before been possible. It has opened up new ways of communicating that are making a profound difference throughout the world.

For instance, when healthcare workers share videos, posts and photos on their Facebook wall, this starts conversations with the patients and communities, is perceived as an active connection, and creates trust. Patients can respond to health care workers using the Facebook software application on their smartphone or tablet. People now wait in line at Internet cafes to connect with friends, family, and the world. They understand the power of these new tools and want to be connected.

Dr. Lou Shuman and Diana P. Friedman, MA, MBA, wrote about the engine that drives new patient referrals and patient loyalty[3]:

- Social networks are no longer the play round for pre-teens and college students.
- Consumers frequently trust the recommendations of their peers, making social media an ideal platform for influencers to spread their ideas and purchase power. Research by NM Incite indicates that 60% of social media users create reviews of products and services.
- To have the most impactful online marketing strategy, you need to take advantage of the multiple online SEO and social media tools. Combining SEO, PPC, social media and an onsite blog will help increase usage and awareness of critical health information.

Twitter - Online Social Networking and Microblogging Service

Twitter is the fastest-growing social network in the world, measured by active users (according to a Global Web Index Study). Twitter saw a 44% growth from June 2012 to March 2013, reaching over 500 million registered accounts. The service currently has 288 million monthly active users, which means that 21% of the world's Internet population is using Twitter every month. Twitter's fastest growing age demographic is 55 to 64 year olds, registering an increase in active users of 79%.

Twitter has taught to world not to underestimate the power of 140 characters. Health care providers can leverage this unique social media tool to connect with patients who prefer rapid communication and brief exchanges. A Twitter chat is essentially an updated version of the "chat rooms" of days gone by: organizers select a # hash tag, send out an invite, and then Twitter users participate in a rapid free-form exchange of ideas or a structured question and answer (Q&A) session via the microblogging service.

If you want is to reach the masses fast, Twitter offers the potential to reach millions of people quickly and has the power to transform lives. Within healthcare, Twitter has shown remarkable capacity for broadcasting news and health information, sometimes allowing it to go "viral" (become shared with very large numbers, very quickly). There have been numerous health care organizations, such as Johns Hopkins, EngenderHealth and Mhealth Alliance that have begun to leverage Twitter as part of their social marketing strategy to promote new health initiatives or create a personal relationship with the public. They post information and send it to the thousands of followers who then "retweet" the posts to their followers, and so on. These organizations have quickly been able to reach thousands of people with a minimal investment of time: it takes seconds to type a short post with a link. Twitter can be a highly effective vehicle and an ideal platform to use in diverse environments: a) for its condensed simplicity in the fast paced developed world; and b) because it does not require sophisticated web-based technology to run and access it for the developing world.

YouTube – Video-Sharing Website

The days of watching a video or film using a VCR or DVD player are almost over. The electronic world has even moved from cable television networks to using web-based online streaming media services such as Netflix and Hulu. Now one of the most powerful websites for video is YouTube.

The following are numbers from YouTube's blog. They put perspective on YouTube's penetration into current culture and usage:

- 1 billion unique monthly visitors
- 6 billion hours of videos are watched every month
- This means that 50% more hours of YouTube video were watched in March 2013. Compare this to August 2012, when it was 4 billion hours a month, and May 2012 when it was 3 billion.

YouTube is the second-largest search engine in the world with thirty-five hours of video being uploaded every minute and two billion videos viewed daily. YouTube can be used by healthcare to:

- Provide information to patients about simple daily health care practices.
- Share videos of detailed procedures that medical workers in the field can learn from.
- Share patient testimonials - to reach prospective patients, or simply as a way to build trust within a skeptical community.

In remote villages, educators can be highly outnumbered or even non-existent. YouTube can be utilized to distribute educational videos that can be shown in large group settings by community health care workers or non-governmental organizations with a healthcare mission. Topics for videos can include:

- Teaching about communicable disease and how to prevent their spread
- Basic life saving skills, such as what to do if someone is choking
- Proper hygiene

When viewers feel good about the content of the video and enjoy its presentation, they share it with their friends and family on Facebook, Twitter or their own personal blogs. Essentially YouTube could be a way to educate the masses. Yale Medical School, Mayo and Mhealth Alliance are examples of large healthcare organizations that already have informative videos available for download at anytime to anyone on numerous topics at no to minimal cost to the viewer.

LinkedIn – Social Networking Site for People in Professional Occupations

LinkedIn, the largest professional business network on the planet, continues to grow but more slowly than the rate of other social networks. To put it in perspective:

- LinkedIn has over 200 million users
- Two new users join LinkedIn every second
- 64% of users are outside the USA

LinkedIn is geared toward the "professional" therefore its use is somewhat different than other vehicles of social media. LinkedIn offers users the opportunity to create a professional network and begin to create a network of individuals and companies for mutual benefit. Many organizations create credibility and trust using LinkedIn because the site provides an opportunity to give specific recommendations, building additional credibility for both organizations and individuals.

LinkedIn also a place to create conversations and share information-driving viewership back to a specific place – whether on a blog or a Facebook page. The power of LinkedIn is measured by the level of connections a person or organization has available. It's the worlds largest business networking site and can be a powerful tool to connect with those in the same medical field or industry to share and expand on information.

Blogging – Web Log, Online Discussion or Information Site

According to the New York Times, blogging is a cost-effective, high-return marketing tool that can be used to broaden awareness and build a brand. Sesame Communications research confirmed that onsite blogging integrated into the practice website resulted in 32% greater website traffic, with users spending 38% more time on the site and looking at 30% more pages per visit.

A healthcare blog can build brand awareness and create opportunities to engage with current and prospective patients. The blog owner can update at their leisure with news, videos and other information.

One secret to effective blogging is consistency. Once a blog is established, patients have come to expect regular posts. A consistent schedule is important, as is keeping to topics of interest to patients. Content must be relevant, intriguing, and engaging to keep patients coming back for more. A lively and memorable blog title is important to capture the patients' attention. Consider offering a mix of personal posts, product announcements, and news that is related to your industry.

Social Media Costs

Many think social media has no real costs, which is inaccurate. Although many social media sites have no or minimal set up costs, what is rarely calculated is the time it takes to keep social media up-to-date and to produce relevant information.

Creating new and up-to-date relevant content takes time and commitment. Drawing from what is currently provided by the medical field is an easy way to share data with the public; however, it is also important to develop and share one's own content. Creating a mix will keep the audience engaged and using the information. Human capital is needed to develop a strategy and create a structure to ensure it is managed easily and efficiently. That is the main cost of social media – the time it takes to create and manage it.

There are several options to manage social media:

- Base levels are generally free.
- Premium or professional upgrades offer additional options – at a price.
- Web tools such as Hoot Suite, Sprout, Buffer, Social Oomph, Tweet Deck, Tweepi, SocialBro and Crowdbooster offer ways to ensure messages and information are sent out in a timely manner.
- While social media tools are designed for easy and free startup, a long-term large social media program may require costly professional marketing or technical support.

Challenges

Occasionally in underdeveloped countries there can be a fear or concern in getting treatment or seeking medical attention. Unlike the developed world, people have not yet developed trust in Internet-based communication. Thus,

it can be a challenge engaging a community that may be unwilling to share information. Social media's success in based on the premise of the more information individuals in the community share the more useful it becomes. For example, when people within social media communities share with their friends and family by posting a status updates about a treatment they received or facility they used. The idea is that this would encourage others to seek medical attention by creating awareness, not only of the treatment or facility, but also of the condition. Social media can help patients to stay connected regardless of geography or time zone.

The continuing expansion of the Internet across developing countries provides opportunity for the use of social media as a disseminator of information along with personal experiences. However, as of now, broadband Internet access may not be available to those most in need of the benefits of social media.

Conclusion

There are multiple avenues to use social media for triangular partnerships between western institutions, institutions in developing countries and the Diaspora for the distribution of information.

There are many fine examples where medical institutions such as the Mayo Clinic use a blog as part of its website, which also links to its Facebook, Twitter, and YouTube channels. Additionally, the Mayo Clinic has a Center for Social Media microsite that includes information about:

- Six social media summits (day-and-half-long intensive boot camps that shows providers and administrators how to use tools effectively in clinical practice)
- Organizations such as Text to Change or Ethiopia Global Initiative that utilize social media to transform conversations and make a difference that cuts across languages, cultures and distance.

Johns Hopkins has become a known and trusted leader in using social media to engage with the world. Stacy Poliseo, the social media voice for Hopkins Medicine has both a local audience and an international one. Her goal is to give a human touch to their brand by using social media. She wants patients to think of Johns Hopkins as an interactive and trusted resource for valuable medical information.5

Swedish, Seattle Washington's largest non-profit health-care provider, blogged about why their social media is effective in reaching the their patients and physicians. Dana Lewis, the interactive marketing director for Swedish who educates physicians on how patients are using these platforms to find information, said6:

- "Swedish's social media strategy is 'not relying on people to come to us, but being where they are—whether that is Facebook, Twitter, or YouTube,' says Lewis. 'Because of that strategy, it makes sense to tap into the amazing experts of our system—the doctors, nurses, and researchers—and thinking how can we get content from them and get it online.'"
- "Even if physicians don't get on social media themselves, they should be willing to recommend social media sites and information to patients, she says. Physicians should be providing a starting point online for patients, because the first things that come up in a Web search may not be that helpful or accurate."

Physicians should know that social media sites are not only a healthcare marketing, information or recruitment tool. Social media can also help educate and engage patients—and support physicians in playing a vital role in those conversations.

Social media is a wonderful set of tools that can be used around the world to share important information and knowledge across all boundaries. Social media can enhance and enliven triangular partnerships by providing structured, transparent and viable platforms for overcoming distance, educational barriers, and health challenges in developing countries. These innovative tools can provide aid both now and in the future, creating a network that includes western institutions, institutions in developing countries, and a bridging Diaspora network to serve families around the globe.

Bibliography

1. Nielsen, Q3 2011. Social Media Report Q3 2011. (Accessed 11/11/2011), URL: http://www.nielsen.com
2. Choney, Suzanne. "Facebook sucks (only?) 12 percent of your Internet time." NBC News Technology 8 February 2011. (Accessed 11/01/11). URL: http://www.nbcnews.com/technology/facebook-sucks-only-12-percent-your-internet-time-125245
3. "Dr. Lou Shuman and Diana P. Friedman, MA, MBA, discuss the engine that drives new patient referrals and patient loyalty" 2011, URL http://endopracticeus.com/web/home/practice-management/340-get-connectedleveraging-social-media-to-accelerate-practice-growth.html
4. Swedish News "Internationally Recognized Social Media Strategist Dana M. Lewis Joins Swedish; Swedish Continues to Expand Efforts to Reach and Educate Patients through Social Media", 26 August 2010, URL http://www.swedish.org/About/Blog/August-2010/Internationally-Recognized-Social-Media-Strategist#axzz2ZdmuecvA
5. Redsicker, Patricia. "How Johns Hopkins uses Social Media" PR Marketer, 12 June 2013 (Accessed 7/29/2013) URL: http://www.wordviewediting.com/how-johns-hopkins-hospital-uses-social-media/
6. Vaughan, Carrie. "Physicians Leveraging Social Media to Educate Patients". HealthLeadersMedia, 3 May 2012, (Accessed 7/20/2013) URL: http://www.healthleadersmedia.com/page-3/PHY-279636/Physicians-Leveraging-Social-Media-to-Educate-Patients

Howard University Vision and Actions

and its Implications on Higher Education Policy Related to African and African American Diaspora's Institutions and Human Resource Development Strategy for Triangular Partnership

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Abstract

The proposed multidisciplinary, multinational Triangular Partnership paradigms discuss the innovative strategies employed to accelerate culturally shared development initiatives designed to empower the African and African American Diaspora to develop long-term track records in self-reliance, domestically and globally. A cursory review

of the role, vision and actions of Howard University provided the prototype of evidence-based studies and lessons to be learned on sustainable development and transferability of shared human and physical capitals for several decades of relationship between Africa and the United States. The ideas and concepts developed by Twinning Memoranda of Understanding among Howard University, Ethiopian Universities, and People to People (P2P) show the pivotal role played by Historically Black Colleges and Universities' (HBCUs) policy on higher education to promote self-reliance in underserved populations in the United States and globally. In so doing, the lessons learned will serve as a means to upscale utilization of human capital and capacity of domestic enterprises with limited resources planning to employ viable Triangular consortia funded by U.S. multinational and bilateral technical assistance.

In the final analysis, Howard University since its inception in 1867 has formally or informally assisted in the development of collaborative human resources capacity for Triangular Partnership with or through People to People Organization and its Virtual Network [P2P], Historically Black Colleges and Universities [HBCUs], as well as other major public and private universities. These efforts provided justifications for continuous replication of Triangular Partnership paradigms domestically and globally. Historically, the track record of P2P and Howard University to assemble diverse talents and agents of change through two-way cost-effective exchange of human and material capital to support graduate medical education and capacity building in Addis Ababa University and University of Gondar have been successful case studies. These paradigms offer incentives to encourage the partners to upscale the existing initiatives into a consortium of African and African American Diaspora. In so doing, it is expected that the outcomes will help improve quality of life and capacity building, as well as working to eliminate socio-economic and health disparities in Africa as a whole.

Background

Howard University since its inception in 1867 has been the leading African American comprehensive institution of higher learning. Its vision and mission created the opportunity for the brightest generation of African origin to pursue self-reliance and academic excellence to inculcate freedom from poverty, diseases and ignorance. When Africa was under the European colonialism, higher education was a rare vehicle for the elite civil servants and the aristocratic individuals and families that aspired for knowledge, personal growth and development. In this manner, they travelled thousands of miles on land and sea to accomplish viable personal and common goals in Europe and America. Many Africans who came to America in 1950s to 1960s faced the incredible first-hand cultural shocks of segregation and limited opportunity to access to the majority-white institutions of higher learning, unless they were supported by bilateral USAID (U.S. Agency for International Development) or U.S. private foundation scholarship programs. Given these historical perspectives and barriers, offering the alternative opportunity for the Africans to attend African American minority institutions has encouraged and fostered individual and collective leadership to promote sustainable community and personal development.[1]

Higher education combined with the affinity among the peoples of African origin has produced many of the scholars and African leaders such first presidents or prime ministers and other professionals to liberate Africa from the vestige of European colonialism in countries such as Ghana and Nigeria. These countries that were in transition from colonialism (in the 1950s and 1960s) and from South African apartheid (in the 1990s) became the prototype of emerging independent nation building stories which occurred at the same time as the Civil Rights Movement

in the United States in 1960s. One can also cite many historical, political, cultural and socio-economic imperatives that characterized the lessons learned in self-reliance and capacity building through higher education and community-based initiative to achieve sustainable development, as well as affirmative action's civil rights. These ideas and ideals have cemented the everlasting bonding between Africans and African Americans in Diaspora, regardless of the painful and forced dispersion of the first generation of African Americans into Diaspora over 450 years ago.[2]

Howard University produced a significant number of college graduates of African and Caribbean origin, some of whom became change agents such educators, engineers, public servants and medical missionaries. For example, in 1935 when Ethiopia, the longest independent African country for 3,000 years, was briefly occupied by Italy, the Fascist aggression galvanized the African Americans and the National Association for the Advancement of Colored People (NAACP) to organize into a spontaneous freedom and civil rights march in Washington and New York. This march was led by Dr. Melaku Bayen, who in 1935 was the first Ethiopian medical graduate from Howard University College of Medicine and the United States of America. While at Howard, Dr. Melaku met a beautiful African American, Dorothy Hadley, and married her in 1931. He briefly served as medical missionary with the International Red Cross in Africa during the Ethiopian occupation in 1935 to 1941. In September 1936, Dr. Melaku returned to the United States as Ethiopia's representative and coordinator of fund-raising activities. He died of pneumonia in New York on May 4, 1940, one year before Ethiopia was liberated in 1941.[3]

A cursory review of the educational policies to promote development and technical assistance fostered by American institutions of higher learning shows misperception and underestimation of the contributions of Historically Black Universities and Colleges (HBCUs) on higher education and experience in developing partnership with the underserved rural and urban populations in America or selective African countries. A review of the history of the HBCUs shows hundreds of students and scholars from African newly independent states and the Caribbean migrated to the United States to receive their graduate education, resident and fellowship in medicine and dentistry, as well as seeking employment as university professors, historians, public and business administrators, engineers, etc... Their exposure to HBCUs was one of the fruits of Howard's legacy in promoting investment in human resources development and agents for change in political, socio-economic projects embodied in the mission and vision of self-reliance, and capacity building initiatives in international development.[4]

Led by Howard's legacy, there have been other legendary people-to-people and institution-to-institution partnerships motivated by the civil rights movements, which supported and facilitated the economic boycott and civil rights movements to eliminate apartheid in South Africa in 1990s. Howard University was in the forefront when it embarked on training students and leaders from Southern Africa such as Namibia, Botswana, Melawi and South Africa.[5]

At present, Howard's vision and priorities evolved from its history of involvement in Triangular Partnership paradigm to cultivate African and African American Diaspora's leadership. Hence, the Board of Trustees' policy statement on February 13, 2013 was one of the thoughtful efforts embodied in the Presidential Commission of Academic Renewal's recommendations as follows:

> Howard University's mission includes working toward solutions to human problems throughout the world. Among the University's priorities, Vision Priorities is a commitment to enhance the

international footprint of the University and to extend its public service role through engagement with international communities. It is the policy of the University to support international initiatives through strategic planning and appropriate oversight. To that end, the Board of Trustees authorized the University to establish a committee to provide oversight for the University's international activities. The University has established a Global Business Steering Committee ("Global Committee") to carry out this role in accordance with this policy.[6]

The Triangular Partnership Paradigm in International Development

In the United States, policy on Triangular Partnership Paradigm was initiated mainly in regional projects involving universities, private sectors, and community-based non-governmental organizations in the 1950s, mainly in the Southern United States - such as North Carolina. The partnership was designed as a domestic template to promote exchange and transfer of high-technologies, train and develop appropriate human capital, and enhance self-reliance through indigenous (domestic) capacity-building in marginalized resource poor areas characterized by a wide gap of socio-economic and health disparities, low income, and underdevelopment of the targeted peripheral rural and urban areas in America.

The above mentioned Triangular Partnership paradigm in theory and practice evolved into active participation in education and economic development using appropriate capacity building through evidence-based research. The combined leadership and investment initiatives led by public sectors rendered valuable strategies for development in the public and private sectors in Africa and Asia. U.S. involvement for the past six decades continued without interruptions. The infusion of human, technical and financial assistance became the pillars of the American Foreign Policy for Development after World War II that begot Point-4 of the Marshal Plan for Reconstruction and Development. Point-4 evolved into a monumental U.S. Agency for International Development (USAID).[8,9]

Given the pragmatic approaches of the Triangular Partnership paradigm, its replication was built-in global policy of the USAID in African Development Initiatives and recent Global Forum Conferences to invite the direct participation of African and African American Diaspora including nongovernmental investors engaged in sustainable development projects. It is believed that the policy was initiated to integrate capacity building as a component of sustainable development using appropriate technologies, cultural compatibility, cost-effective interventions, as well as building logical framework to integrate three tier educational curriculums to reach out to underserved communities using People to People (P2P) networks engaged in working with a consortium of public and private indigenous and international investments.[10]

This consortium included but was not limited to institution-to-institution initiatives that stimulated evidence-based learning technologies employed at grassroots levels in underserved areas of resource-limited countries. Overall, the Triangular Partnership paradigm also provided a framework for vertical and horizontal bilateral multilateral exchange of human and material capital between resource-limited and resource-poor regions low and middle income.[11]

These multilateral initiatives demonstrated flexible management of creative twining projects owned by African American Diaspora, New African Immigrants in Diaspora, among others, enabled its partners in the public and private domestic development sectors to close socio-economic and health disparities in underserved areas. The Ethiopian P2P Organization based in the United States since its inception about fifteen years ago invested in indigenous and global capacity building to energize graduate medical education, research and best practice models driven by creative network of partnership with the Ethiopian Medical Centers using hybrid virtual and face-to-face technologies. The rotating face-to-face encounters developed a series of domestic and international workshops, and conferences as forums for live exchange of ideas and consultations.

Howard University has hosted two of the major conventions in collaboration with the Ethiopian P2P Organization and its Virtual Network made of domestic and global public and private sectors in 2009 and 2010 consecutively. To this end, the formal or informal Triangular Partnership paradigm was partially emanated from the Twinning Projects sponsored and/or supported by USAID, multilateral and UN and World Bank. The interdisciplinary participants were not only from Howard's Colleges of Medicine, Engineering, Social Work, Pharmacy, Allied Health Sciences and Arts and Sciences but also from a cross section of domestic and global representatives of ministries of health, scholars, researchers and practitioners affiliated with land-grant universities and medical centers in Ethiopia, Africa and USA.[12,13,14]

The replication of African American experiences in self-reliance to promote access to health care in the medically underserved areas in the United States has contributed diverse ideas and practices on transferring appropriate capacity to build community-based development projects in some African countries. Individually or collectively, the graduates of the HBCUs helped expand civil rights, political and cultural activism and pioneers of nation building characterized by their collaboration with African counterparts made of volunteers trained as indigenous change agents.[15]

These African American Higher Learning institutions have not only produced college graduates but also nurtured and employed one of five university professors who were recent immigrants, or first and second born generations in Diaspora. Today, there are about four out of five new immigrants and naturalized Africans in Diaspora that are mostly assimilated in the Black American Diaspora cultures and politics. For example, Howard University has made a significant contribution by educating and employing students, faculty and researchers from the five regions of Africa and the Caribbean. Historically, this constitutes a critical mass of countries that speak the major four languages of the African Union States, mainly English, French, Arabic, Portuguese and Spanish and other living African languages such Swahili, Wolof, and Amharic.[16]

The Triangular Partnership paradigm demonstrated the ongoing initiatives of African American Institutions of Higher Learning. For example, the Office of Global Affairs at Howard University is organized and led by two qualified Academic Associates to the Provost with a definite mandate to mobilize, engage and coordinate partnerships driven by public and private national universities and multinational private investments in selected regions in Africa – those ranked by the World Bank as high and middle developing countries. At present, the voluntary Triangular Partnership led by People to People in collaboration with Howard University has also evolved from decades of Howard University involvement to rejuvenate investment in sustainable development programs that value the commitment of African American Diaspora Coalition with the New African Immigrants and naturalized citizens.

Howard has signed several Memoranda of Understanding that helped its partners to promote existing or potential affiliations with networks connected to African and US domestic businessmen, consultants, and USAID contractors. Several universities and ministries of education and health, as well as private consultation agencies that have indefinite quantity agreement (IQC) have also signed Triangular partnership with People to People Organizations to implement USAID/CDC (U.S. Centers for Disease Control and Prevention) funded PEPFAR (President's Emergency Plan for AIDS Relief). Howard has already been effective in capacity building the PEPFAR/CDC projects in Malawi and Ethiopia to name a few in the African regions.[17,18,19]

It is worthwhile to note that these memoranda of understanding also assisted in encouraging strategic planning to employ diverse expertise at schools, colleges and departmental partnerships. These partnerships were led by individual researchers, consultants, scholars as part of efforts to enhance institution-to-institution and projects operated by non-governmental, not-for-profit agencies with historical and cultural ties with Africa and African American Diaspora. Howard University, as one of the higher learning institutions, with its 145 years of experience in comprehensive track record in research, education and service, has sustained its engagement in fully implementing the above-mentioned global initiative policy of February 13, 2013, regionally and internationally.

The strategy of comprehensive universities has helped in effective use of their resources to promote cost-effective financing and mobilization of transfer of human capital, mainly built on the pay-back policy of the wiling and voluntary incentives to attract professionals and investors from resource rich to resource limited nations in the African regions. For example, the United Nations Development Programs has long standing policy to second faculty or expatriate practitioners to spend time not only consulting but also engage In delivering direct services to the indigenous institutions in order to improve curriculum, grant writing, logistics in short and long-terms series of consultation with UNDP, WHO and UNICEF among others. Some of the HBCUs faculty and researchers have participated in Fulbright and African Graduate Scholarship programs, as well UNDP projects as visiting professors, engineers, physicians, information and environmental experts and consultants as counterparts to indigenous change agents. Occasionally, many of Howard University faculty and staff have been recruited to serve in African public universities and consultants with private contractors using the privilege of sabbatical or special leave of absence.

Conclusion

Finally, there have been several alternatives multilateral and bilateral frameworks to manage Triangular Partnership paradigms by the United Nations Millennium Fund, USAID Global Health Initiative to Fight Emerging Diseases, PEPFAR and others. These collaborative initiatives are now embarked on reassessing their ongoing technical assistant strategies in favor of expanding the twinning partnership into coalition and consortium paradigms. In the same manner as previous projects funded by USAID which helped establish or fund colleges and vocational schools in Ethiopia, such as the Gondar School of Public Health and Alemaya Agriculture College in 1950s [10] and its involvement in environmental and natural disasters emergency projects, it appears that the new foreign technical assistance tends to move to establish long-term sustainable development institutions that focus mostly on decreasing dependence on foreign aid. The dependence on such as traditional humanitarian and emergency projects would be reduced to promote to meaningful self-reliance using domestic and African Diaspora to develop Triangular Partnership. These coalitions and consortia would be made up of U.S. private and public investors with track records

of working nationally and internationally. The fast-growing public and private agencies or consortia such as the Global Forum resorted to Triangular Partnership paradigms to develop new initiatives made of private not-for-profit African Diaspora organizations such as People to People have the opportunity to develop new relationships with these entities for many decades in the future. It is expected that the promotion of the Triangular Partnership will offer windows of opportunity and successful cost effective capacity building and shared enterprises between resource limited and resource rich countries in U.S. and Africa.

To this effect, the Vision and Action as embodied in Howard's Vision and Mission Statements primarily targeted business sectors with broad and inclusive interpretation to promote alternative involvement in transferable, sustainable, integrated capacity building using appropriate essential component/s of the Triangular Partnership paradigms in Africa.

The pooling of multilateral and bilateral technical assistance has become a common vehicle to implement a policy of reversing the brain transfer from resource-limited countries to lucrative magnet destination in Europe and America. In this respect, U.S. and European institutions of higher education, as well as advanced research and medical centers have already been able to diversify their policies on sustainable development investments that address effective investment return embodied in the principle of social justice and equity in Africa.

The series of forums and collaborative efforts to engage the African and African American Diaspora seem to have energized in-kind responses using strategic points of entry to exploit creative coalition approaches to empower the grassroots organizations without borders. For example, many of the Triangular Partnerships began to replicate the use of Peace Corps Volunteers' success stories in reverse. The multinational volunteer and twining exchange partnership network in place has helped Howard University, one of the major partners working as part of the constellation of U.S. universities and colleges. This group of academic institutions working with the P2P Organization has served to mobilize volunteers to build capacity in medical centers and schools. They have used distance learning and online resources from expatriate and Ethiopians in Diaspora for more than thirteen years. PEPFAR and Global Funds have been used to seed money in addition to the earmarked World Bank initiative to subsidize or second many of the recent projects involving African Diaspora and expatriate employees. 20,21

Given the broad policy on resource diversifications in the public and private sectors, many of the higher education institutions in the United States, including HBCUs, can motivate and mobilize a large number of their alumni pool which includes professors, researchers, administrators, postgraduate medical residents and students currently acknowledged as part of the framework of the three components of the Triangular Partnership paradigm nationally, regionally or internationally.

NOTE: Dr. Ahmed A. Moen is a member of the People to People Task Force for the Promotion of Health and Socio-economic Development Initiatives in U.S A and Africa.

Bibliography

1. Gaines, Kevin Kelly. African American History. American Historical Association, 2012.
2. Gaines, Kevin Kelly. American Africans in Ghana: Black Expatriates and the Civil Rights Era; books.google.com
3. Asfaw, Zergabachew and Alemayehu, Efrem, "Workneh Eshete and Melaku Beyan: Pioneers in Medicine: Melaku Emanuel Beyan: The First Ethiopian to Earn an American Degree" in The Manual of Ethiopian Medical History, ed. Enawgaw Mehari, Kinfe Geberyehu, 12-14. People to People USA/Ethiopia, Louisville, KT. 2013
4. Ahmed A. Moen. "Lessons Learned from Historical Black University. The Brain Drain and Educational Challenges for Africa. Paper Published in the 5th International Conference on Public Management, Policy and Development, Dakar, Senegal June 2005
5. Edgar, Robert (ed.) "An African American in South Africa: The Travel Notes of Ralph J Bunche, 28 September 1937-1" Athens, Ohio: The Ohio University Press, 2001. xv + 398 pp.
6. Howard University Policy. (Number: 400-009) Global Business Steering Committee. Office of the Provost and Chief Academic Officer. February 15, 2013. www.howard.edu/secretary/.../GlobalBusinessSteeringCommitteePolicy.pdf
7. Point Four Program - Wikipedia, the free encyclopedia. en.wikipedia.org/wiki/Program
8. Commission on Smart Global Health. Global Health Policy Center at the Center for Strategic and International Studies (CSIS) in Washington D.C. SmartGlobalHealth.org
9. Carlson, Denis, G. "The Impact of the Gondar Public Health College and Training Centre". The Manual of Ethiopian Medical History, ed. Enawgaw Mehari, Kinfe Geberyehu, 30-34. People to People USA/Ethiopia, Louisville, KT. 2013
10. People to People: Twinning Projects with U.S.A and Ethiopian Universities.
11. Memorandum of Understanding. new.peoplepeople.org/
12. Global Diaspora Forum. Global Partnership Initiative. . US Department of State. www.state.gov
13. Moorland-Spingarn Research Center at Howard University. www.howard.edu/msrc/about_history.html
14. Graduate Bulletin. www.coas.howard.edu/history/images/graduate-bulletin.pdf
15. Howard University Health Care and Development Projects [underway] in Nigeria, Zambia, Malawi and South Africa. www.howard.edu.
16. Research Triangular International. www.RTI.org
17. Global Health Initiative/USAID/Ethiopia. Research-Triangle-Institute-RTI and Save the Children, SIL, Lead, Inc. www. ethiopia.usaid.gov/category/partners/
18. Mengesha Admasu & Ahmed A. Moen An Overview of Health-Delivery Service, Medical and Health Sciences Education, and Human Resources Development in Ethiopia 1941 - 2011. A Module for Training Medical Students in Ethiopia. The Ethiopian Health Care Delivery Services: Historical Crossroads on Evolution, Revolution and Transformation Trends and Policies in 20th and 21stCenturies 23-29
19. Stump, Elizabeth, Neurology Today, Enawgaw Mehari, MD, Founder of People to People, Tackles the Spread of HIV/AIDS in Africa 6 November 2008 - Volume 8 - Issue 21 - p 20–21. People to People USA/Ethiopia, Louisville, KT. 2013
20. Ruger, Jennifer Prah. "The Changing Role of the World Bank in Global Health." Am J Public Health. 95(1): 60–70 (2009)
21. Ahmed A. Moen. Capacity Building and Crisis of the Health Delivery Services in Africa in HIV/AIDS Environment: The Case of Ethiopia. Paper published in the International Conference on Public Management, Policy and Development Proceedings. pp. 414-417. Addis Ababa, Ethiopia [2001]

An Introspective Look at the Failure of International Aid in Africa

P2P's Triangular Partnership

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> "Grand plans of poverty alleviation and development have failed, but the industry behind these plans has become a monster, which is hard to restructure let alone get rid of. It is hard because partly there is a lot of money and interest involved in countries which sponsor the industry as well as in aid recipient countries, and partly because of collective ignorance about the motives of global welfare-ism". (BBC)

Introduction

Multilateral, bilateral and non-state external agencies have in recent years taken large numbers of initiatives aimed directly or indirectly at helping Africa "develop" and "democratize" its way out of historical economic chaos and

instability. In doing so, they rely on a wide variety of programs, institutional mechanisms and policies as the ten elements of the 1989 Washington Consensus. Indeed, growing external involvement in African projects of democratization and economic recovery has resulted in increasingly challenging problems of conceptualizing and understanding the role and function of international agencies. On the other hand, there is no denying the fact that the financial globalization has surpassed many economies, with a daily turnover of trillions dollars, where it has acquired a super-state structure. Nonetheless, given the dearth of capacity among Africa states and societies, they have yet to develop coherent strategies to protect people from financial and aid markets.

The growth of foreign interventions seems in marked contrast to the limited thought and effort exerted by developers and democratizes of African polity to put the interventions in coherent theoretical or strategic perspective. Hence, one may ask, what is the overall rationality or significance of the great traffic of projects of democratization and development in Africa, the proliferating activities that seem to show little regard for economy of coordination. How far and in what ways do various international agencies, programs, mechanisms, forms of knowledge and technical assistance feed on one another in helping set the boundaries of aid reform in Africa? The important issues that these questions suggest are not sufficiently addressed, or even raised, in much of the current discussion of aid in Africa. The 2005 Paris Declaration in its "Statement of Resolve on Aid Harmonization" underpins far-reaching actions to reform the ways aid is delivered and managed. Such a resolve has yet to see the light of day. This is a squandered opportunity for donors that could have marshaled resources to play a constructive role in humanity's global welfare.

Algeria and Egypt, Benin and Burkina Faso, Lesotho and Mauritania, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Seychelles, Sierra Leone, Somalia, Sudan, Togo, Tunisia, Uganda and Zanzibar have all experienced multiple coups and counter coups for various political and social reasons, including ill-thought economic adjustment programs of international donors. On the other hand, the looting of minerals, flora and fauna resources by many nations, including blood diamonds exploiting guerrilla and ethnic tensions, characterize the "investment" landscape in much of Africa.

Africa's growing debt burdens have generated authoritarian responses to popular anger. The link to rising ethnic tensions is manifested in the distribution of power, wealth and ethnicity, especially under conditions of increasing scarcity. A core contention is that political tensions are arising as part of the general resistance against their pauperizing impact of the state and its international backers, which are seen as increasingly coercive and as negligent of their basic welfare responsibilities. These tendencies interact causally, despondently warped for salvage with structural adjustments.

On a more positive note, Africa is being weaned from its international dependency. Africa's integration into the global economy shows a steady incorporation into the mainstream. Macroeconomic indicators used to judge conformity with the mainstream show that African countries today appear more aligned with globalization than Europe. Africa is situated closer to the mainstream, while key Organization for Economic Co-operation and Development (OECD) countries drift away. Data tracking points to the continent becoming a key player, not just assimilating into the global mainstream, but also helping to shape it. (Pence, Eliot, 2012:2)

Using qualitative policy and program analysis, this chapter provides the following:

- Section One: Background to the aid debate.
- Section Two: Current analytical perspectives on aid and development.
- Section Three: The record of policy transfers and structural adjustments (policy transfers, SAPS, The Washington Consensus).
- Section Four covers reforming global governance, within the context of aid.
- Sections Five and Six present what is change is possible and the paradigmatic shifts in global governance of aid.

Section One: The Philosophy of Aid – Background of the Debate

The conflicts and famines of the past few decades were a cruel test of the responses of relief agencies in Africa. While the outpouring sympathy and generous response of the international community to human distress has been impressive, aid agencies "the firemen of international disasters" brought to light some serious doubts about the ability of such interventions to reduce peoples' vulnerability to state-sponsored and conflict-triggered famines. Today, the crises assume new dimensions as changing production relations, spurred by structural adjustments, threaten livelihood security. "The poor you will always have with you" dictum continues to be true.

In response to this, over the past decades, rich countries have pumped an astounding sum in aid to poor nations. The poor development performance of nations receiving aid has led many to think that the money has been largely wasted, Much aid money seems to support tyrants who have in plain sight used military and police forces to suppress descent. The billions that have been pumped to Africa have failed to alleviate poverty, let alone improve the livelihoods of the populace. In many instances, aid money, coupled with natural resources that have been exploited by multi-nationals coming from the same donor countries, have been the causes of incessant conflicts that have literally taken regional armies and United Nations (UN) peacekeeping to bring a semblance of peace.

More than in the past, overseas aid has become an indispensable unpleasant fact, helping to channel investment and catalyzing the rise of social forces it finds compatible, and aborting those that are hostile to it. These assertions are supported by the aid acts of oil-rich nations that support the spiritual actions of fellow believers rather than helping human development initiatives. The offshoots of these actions have created worldwide chaos that takes a superpower to undo.

Yet, geopolitics and strategic considerations often prevail over humanitarian or Millennium Development Goals (MDGs) development targets on which world leaders have agreed. Even when leaders agree on subjects of interest among nations, there has been visible disagreement between them and their money managers on the effectiveness of aid. Indeed, research and investigation into the positive impact of aid, notwithstanding World Bank and UN claims of a many best practices achieved, have failed to establish the nexus between foreign aid and sustainable livelihoods in much of Africa, whatever the volume of money is involved. As Shantayanan Devarajan, David R. Dollar, Torgny Holmgren, wrote in 2001:

> With increasing aid fatigue, budget cuts in countries of the Organization for Economic Co-operation and Development (OECD) and the introduction of "governance" conditionality, aid funds have become more movable. The emerging global consensus in the early 1990s on what forms good development policy has also helped induce a greater willingness to reallocate aid in favor of good policies… Ghana and Uganda are among the most successful reformers in Sub-Saharan Africa (SSA) during the past 20 years. Conditional financial aid was later most helpful in pushing the reform agendas and in implementing the reforms. A recent study by Messrs Dollar and Collier suggests that, given current policies and aid levels, SSA will reduce poverty by 11% by 2015, far short of the goals set in 2000. Even without any improvement in overall economic policies in Africa, a 50% increase in aid flows would double poverty reduction, to 22%—so long as it was coupled with efficient reallocation of aid towards poor countries with good policies. Dramatic progress towards the goals cannot come from aid alone. That will take a combination of better economic policies in poor countries, more open trade regimes in rich ones, and aid flows that are not just higher but also better allocated. Doubling aid cannot do it alone. (Devarajan, Dollar, Holmgren, 2001:14-16).

Enter the world of conditionalities, a terminology inserted as a cliché by donors, because global financial institutions have made their loans conditional on governance and policy reform directed at the Washington Consensus. African leaders accept these conditionalities since it does not affect them or their political groups. The reasons are grounded in inherent human weakness but also in the inertia that such decisions imply in terms of their impact on the local populace for which these leaders have little concern. Hence, even when poor African nations manifestly contravene and defy conditionalities, the donor community is often forced to release more funds to oil their ruling machinery. For fear of having a failed state, they would have to deal at much higher human cost at a later date. As Nobuhide Sawamura wrote in 2004:

> Japan's philosophy of aid is characterized by a strong respect for autonomous development and the encouragement of self-help efforts of developing countries. The Ministry of Foreign Affairs describes this idea as having originated in Japan's own development experience in its recent history and in its experience in providing assistance to East Asian countries. In addition to these reasons, there is a Japanese tradition of respecting self-help efforts, which has grown out of education in Japan. Respecting self-help is strongly related to having a high regard for self-reliant attitudes. This does not mean that people do not help each other; rather, the efforts of the individual are required to work together to achieve certain goals. What should be emphasized is the equal relationship between donor and recipient: a genuine partnership. Ownership of developing countries is of central importance to international development cooperation. (Sawamura, 2004:27-40)

The Paris Declaration on Aid Harmonization in its "Statement of Resolve" presented that donors and recipients are resolved "to take far-reaching and monitorable actions to reform the ways aid is delivered and managed". A fresh start was what The Economist called it in 2002. The UN conference in Mexico appears to have shifted the aid debate, with the rich countries squabbling about which has promised most. However, the real challenge is to make foreign aid more effective. Failed states are exactly the places where large-scale aid does not work. According to the World Bank's own calculations, there are twenty-eight countries, mostly in Sub-Saharan Africa, where aid is

unlikely to work. More broadly, the academic research on the effectiveness of aid suggests that the emphasis should be on choosing the right countries and programs, rather than on quantity.

Section Two: Current Analytical Perspectives on Aid and Development

Current discussions and analyses of transition to development in Africa and Africa generally are marked by several limitations. These include a tendency to narrow development aid thought and practice to the terms and categories of immediate, not-very-well-considered aid and social action. These shortcomings can be seen as outcomes of more or less conscious attempts of indigenous state institutions and their international backers to get their hands quickly on "urgent" matters of aid politics without much thought given to analysis. One manifestation of this is the socialization of development ideas and practices, a process that often spawns theory and over-simplification of difficult concepts. The power of a theory can make it difficult to understand complex development rules and gets in the way of reducing ideas to transparent and sustainable institutional practice.

Another difficulty in the recent approach to aid in Africa is the sometimes-unaware connection between donations and the donors' development ideas, values and goals with regard to civil society. Here, our attention and thought are diverted from the critical distinction between a system of abstract categories as a construct of an explicit rationalization (a formal conceptualization and design), and broad diverse domains of purposefulness in the plenitude of social experience. We are discouraged from acknowledging the distance and tension between these two spheres of developmental thought and practice.

Another expression in existing perspectives and projects of development aid is the common assumption that the proliferation of non-governmental organizations (NGOs) is in and of itself an index of aid effectiveness. The assumption seems plausible. However, the growing number and diversity of NGOs mean that the organizations have very uneven aid and professional capabilities, and differing levels of commitment to processes of aid effectiveness. They provide a range of social, humanitarian and relief services of varying proximity and relevance to the ends and purposes of development aid. Nevertheless, they do not function simply as instruments to those ends. Despite good intentions, NGOs have their own inclinations, concerns and motivations, which African politics and societies must take into account. These organizations may actually weaken civil society within a nation. At their worst, NGOs can function as instruments for the consolidation of technocratic elite, driven by funding from external donors instead of indigenous grassroots support.

Inattention to the challenges posed by the production of developmental systems and processes within African societies results in theorizing them as abstract possibilities. When it is not dissolved into the immediate reality of aid, often partisan or ethnocentric activity, aid is Africa is likely to be represented as a humane principle that needs only proper application. Practitioners and analysts of aid tend to pass over quickly its fragmentary presence in much of Africa, adjusting it against an ideal conception of what it might be. On the implicit assumption that circulation of aid ideas and values in Africa nearly exhaust their articulation, organizations often rush to matters of implementation.

Consequently, critical problems concerning the philosophical and practical entrenchment of development systems in Africa receive insufficient attention. The fundamental issues of how the concepts, standards and practices of aid could be generated and sustained under historically hectic African conditions, and the manner in which they are likely to gain systemic integrity and autonomy as well as broad social currency, are inadequately addressed. This relative inattention leads analysts and practitioners alike to make internal observations and assessments in terms of aid performances without questioning setting up or securing them as developmental systems in the first place. Insofar as existing perspectives neglect to consider Aid as a system in which donors impose their ideology upon Africans from the outside, approved-development consists of a set of activities in which only outsider concepts and standards are applied, as opposed to being fashioned in African contexts and conditions.

Even at the level of application alone, it is largely overlooked that international models may enter societies through a proliferation of programs that hinder the growth of open and effective processes, which may retard indigenous experience and capacity. Whether development in Africa is defined in terms of state policy or citizen action, private value or public norm, by taking little consideration of how these systems are articulated, development at once the most concrete and least understood of ideas in Africa. Within current projects of aid reform, it is either conventionalized or sterilized as theory. Aid reform is often vacuously formalized on the ground of practice. It enters societies in relatively abstract and plain form, yet is expected to lend itself to immediate and vital Africa experience. It suggests itself and seems within reach only to elude, appears readily practicable only to resist realization.

Section Three: The Record of Policy Transfers and Structural Adjustments

Policy Transfers

Policy makers can be motivated by different factors to import or export policies, institutions and programs from or to another political setting. Thus, there is more than one reason for policy elites to engage in the policy transfer process. There is a natural tendency to look abroad, to see how similar problems were addressed, and to share ideas to draw lessons when past or present solutions are not found at home (Newmark, 2002:154). In doing so, policymakers perceived that looking across borders often provides potential solutions to domestic problems and provides a way of dealing with the problem quickly and at lower cost, when they believe that their countries are placed poorly in international benchmarking reports (Dolowitz, 2003:103).

Another reason for the involvement of policy elites in the process of policy transfer is the occurrence of new policy problems that cannot be dealt with effectively through established domestic policy heuristics. Hence, Evans and Davies (1999:361) argue that the process of policy transfer should be examined through a structure and agency approach with three dimensions: global, the macro level and inter organizational level. Policy transfer agents can borrow policies, institutions or programs from other political systems or units within their own country. (Dolowitz and Marsh, 2000:12). The interaction of think tanks, consultants and policy experts with the media, government agents, the business world and non-governmental organizations create opportunities for exchange of ideas (Stone, 1999:46).

The 1980s saw a major change in the lending-policy framework of the World Bank and the International Monetary Fund (IMF). The World Bank began to reorient both its development policy models and its relation with the IMF and developing countries. This situation gave birth to the structural adjustment lending, in which conditionality was linked to policy reforms in Africa. The World Bank also linked structural adjustment programs to recipients' adoption of IMF stabilization policies (Gibbon, 2000:122-123). The policy changes have relationship with the changing political and economic circumstances in the developed nations in 1970s and 1980s. The economic crisis in the 1970s and the collapse of state planning economy in the former Soviet Union and other communist countries undermined the role of state in economic development and the hitherto-accepted Keynesian economic development paradigm (Gibbon, 2000:129). This situation led to the ascendance of neo-liberal economics as a dominant paradigm to diagnosis problems, devise, and prescribe solutions. Consequently, there emerged a political attack on big government thinking of the Keynesian theory. Big government was criticized as being incompetent and oppressive.

The IMF Structural Adjustment Program (SAP) in Africa was devised to replace the post-independence centralized state-planning pattern of development, first developed and introduced as economic crisis management strategies. African states were required to get approval from the World Bank to obtain funding, credit, debt rescheduling or debit relief from any Western source. The policy reform models were considered as universally applicable (Soludo, 2003: 2526). Nevertheless, policy makers, intellectuals, and civic leaders raised their concern about the adaptability, compatibility or adequacy of the policy reforms prescribed by the World Bank and the IMF to the realities of the crisis and the context of the political, social and institutional arena in Africa (Olukoshi, 1995:59).

International financial institutions rejected the views and concerns of Africans and insisted on the universality of national economic behaviors, which is the monoeconomics idea of the neo-liberalists. According to the World Bank and the IMF, the implementation failure of the SAP is due to the lack of political will or inability of governments in Africa to take hard political decisions. It was said that African governments either did not have the confidence and courage or were too weak to resist the imposition of development models and policy reforms prescribed by the World Bank and IMF (Hobsbawn, 1994:431). Therefore, African governments surrendered their national policy initiatives to the international financial institutions and experts. However, after several years of experimentation, the limited success in achieving the objectives of the SAPs compelled the World Bank to reconsider the macro-political and social issues in the process of policy transfers (Mkandawire and Olukoshi, 1995:1). The recognition of the failure of the SAPs for sustainable long-term development led to the introduction of better governance in Africa, giving emphasis to free flow of information and transparency in the public sector, policy predictability and rule of law (Ibid). Accordingly, as a component of good governance, the civil service reform came into the agenda of the World Bank (Olukoshi, 2003: 249),

Nations, both the developed and developing, have sought to learn from what they regard as more efficient and effective policies and practices in other countries. However, even though there have been long traditions of borrowing policy ideas and practices from abroad or imposition of policies, ideas, institutions and programs upon states, enough attention was not given to the process of policy transfer in the academic environment. Although, in practice anything can be transferred from one political setting to another, Dolowitz and Marsh (2000:11) identified eight objects of transfer, including policy goals, policy content, policy instruments, policy programs, institutions, ideologies, ideas and attitudes and negative lessons. Even though the process of policy transfer has a long history, the

advances in communication technology and the process of globalization have increased the occurrence of policy transfer. During the era of imperialism, European colonial powers exercised coercive transfer of policies. European legal codes, parliamentary institutions, currencies and bureaucratic structures were transferred into the colonial territories in Africa, Asia and Latin America. Similarly, the communist ideology and Soviet models of economic organizations were spread to East Asia, East Europe, Africa and other communist satellite states and affiliated groups (Stone, 1999:55).

The growing influence of supra-national institutions and their interest in the idea of policy transfer between different political settings is also considered as one of the major reasons for the development of policy transfer. Dolowitz and Marsh (2000:17) identified three factors that contribute to policy failure. These are uninformed transfer, incomplete transfer, and inappropriate transfer. Turbin (2001:98) argues that failure to understand the institutional and cultural contexts leads to inappropriate policy transfer with disastrous consequences. According to Docowitz (2003:104) if a country engages in a policy transfer as a result of coercive process it is likely that the implications of the imported policy on political and cultural systems of recipient country will be neglected. This happens when developing countries are made by the World Bank to transfer developed (western) countries policies and practices.

The IMF/World Bank Structural Adjustment Programs (SAPs)

SAPs were introduced in Africa on a massive scale from the early 1980s onward at a time when most African countries were already in deep economic crises (Olukoshi, 2003:236). The program consisted of reforms aimed at stabilizing African countries external and internal balances and promoting their growth by devaluation, trade liberalization, privatization and supporting institutional changes (Engberg-Pedersen, et al., 1996:9). The World Bank and the IMF were from the start the two main institutions behind the introduction of structural adjustment programs in Africa.

The World Bank and the IMF forced African governments to adopt SAPs. During the 1980s, Africa's severe economic problems resulted in an increased dependence up on external program finance (Helleiner, 1994:10). The World Bank and the IMF are the primary lenders to most of the African countries and these financial institutions made such assistance available on their own terms and conditions. The World Bank insisted on linked policy reforms with aid, and to the adoption of SAPs as a condition for continued access to loans (Abdi, 1993:26). Later on, the World Bank also required borrowing countries to adopt IMF stabilization programs to qualify for loans. This means a working agreement with the IMF became a pre-condition for negotiating a World Bank financial assistance (Gibbon, 1995:122-123). Given their desperate need for foreign exchange and the deep economic crisis African governments found it difficult to resist these terms.

SAPs were introduced in Africa to solve the fiscal and trade imbalances and improve the capacity of the governments to service their debt obligations. According to Preston (1996:255), the World Bank has a series of principles, which guide policy advice to avoid market regulation, market intervention, government role in the economy, collective intervention in the market and free trade of goods and currency freely traded. The state has traditionally played a dominant role, being an all-pervasive allocator of controller of economic activities (Demery, 1994:33). Hence, Olukoshi (1995:158) argues that SAPs represent a radical attempt to replace the post-colonial state-led pattern of development.

Ever since the introduction of the SAPS in Africa, there were controversies about their relevance to the African condition and effectiveness in achieving desired development objectives (Soludo, 2003:28). African elites and governments recognized that the economic crisis in Africa required fundamental adjustment, but they raised serious reservations about the appropriateness of such policy reforms (Mkandawire and Soludo, 2003:2). The policy ideas and development models transferred from capitalist nations to African countries were not based on intellectual appraisal of African economic, cultural and political contexts (Gibbon, 1995:124). As a result, African intellectuals were either hostile to or skeptical about the World Bank's economic reform project in Africa (Olukoshi, 2003:264).

Another area of controversy was the appropriateness and efficacy of the processes through which development programs were designed and the issue of ownership of the programs (Helleiner, 1994: 5). Mkandawire and Soludo (2003:13) argued:

> Africans should take the driver's seat, while others can help because they have the ultimate responsibility to think for Africa and bring economic development. However, throughout the adjustment years the World Bank seized much of the initiative and foreclosed debate insisting that it was either their way or nothing.

The World Bank did not consider that the developing world was a distinct policy environment, requiring acknowledgement and locally appropriate development programs. It insisted on the universality of national economic behavior (Mkandawire and Soludo, 2003:25-26). According to this view, all societies worked based on same laws, namely the maximization of human welfare via the free operation of the market. Exceptions were represented only by those societies where efforts have been made to intervene, administratively to modify market out comes and where corresponding human welfare failed to be maximized (Gibbon 1995:121-122). The development of African countries, therefore, depended on the removal of the administratively imposed distortions, which had prevented their natural endowments.

The World Bank ascribed the problems of the implementation of SAPs to African-internal rather than external factors. According to the World Bank's argument (Ibid, 138), African governments resisted change because their social base would erode. The governments were seen as the problem, especially in a context of poorly developed markets and corresponding social institutions. Furthermore, the World Bank argued that reforms were not successfully implemented by African governments because of those governments' inability or unwillingness to make hard political decisions. The governments were seen to reply on a coalition of forces with interests linked through corrupted practices (Engberg-Pedersen and et al., 1996:5). World Bank authorities also argued that (Helleiner, 1994:7) their own pressure was necessary to overcome the influence of local stakes that would otherwise frustrate implementation of the structural adjustment programs. They asserted that Africa is underdeveloped not because of the influence of capitalism and financial institutions they control but because of the heavy hand of the state and the corruption, including inefficiency and a lack of economic incentives permeating African economies.

Governance Regimes and Africa: 'Western' Tolerance of Bad Regimes and the Afro-Arab Spring

Problems of poor governance, and a civil society rendered decadent in this process notwithstanding, it is easy to follow the current trend within the international community and advocate for the development governance as a desir-

able form of progress that promote critical social change and aid effectiveness. Nor is it difficult to judge how Africans should behave if development is going to be a vehicle of change. Nevertheless, it is not so easy to conceptualize governance as a working process, which is balanced against strategy, to determine what makes for real, as opposed to vacuously formal process. As a way of contributing to the overcoming or lessening of these difficulties, we may theories development governance and the theories of democracy that it bears within it as the dynamic interaction of strategy and process. Ash Amin wrote in 2012:

> At pivotal moments in history, shifting the principles of the game have been a vital gesticulation of organized state capture, propounding to impel a new social order out of latent concerns, as well as develop the means to alter the grammar of politics. If democracy means rule by the people for the people, it has broken down. All we have today is rule by national and transnational elites, marked by periodic social eruptions that fail to add up to anything transformative. The elites bounce back regrouped, the protestors are silenced or appeased and electoral victories promising radical change end up captured by stakes. The Arab Spring has yet to bring spring to the masses; the uprisings around the world against financial capitalism and austerity have only served to strengthen ties between banks, international financial institutions and the powerful states. The millions of people crushed by the current economic crisis and its handling by the authorities are told that their sacrifice is needed for a return to better times, while reforming governments trying to protect the less well-off rely on the approval of lenders, rating agencies, the media and powerful states. These failures of development are worldwide, a feature also of so-called 'mature democracies'. People everywhere are not doing much of the governing, while those supposed to be acting on their behalf are doing nothing of the sort. The consequence is growing social misery and injustice.

All told, it is people, not only the temperamental young and labor, but women, mothers, girls who had never seen a protest, that were pouring into the streets in the Afro-Arab Spring of 2010 to 2011. Amal Sharaf, a 36-year-old mother who is one of the founders of the April 6 Movement, handed out fliers in the days leading up to the first major protests on January 25, when people filled Cairo's Tahrir Square (Newsweek, 2011) and history changed its course not only in the Middle East but elsewhere where tyranny prevails, especially in Africa.

Section Five: A Flavor of What is Possible: the UN Millennium Declaration, PEPFAR, Infrastructure Development…

The opening salvo of the UN Millennium Declaration proclaims,

> We recognize that, in addition to our separate responsibilities to our individual societies, we have a collective responsibility to uphold the principles of human dignity, equality and equity at the global level. As leaders we have a duty therefore to the entire world's people, especially the most vulnerable and, in particular, the children of the world, to whom the future belongs.

The resulting Millennium Declaration identified urgent, collective commitments and ambitious targets with clearly defined deadlines set for 2015. Countries such as Ethiopia are on track to achieve six of the eight MDGs.

Aid that Works: an Ethiopian Case Study

Access Capital Research (2011) underpins the fact that public investment supported by international aid has in recent years been one of the major drivers of economic growth in Ethiopia. A five-year GTP enacted in early 2011 has set the stage for an even bigger role for public sector spending in the coming years. For the five-year GTP period as a whole, the sum of budgetary government spending and off budget spending by public enterprises is programmed to reach Birr 1.26 trillion, or an average of 41% of GDP per year over five years. One of the most distinctive features of the public spending envisaged above is the unusually high level of capital expenditure, which will see its share rising from 56% to 61% of total government expenditure.

Hardware Investments: This encompass the whole range of physical and infrastructural facilities needed to allow the movement of labor, goods, and services across a market economy—roads, railways, power plants to generate electricity, electricity grid networks, water and sewage facilities, etc. Among the notable plans in this area are:

- **Roads, Railways and Air Infrastructure:** Building 71,000 kilometers of new roads, including all-weather roads to virtually all communities and modern eight-lane expressways; constructing 2,395 kilometers of new railways and raising Ethiopian Airlines' air fleet by 35 additional aircraft, including 4 new cargo carriers, and building a huge new cargo hub at Bole Airport with a capacity to handle 125,000 tons per day in perishable export commodities.
- **Power Generation and Electricity Distribution:** Generating 8000 MW of new power generation capacity and laying 132,000 kilometers of new electricity distribution lines and the expansion of electricity coverage to 75 % of the country.
- **Other sectors** are raising mobile phone accessibility to 45% of the country's population, and mobile phone users from ten to forty million, building 157,000 new condominium-housing units, expanding the water supply infrastructure to 99% of the population and the drilling of some 3,000 water wells per year and increasing in irrigation coverage from 3% to 16% of total farm land and developing new or additional capacity in sectors that include textiles, metals and engineering, cement, fertilizers, and sugar production, on commercial agriculture, three million hectares of land available for investment and tremendous exploration is going on by more than twenty-five companies for oil, gas, gold, tanatalum, uranium, etc.

Software Investments: These are best seen as the human capacity building required to run an increasingly modernizing national economy- from basic health care to ensure a capable labor force to the provision of adequate education at the primary, secondary, and tertiary level, in additional to specialized vocational and technical training schools needed to run an increasingly complex economy. Among the key targets in this area are frontloading resources to fight poverty, increasing (net) primary enrolment to 100%; raising the number of students at government universities to near half a million students (from 185,000 at present); ensuring universal education to 8th grade; raising the number of students at Technical and Vocational schools to above 1 million (from 717,000 at present); establishing a public university that will have 40% of science/engineering students and ensuring 9,000 new medical school entrants annually and reaching a 100 % primary health services coverage (from 89%) through large-scale expansions in public health centers and hospitals and ensuring large reductions in infant and maternal mortality and the incidence of various diseases.

Much of the public investment laid out above and in the GTP is needed, justified, and on the whole appropriate, but how such investment is to be financed remains only partially addressed and the issue of who should carry out the investments is—in at least three specific cases—quite questionable. The case for government investments in public goods such as roads and power infrastructure is undeniable, as it is laying the essential foundations—the necessary conduits and circuitry—of a modern economy without which a whole range of private players would be handicapped: farmers seeking to take their goods to urban population centers, industries requiring water and electricity to function; exporters requiring modern air, road, or rail links to deliver their goods on time, and so forth.

> The lessons of other large and fast-growing developing countries—from Nigeria and its power shortages, to India's road and port-related deficiencies— all point to the need to address infrastructure bottlenecks well before they become handicaps to growth. The infrastructure gap is a curse faced by many countries in Africa and it is only to be welcomed that public policies and donor aid in Ethiopia are addressing not just present but also prospective needs in key public goods, all of which is something that can work to crowd in private investment. (Access Capital Research, 2011)

Section Six: Paradigmatic Shifts in Global Governance of Aid

The author submits that paradigmatic shifts global governance of aid in can be explained with reference to two institutional factors: global aid organizations and rules – a triangular partnership between policies, institutions and development actors. The central hypothesis is that the relative strength of such a triangular partnership determines the rules of the game that are installed - a plural set of organizations that promote and protect rules of peaceful participation and competition in development that ensure popular participation and intellectual curiosity. Different kinds of organizations play a leading role during different phases of transition. One can hypothesize that the absence or weakness of certain partnerships explains why global governance of aid stalls at certain key junctures, where these norms and procedures would have to become fully assimilated by a majority of the players within a system. There must be consensus on the rules of the game, whether these rule are embodied in legal texts, or in less formal but no less real customs of aid administration as it is practiced. Pluralistic triangular partnership of aid institutionalizes uncertainty but succeeds if all actors accept this uncertainty as opposed to the rigidities of nonconformity.

This will commonly be characterized by a number of distinctive and shared additional elements, including concepts and rules of universal a triangular partnership, juxtaposed to national and cultural values, traditions of discourse and arguments and modes of representation of specific interests, needs and issues. These elements, or complexes of elements, will tend to assume varying forms and enter into shifting relations of competition, cooperation and hegemony during a triangular partnership reform. Generally, the broader the ranges of ideas at play, the more varied and uncertain relations are the greater are the possibilities for aid openness and transparency that exists. As stated earlier, multilaterals such as the World Bank range their activities and influence across the network extensively while others are localized. With all the multiplicity of different, not very well coordinated, global mechanisms, it has been a bit difficult to maintain a sense of direction, in both a strategic and process sense.

Like the evolution aid culture and emergence of triangular partnership agencies and activities to which they are often tied more or less closely, ideological constructs tend to be unsettled and, at times, unsettling. Particularly at the initial stages, they are more likely to be uncertain rather than stable structures of ideas and values. This has the

effect of opening up the entire process, of freeing the process from simple domination by any one organized actor or coalition of actors. Yet, global ideological elements and relations take shape and come into play within a hierarchy of global and local agencies and groups. A determinate order of institutions, powers, interests and activities operates through a complex partnership ideas and values, filling out, specifying, anchoring and, often shortcutting their formal content or meaning. Moreover, this may impose ideological as well as practical limits on the extent to which and how triangular partnership reform processes can be broadened.

Those promoters of aid governance often do not efficiently realize the potential of the ideas and goals they promote raises the issue of whether the ideas in question may be fundamentally constrained at the moment of their conception by the very technocratic structures that ground their articulation. Additionally, the supply of ideas may be artificially deflated by particular strategies and mechanisms used by high-handed states to manage entire reform processes. Conceptual possibilities may be left unrealized, or sub-optimally realized, insofar as the intergovernmental agencies elite are preoccupied with filling out those spaces of uncertainty in aid governance thought, discourse and action that alternative groups would occupy in the course of their own engagement.

This has to change under the rubrics of a triangular partnership. In the wake for Africa's renaissance, aid donors have to approach development by connecting with people, joining in on their aspirations, complementing their abilities with our resources, and assisting to create true partnerships. We must commit ourselves to a common discipline of empowerment among all people, to a fundamentally new value system based on justice, peace and the integrity of creation, a system that recognizes the rich resources of human communities, their cultural and spiritual contributions and the wealth of nature. It will be radically different from the value system on which the present economic and political orders are based and which lies behind the current crises. We need to define a new understanding of empowerment in which those who have been marginalized by reason of sex, age, economic and political condition, ethnic origin and disability, the homeless, refugees, asylum-seekers and migrants alike take their place at the centre of all decisions and actions as equal partners.

Given time, the empowerment approach entailed in this new paradigm, can take root to become significantly enabling to African countries and peoples as they strive to meet their objectives. This requires among, other things, a fundamental paradigm shift in the identification of development challenges and a sustained effort to transform the way in which knowledge is currently constructed, organized and used as a basis for programming. The basic point here is that the extent and nature of livelihood sustainability are conditioned by the breadth of the range of available participants and the degree of uncertainty and complexity that characterized their agency and functional relations.

At the structural level, a certain hierarchy of agency and activity is evident within the network of participants, such that some actors assume primary position relative to others that are by comparison relegated to be limited players. This then characterizes the enabling environment for Sustainable Human Development that is modulated and, at times, mediated by a number of distinctive and shared elements. These include concepts and rules of government, national and cultural values, traditions of political discourse and arguments, and modes of representation of specific individual interests, needs and issues. These elements, or groups of elements, will tend to assume varying forms and enter into shifting relations of competition, co-operation, and hegemony during the exercise of participation. Generally, the broader the range of ideological elements at play and the more varied and uncertain their relation, the greater is the possibility of process openness that exist. However, many questions linger that need to be addressed:

- Does aid enter local processes as an external ideology, constructing and deploying its concepts in sterile abstraction from the immediacies of indigenous traditions, beliefs, and values?
- In the case of rural communities, do development ideas addressing poverty come into play in total opposition to, or in cooperation with historic values and sentiments?
- In the struggle for aid effectiveness, do leading stakeholders equate the articulation of their ideas and agenda with the production of broad-based concepts, norms and goals that should govern the direction of national development at all levels?
- Does aid effectiveness signify change in terms of the transformation of the immediate stuff of stakeholder-specific partisan agenda into a new kind of co-evolutionary activity - an activity mediated and guided by objective and critical policy analysis, formulation and management standards, rules and principles?

Questions such as these are important in examining and assessing the ideological basis for a triangular partnership. However, as important as it is, this is only one context, level or analysis of the breadth and depth of the triangular partnership process on the terrain of ideology. There is another level of analysis, concerned with the extent and nature of openness of distinct ideological constructs to one another, with modes of articulation of given sets of ideas and values and of representations of specific issues relative to others. The concern here is not so much the diversity of ideas, values and opinions allowed to gain currency as modes of their competitive and cooperative articulation in a triangular partnership. In the light of these questions, it is possible to draw a conceptual distinction between two levels of articulation of ideology in a triangular partnership and to note the implications of their relations for process openness. There are first, representations of specific interests, identities, needs, wishes, goals, claims, demands and so on, different among donors and recipient states and communities. These are to be distinguished from a second level of production and circulation of development a triangular partnership where broad-based concepts, principles and rules take shape and come into play. For convenience, we can designate ideological elements at the former level of particular representations or contents, and those at the latter level of general forms. Particular representations have to do with ideologically loaded articulations of interests, needs and activities, which may appear or become so immediate as to be taken for spontaneous realities. General forms of a triangular partnership refer to systemic categories and institutional mechanisms; they objectively, mediate and generalize particular representations.

In examining or assessing the ideological problems of the a triangular partnership in development, general forms and particular representations need to be addressed in terms of their relation, even as they retain their distinct conceptual status. For the two levels of ideas formation, tend to incorporate each other in a more or less uncertain and complex process, as well as constituting relatively autonomous coherence. The breadth and depth of generic forms cannot be grasped or judged simply on their own worth, i.e., on their theoretical correctness or the rigor of their formal construction. Such an understanding should not overlook the matter of how far particular partnership representations or constructs inform and condition concepts and rules; but have to conceptualize the relation between the two levels of production of ideology and its implications for openness.

One way is to think of it in terms of concrete instances and abstract systems; a system of concepts, rules and procedures that provides objective standards to which every instance of representation of interests, needs, demands and intentions must conform. In this light, triangular partnerships appear as a process in which a donor structural models are applied to local recipient contexts, much to the dismay of practitioners seen as the extension of the institutional

contents of the model toward projects of reform. This conceptualization may not be entirely mistaken, but it is far from satisfactory. Generic modes of triangular partnerships are not simply pure ideas devoid of practical content and particular constructs are not merely points of application of systemic elements, which are wholly external to them and in whose articulation they have no role to play. If general forms are seen as standards to which every instance of representation of particular interests must conform, the effect will be restricting triangular partnership openness.

That will mean pushing ideas and values produced in the plenitude of social experience to the background and accord primacy to a mere system of abstract theories, giving primacy to the conditionalities of donors. It must also be noted here that the institutional mechanisms of aid cannot come alive in local contexts merely as generic forms. They make themselves felt only to the extent local institutions address through them their concerns. Alternative way of looking at the relation between general forms and particular contents in a triangular partnership would give precedence to the latter over the former. Within this perspective, specific organizations and groups appear to have more leeway articulating systems of abstract categories according to their particular interests and intentions. A triangular partnership as a system of universal concepts and practices will necessarily be instantiated in contexts, but only in line with the specific aims and strategies of particular aid donors and recipients rather than within a simple application of its concepts in their pre-given abstract form. Instead of being applied to local contexts, global forms or models of aid governance provide ideological materials for construction in those contexts.

This perspective has merits. It can work as a corrective to the view of a triangular partnership as a mere extension of a system of abstract categories to concrete instances. However, the issue here is not one of simply giving primacy to specific contents over general forms. The concepts and principles may allow particular interests and intentions to permeate them, yet should take shape through such particularities as distinct, relatively autonomous articulations. It is important to recognize here that there are various ways of connecting particular interests and goals to global concepts and principles and that certain ways may be restrictive of aid governance transparency. In some cases, tying systems to ideological constructs is not to appreciate the systems' inherent breadth and complexity. It is, rather, to operate within forms of knowledge that encompass only a limited part of the systems' full range. In addition, states managing triangular partnership processes may use strategies of interest articulation or identity construction that in effect displace or distort the generic forms that provide the standards for their efforts. A given organization may operate the formal concepts and rules in such a way as to maximize their openness and transparency.

Nevertheless, the opposite is not uncommon: a theoretically open and free partnership reform process may, in actuality, be dominated and narrowed by the particular agendas of assignable participants, specifically tied to interests of donor regimes. Hence, the relation between explicit, general forms and particular representations can best be grasped as their dynamic, mutually constitutive or regulative articulation. It must be recognized that the former do not have effective generality or objectivity of their own, independent of particular elements and contents. If they were wholly independent, they will be vacuous and irrelevant. Moreover, specific representations are not passive external targets of application of generic forms but in part constitutive of them. In other words, neither one nor the other level has elements, features and functions that it owes entirely to itself.

Thus, a triangular partnership entails conceptualization in global categories that are invested with varying local meanings that are themselves in part actualization of trends in aid (and development) thought. Openness, transparency and complexity will depend on the extent to which and how global and local levels or dimensions are articu-

lated with each other. This means that the attempt to subsume unification by some particular aid or ideological intention must, limit rather than enhance openness. If what explicit general forms signify is no particular partnership strategy but the very process of aid governance itself, then any particular agenda or intention must, to the extent it is development aid, allow general forms to work themselves out through it.

Conversely, triangular partnership strategies must take on generic elements, dimensions and functions. In order to have significant constitutive or regulative effects on the plenitude of particular representations, it must be allowed to attain coherence and integrity even as it comes into play in varied contexts of activity. While it may be tied to the initiatives and leadership of assignable organizations in its emergence and development, it nonetheless gains currency as a relatively autonomous system that other, competing ideas can also participate in and operate. As a set of distinctly general mechanisms of thought and practice, a triangular partnership takes the diversity of particular aid activities into itself and makes them a vital part of its conceptual and institutional economy. It mediates and channels specific actors by means of an objectification and generalization that works on and through them. Within current projects of aid governance, development values are either conventionalized or sterilized on terrain of theory and often vacuously formalized on the ground of practice and enter African society in relatively abstract, syncretic and plain form, yet are expected to land on immediate and vital African polity's socio-political experience.

Conclusion

In Africa, the medium-term outlook for the region remains positive. Growth will be supported by rising external inflows (capital and investment) and high commodity prices. Economic reform programs will continue, boosting the role of the private sector in the economy (EIU, 2012). Indeed today, the picture is changing fast. Stories of African migrants struggling to find a route to Europe contrast with recent reports that Europeans are struggling to find working permits in Africa. Though largely still the recipient of foreign direct investment, Africa is gobbling up distressed assets in the West. Already larger than aid by a substantial margin, funds are now flowing to Europe from Africa. Pence, Eliot reported in 2012:

> Underscoring these trends is reduced dependency on multilaterals (China alone lends more to Africa than the World Bank) and research estimates that BRIC-Africa trade increased ten-fold in the past 10 years. Even as a major western newspaper openly wonders how Africa will 'join the larger world on its own terms,' across virtually all indicators, evidence suggests it is doing so largely on its own terms. If the West is stuck in aid paralysis, while Africa enjoys an economic renaissance, a more pressing question for observers might be when will the West join Africa?

The cast to which the African state formation was to be molded under the Western form of political domination failed because of the resolute defiance of indigenous cultures. Indigenes neither had a problem of character defect or ethical failure. It was one of misinterpretation arising from the deconstruction of human society and its history. Such colonial analyses were based on false correlation and false consideration on the separation of meaning from social context, behavior from cultural milieu and action from social structures. Judgments are based on representations especially the perception that the Western state, and its correlates, market society and bureaucratic organization ought to exist.

Africans are awash about the enormity of their problems and this can be disabling. Overwhelmed by the magnitude of poverty and violence, they tend to go passive - or to strike out in usually futile individual acts of rage, thus maintaining the tyranny of those who benefit from the status quo. Hence, a deeply radical idea that is the definitive augmentation of the idea of shared values must be grounded on the fact that each cultural community has rights that deserve respect, and that each must have a voice in the vital decisions that affect the quality of lives. Those who command a lopsided share of supremacy would not be content to hear this idea put forward, for it burdens them to account to those who are locked out by the current order as this sphere is a threat to a state with an all-pervasive regulation of society. (Costantinos, BT., 1996:443)

Africa has folklore, legends, and narratives through which its people invest their history with meaning and value. They have been subjected to materialist criticism from the perspective of scientific standards of historical knowledge and truth as if they were simply epistemological categories. Africa is rich in the visual, literary, and performing arts, that strive to express subjective feelings and emotions and depict reality or nature objectively.

African nations undoubtedly will continue to depend on some international assistance in their projects of reform. Such assistance is vital for the projects in many areas and at many levels. Yet it must be recognized that external support creates problems as well as opportunities for development and democratization on Africa. In confronting the imperatives of change, nothing is more challenging for African polities than the strategic coordination of diverse global and local elements, relations and activities within themselves, nor has anything greater potential for enabling them achieve successful transitions to a triangular partnership in development. As the march of meritocracy has now slowed to a crawl in both donor and recipient states, and, on some fronts, has even turned into a retreat, the real threat to mismanage aid is manifesting itself in many ways.

Political leadership in Africa requires intimate knowledge of public policy analysis, formulation and management and development of strategic plans and implementing them to achieve results. This is augured in a need for an independent review of the capacities of institutions as regards the rights-based approach to developing the institutions and developing knowledge management systems, stopping the brain drain and turning it to brain-gain. Democracy will survive as long as multiparty elections continue to be held in which voters are free to exercise meaningful choices.

> So far, only a few have satisfied even the most minimal conditions set by the two turnover test. In all political regimes, the meaning of incumbent victories is more difficult to interpret than the meaning of historic voter realignments. Where the influence of big men continues to loom large over electoral and other political processes, it is rarely clear whether the re-election of an incumbent constitutes the extension of a leader's mandate or the resignation of the electorate to an inevitable dominance. For these reasons, the meaning of Africa's second and third elections will be murkier than the contests of the early 1990s. (Schmitter, Philippe, 1992)

When all is said and done, however, the fact that intense political struggles are still being waged is proof that the institution of elections is beginning to matter. Work is ongoing to confront fake elections, greed and corruption, the impact of the Washington Consensus and exporting terror. The central hypothesis is therefore that the relative strength of political organizations determines the rules of the political game that are installed. Democratization of

a triangular partnership requires a plural set of political organizations, which promote and protect rules of peaceful participation and competition. Together, democratic institutions (plural organizations plus rules of accountability) ensure control of the state executive that has to negotiate aid on behalf of the population, on a working model of a triangular partnership.

Bibliography

1. Access Capital Research, 2011, Ethiopia: Macroeconomic Handbook 2011-2012, Addis Ababa: Access Capital Research Group
2. Ash Amin, Reinventing Development, Open Development, 11 July 2012, accessed July 11, 2012 from http://www.opendevelopment.net/ash-amin/reinventing-development
3. Costantinos, BT., 1996, Transition to Democracy in Africa: A Cross National Study. Arusha: GCA/ALF
4. Dolowitz, D. and Marsh, D. 2000. Learning from Abroad: The Role of Policy Transfer in contemporary Policy-Making. Governance: An International Journal of Policy and Administration, 13(1): 5-24. Available at: http://www.blackwellsnergy.com accessed on 3 October 2007.
5. Dolowitz. D. 2003. A Policy-Maker's guide to policy Transfer, The political Quarterly Publishing Co. Ltd, Available at: http://www.blackwellsnergy.com accessed on 3 October 2007.
6. EIU, Despite the current challenges, Africa's longer-term prospects are good, July 18th 2012, accessed July 27, 2012, http://gfs.eiu.com/Article.aspx?articleType=rf&articleid=1719285556&secId=6
7. Engberg-Pedersen, P. and et al. 1996. Structural Adjustment in Africa: A Survey of the Experience. In Engberg-Pedersen, P and et.al. (eds). Limits of Adjustment in Africa. Denmark:CDR
8. Evans, M and Davies, J. 1999. Understanding policy transfer: A Multiple-level, Multi-Disciplinary Perspective. Public Administration, 77(2): 361-385. Available at: http:// www.blackwell-snergy.com. Accessed on 3 Oct. 2007
9. Gibbon, P. 1995. Towards a Political Economy of the World Bank, 1970. In Mkandawire, T. and Olukoshi, A (eds) Between Liberalization and Oppression, The Politics of SAP in Africa. Dakar, CODESRIA.
10. Helleiner, K. 1994. From Adjustment to Development in Sub-Saharan Africa: Consensus and Continuing Conflict. In Conrnia, A. and Helleiner, K. (eds). From Adjustment to Development in Africa: Conflict, Controversy, Governance, Consensus? London, Macmillan Press Ltd.
11. James, O. and Lodge, M. 2003. The Limitations of 'Policy-Transfer' and 'Lesson Drawing' for Public Policy Research. Political Studies Review, 1: 179-193. Available at: http:// www.blackwellsnergy.com. Accessed on 3 Oct 2007.
12. Mkandawire, T., 1994. The Political Economy of Privatization in Africa. Dakar: CODESRA Book Series.
13. Mkandawire, T. and Olukoshi, A. 1995. Issues and Perspectives in the Politics of Structural Adjustment in Africa. In Mkandawire, T. and Olukoshi, A. (eds). Between Liberalization and Oppression: The Politics of Structural Adjustment in Africa. Dakar, CODESRIA Book Series.
14. Mkandawire, T. and Soludo, C., 2003, Towards the Broadening of Development Policy Dialogue for Africa. In Makandawire, T. and Soludo,C. (eds). African Voices on Structural Adjustment. Dakar, CODESREA
15. Nobuhide Sawamura, (2004). Japan's Philosophy of Self-Help Efforts in International Development Cooperation: Does It Work in Africa? http://home.hiroshima-u.ac.jp/cice/sawamura7-1.pdf, CICE Hiroshima University, Journal of International Cooperation in Education, Vol.7, No.1, pp.27-40

16. Newmark, A. 2002. An Integrated Approach to Policy Transfer and Diffusion. The Review of Policy Research, 19(2). Available at: http:// www.blackwell-snergy.com, accessed on 10 January 2008.
17. Newsweek (2011) The Keystroke Revolution, Rage Against the Regime, http://www.newsweek.com/2011/01/30/rage-against-the-regime.html, accessed March 28, 2011
18. OECD, Development Aid at a Glance, Statistics by Region: Africa 2012 edition, http://www.oecd.org/investment/aidstatistics/42139250.pdf,
19. Olukoshi A. 2003. The Elusive Prince of Denmark: Structural Adjustment and the Crisis of Governance in Africa. In Makandawire, T. and Soludo, C. (eds). African Voices on Structural Adjustment. Dakar, CODESREA.
20. Olukoshi A., 1995. The Politics of Structural Adjustment in Nigeria. In Makandawire, T. and Olukoshi, A. (eds). Between Liberalisation and Oppression. The Politics of Structural Adjustments in Africa. Dakar, CODESREA Book Series.
21. Pence, Eliot, 2012, Africa Rising: when will the West join Africa, retrieved on July 12, 2012 from http://africanarguments.org/2012/07/05/africa-rising-when-will-the-west-join-africa-by-eliot-pence-bright-simons/
22. Preston, W. 1996. Development Theory. An Introduction. Oxford, Black Well Publishers.
23. Schmitter, Philippe, "The Consolidation of Democracy and the Representation of Social Groups", American Behavioral Scientist 35 (March - June, 1992), pp. 422-449.
24. Shantayanan Devarajan, David R. Dollar, Torgny Holmgren, (2001). Aid and Reform in Africa: Lessons from Ten Case Studies, Washington, D.C.: The World Bank, retrieved Jan 27 2013 http://biblioteca.hegoa.ehu.es/system/ebooks/11934/original/Aid_and_Reform_in_Africa.pdf,
25. Soludo, C. 2003. In Search of Alternative Analytical and Methodological Frameworks for an African Economic Development Model. In Mkandawire, T. and Soludo, C., (eds). African Voices on Structural Adjustment. Dakar, CODESSREA.
26. Stone, D. 2000. Non-Governmental Policy Transfer: The Strategies of Independent Policy Institutes. Governance: An International Journal of Policy and Administration, 13(1). 45-62. Available at: http://www.blackwell-snergy.com, accessed on 15 September 2007.
27. Svendsen, E. 1996. Overview of the Debate on Structural Adjustment in Africa. In Engberg Pedersen. P. et al. (eds). Limits of Adjustment in Africa. Denmark, CDR
28. The Economist Magazine (2002) A fresh start, http://www.economist.com/node/1055273, accessed Jan 28, 2013
29. Turbin, J. 2001. Policy Borrowing: Lessons from European Attempts to Transfer Training Practices. International Journal of Training and Development, 5(2). Available at: http://www.blackwellsnergy.com, Accessed on 15 September 2007.

Leveraging Information Technology Infrastructure to Maximize Triangular Partnership Programs

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Abstract

The majority of the mortalities and morbidities in underdeveloped countries may be attributed to growing population and significant increase in disease burden on one hand, and substantial lack of health care resources, including

human, economical, technical, and educational on the other hand. The impacts of various methods to improve the health care problems and facilities in underdeveloped world have been innovated. In this regard, role of information and communication technology (ICT) is crucial. ICT has brought a revolution in the field of medical education, patient care and research in the last couple of decades. Triangular partnership (TP) has also substantially served to provide and to incorporate ICT in underdeveloped countries so that these countries would benefitted from these and the knowledge as well education of local institutions could be at par with developed countries. This article provides (a) the overview of ICT, its enhancement, and its application in medical education (b) role and challenges ahead for triangular partnership to facilitate this.

Introduction

The key carrier technology of the first Industrial Revolution (1770 to 1850), the first so-called Kondratiev wave, was based on water-powered mechanization, the second Kondratiev wave (1850 to 1900) was enabled by steam-powered technology, the third Kondratiev wave (1900 to 1940) was characterized by the electrification of social and productive organization, the fourth Kondratiev wave by motorization and the automated mobilization of society (1940 to 1970), and the most recent fifth Kondratiev wave by the digitization of social systems. Each one of those Kondratiev waves has been characterized by a sustained period of social modernization, most notably by sustained periods of increasing economic productivity. Digital Information and Communication Technologies (ICT) as the fifth Kondratiev wave fulfill those requirements and therefore represent a general purpose technology that can transform an entire economy, leading to a modern, and more developed form of socio-economic and political organization.

The impacts of various methods, however, to improve the health care problems and facilities in underdeveloped world have been innovated. In this regard, role of ICT is crucial. ICT has brought a revolution in the field of medical education, patient care and research in the last couple of decades. Goldschmidt showed in 2004 phase shift and overlap of the so-called Kondratiev wave of IT (fifth wave) and health (sixth wave).[1] However, the involvement of newer (information) technologies such as computers and internets have created significant improving contribution in medical teaching as well as in learning in medical college and other related institutions around the world, especially in western countries.[2] Additionally, some countries of underdeveloped world with the help of developed countries, non-government organizations and international organizations have also started to adopt these newer technologies and have directed towards better health care facilities, medical education and training.[3,-7]

In this regard, Triangular Partnership is an association that was built fifteen years back to generate knowledge transfer from well-developed medical institutions to local universities and hospitals. TP goes beyond opening schools in the remote areas of poor communities and helping societies with a theme of people to people (P2P) projects. TP has also substantially served to provide and incorporate ICT in underdeveloped countries. These countries benefit from ICT and knowledge as well as education of local institutions bringing them to par with developed countries. This article provides an overview of ICT, its enhancement, and its application in medical education and considers the role and challenges ahead for triangular partnership.

The Gap Between Need and Demand

In the past couple of years, there has been a decline in the overall morbidity and mortality throughout the world; however, there is discrepancy in the data pertaining to developed and developing countries. Though there is substantial decline in the poor outcome related to health care problems in developed countries, there is still no change or even increase in the overall burden of the disease and adverse outcomes in the underdeveloped countries. The majority of these mortalities and morbidities in underdeveloped countries may be attributed to growing population and significant increase in disease burden on one hand, and substantial lack of health care resources including human, economical, technical, and educational on the other hand.[4]

Two trends have become highly prominent in the international dialogue on development co-operation in recent years. The first is the growing role of middle-income countries as not only recipients, but also providers of development co-operation. The second is the increased attention to principles of effective aid, in response to the criticism that decades of aid have not led to the desired results of sustainable economic growth and poverty reduction. The limited health care budget, chronic shortage of health care workers and lack of incentives to retain those in remote areas further jeopardize the national health care delivery system. Recently, the application of ICT to health care delivery and the use of telemedicine have raised hopes in some developing countries.

The Revolution of Information Technology

There has been a tremendous growth in the IT sector of medical education. IT has substantial impact on reforming medical education from traditional lecture to more student-centered education.2,5,6 The use of computers and laptops can make it easier for both teachers and students: for delivering lectures, developing projects, reading different papers related to same topic, browsing multiple books and journals, and importantly, keeping them updated. By the mid-1990s, IT was revolutionized with the evolution of the Internet as a global connectivity tool. The emergence of the World Wide Web (WWW) helped individuals by enhancing their creativity, communication and learning process.

The biggest benefit of IT in the healthcare area is to facilitate making medical knowledge accessible to everyone. Patients can now use ICT to better understand their medical conditions, share information with other people, and communicate with physicians. They may learn about important information related to diagnostic methods, results of laboratory reports, and medico-legal lawsuits. Computer technology has helped to carry out large research projects and multicenter trials. ICT provides methods to gather, store and retrieve data, performing statistical analysis, and individualizing the medical education. ICT also opened the gate for distant learning and practicing, and virtual simulators.

Students and teachers in underdeveloped countries can use ICT to acquire and update their information and knowledge. ICT in the developing world has the potential to provide telemedicine and concept of simulation.3 With these aids, physicians can gain knowledge and skills and be better prepared to serve.

Examples from All Over the World

It is difficult to build health information infrastructure in the developing world, but substantial progress is being made. Examples of significant efforts are:

- River Blindness Eradication Project: The World Health Organization (WHO) has been implementing a program to eliminate the Onchoscerchiasis (River Blindness) vector from the low elevation river valleys of West Africa. Now the Black Fly vector is under control partly as a result of the use of health informatics and space-based remote sensing.
- COPINE Telemedicine: The COPINE Telemedicine project of WHO and the European Space Agency has developed a strategic plan for delivering telemedicine to eleven countries in Africa.
- Zimbabwe Healthnet Surveillance: A 9600 baud Internet-based health surveillance data reporting system that aggregates nation-wide population data in two-week cycles, which is timelier than found in several developed nations.
- Malaysia Tele Health: This project has proposed to use advanced health information systems to create community health knowledge bases and to provide health information directly to the consumer.
- Saudi Arabia and Kuwait: Nations like Saudi Arabia and Kuwait are experimenting with telemedicine and building out national health information systems within and around their hospital facilities.
- Ethiopia: Ethiopia has undertaken an extensive reform and re-design of health information and monitoring systems (HMIS) introduced in six of Ethiopia's nine regions in 2008.
- Medical Education Partnership Initiative (MEPI) in Ethiopia: A consortium project that has made substantial steps towards improving quality of medical education by giving students access to a wide range of new textbooks and will soon allow them to enjoy Information Technology based learning resources such as a digital library.

Influences on the Triangular Partnership Program

The People to People (P2P) organization has used triangular partnership to initiate tele-medicine. That is, medical information is exchanged from one site to another via electronic communications to improve patients' health status. The tele-health program provides remote healthcare services via videoconferencing, virtual exchange portals, e-health systems, remote monitoring, e-mentoring, and continuing medical education. Through virtual delivery and development of online communities of practice, information can be accessed at any time and can be shared in perpetuity.

Ventures

Different well-known hospitals like Mayo Clinic, the Harvard Hospitals, and the Cleveland Clinic, among others are beginning to export health informatics (intense health services) into the southern hemisphere in the form of commercial ventures, such as:

- Informatics 2000 Initiative: The Inter-American Development Bank and the Pan American Health Organization have been assembling human resources from essentially all countries throughout the Latin American region and many from the Caribbean. A few health informatics projects have already received funding.

- Health Information Infrastructure (HII) Collaboratory for the Americas: An international collaborative work environment has be kicked off as an independent project in association with WHO and the Informatics 2000 Initiative to enhance the development of benchmarks and standards applicable within the Americas - with a special emphasis on Latin America and the Caribbean. The HII Collaborator proposes to assist in the development of national HII collaborating centers and model centers throughout the region.
- WorldPort 2000: The WorldPort 2000 project is aiming at producing complete air-liftable village solar electricity units with embedded computer kiosks, including cellular connectivity to the Internet featuring health information.

Ethiopia

Working in close collaborations with the Federal Ministry of Health and institutional partners such as the World Bank and others, P2P is helping to fill in the gaps and support the government's New Innovative Medical Education Initiative (NIMEI).

In October 2006, during the Infectious Diseases Society of America annual meeting in Toronto, Infectious Diseases physicians of Ethiopian-descent jointly established the Ethiopian Infectious Diseases Network (EIDN). The main focus of EIDN is to work and share the ideas related to infectious diseases and HIV/AIDS. There exists substantial lack of human resources to overcome this, so members of EIDN have been participating in a tele / video medicine training and case discussion. EIDN's work demonstrates the important role of ICT in this field. Also, with the help of ICT, most of this discussion related to HIV / Hepatitis is recorded and distributed to Ethiopian physicians who practice outside of Addis Ababa.

Triangular Partnership

The tremendous growth in the field of ICT has made possible to provide a large amount of easily-accessible information. With the help of ICT, P2P has created e-Library, providing access to materials related to health and medical education. E-Library also serves to archive materials virtually for the purposes of knowledge sharing and the promotion of learning. Some examples of online resources for virtual learning are:

- NextGenU.org: This is a e-Learning program with a focus in the health sciences, NextGenerationYou (NextGenU`s) in association with leading universities, professional societies, and government organizations like the U.S. CDC, World Bank, and World Health Organization, imparting highest quality of knowledge and give learners credit for this training. Founded in 2001, the first full course was launched in Emergency Medicine in March 2012 and initial data show that NextGenU's training may be comparable to American medical schooling.
- WorldPossible.org (RACHEL server): One step ahead, World Possible, a nonprofit organization, seeks to provide educational resources to communities lacking Internet access. World Possible's RACHEL server has started to distribute offline copies of the most useful education materials to communities that have computers but no Internet. These communities have access to a pseudo-Internet and are able to store both useful material and references. The vision is to make a literate and poverty free world possible by means of Education, Technology and Community Service.

- University of Pittsburgh SuperCourse: To improve teaching and provide a vast educational database related to global health and prevention, Supercourse, an e-Library, has been created by the WHO Collaborating Center at the University of Pittsburgh. Supercourse has a network of over 56,000 scientists in 174 countries who are sharing for free a library of 5264 lectures in 31 languages.
- Medical Aid Films (MAF): With the help of multimedia and ICT, training and education in some developing countries is being imparted through film. The main focus of these films (MAF) is to save the lives of vulnerable women and children. MAF provides film modules on topics including:
  - Cervical cancer
  - Basic Obstetric Ultrasound
  - Understanding Your Body
  - Nutrition
  - Obstetric & Neonatal Emergencies
  - Safe Delivery & Healthy Newborn Care
  - Child Delivery
  - Reproduction & Pregnancy
  - Breastfeeding
  - Post-Partem Hemorrhage

- USAID Global Health e-Learning: Another e-Learning site which provides current information related to global health topics. The Global Health eLearning Center also provides Internet-based courses that offers: 1) continuing education for health professionals; 2) technical content on key public health topics; and 3) practical resource related to public health knowledge.
- Blackboard: An education technology company dedicated to improving every aspect of the education experience for millions of learners and educators around the world. BlackBoard provides free software (for creation of up to five courses) and a paying version for online course development.
- African Health OER Network: Uses open educational resources (OER) to share knowledge, address curriculum gaps, and support communities around health education.
- MIT OpenCourseWare (OCW): A web-based publication of virtually all Massachusetts Institute of Technology (MIT) course content. OCW is open and available to the world and is a permanent MIT activity. MIT OpenCourseWare is a free publication of MIT course materials, including lecture notes, videos, exams, and more, that reflects almost all the undergraduate and graduate subjects taught at MIT.
- OpenStudy: A social learning network where students ask questions, give help, and connect with other students studying the same things. With the help of ICT, This noble mission for making the world one large study group, regardless of school, location, or background would be made possible soon in near future.

Another significant contribution through the utilization of ICT is making of E-Letters (the P2P Monthly E-Newsletter) and web sites, such as www.PeoplePeople.org. These resources help keep P2P supporters in the field of global health and better serve to share ones views, knowledge and experience by most effective way.

Barriers

There exist various barriers for the implementation and proper utilization of ICT in health care sectors, especially in developing countries. These include economic, structural, cultural, technical and professional barriers.

Economic barriers are most frequently encountered in these countries.10 There is at present a substantial lack of evidence on cost-benefit analysis of ICT in developing countries. In addition, huge investments are required to implement effective IT in areas where there is a high death rate due to lack of adequate food and shelter.

Structural barriers mainly depend upon the country in which IT is going to be set up. In addition, requirements of a local region affect the need and type of IT implementation. In developing countries, various organizations may be involved, such as local government, private national and international companies, national government and other international organizations. There is often a lack of good coordination among such a variety of organizations. Other structural barriers include:

- IT in the health sector requires an understanding of local needs. This mandates the international organizations to conduct research on local factors before implementation.
- Another potential problem is a lack of standardization and certification for health IT systems. A contributing factor to the delayed standard adoption is the lack of incentive for data exchange between and among providers as well as between providers and payers.
- Regulations relating to healthcare data, privacy and confidentiality are also often barriers to health IT as they may restrict the sharing of patient data among providers while also protecting important personal information.

Cultural barriers may have substantial impact on the success or failure of implementation of ICT in healthcare. For example:

- Some clinicians find system usage can be time-consuming and delay clinical diagnosis or management of the patient.
- Other clinicians overburdened with patients may not have the proper time to make use of helpful ICT tools.
- Simple incorporation of IT in healthcare sector is not a sufficient solution. IT should be easy to use, informative, and less time-consuming than alternatives.
- IT must not interfere with clinicians' rapport with their patient.
- It can be difficult to alter the long-standing local practices of some clinicians who may resist using new IT tools.

Technical and professional obstacles will be lowered with proper coordination, awareness of technologies being implemented, proper knowledge among clinicians as well as administrators of both equipments and their usages, training in biomedical informatics, and a strategic organizational process.8,9

View to the Future

Triangular partnership is helping to implement ICT in various healthcare sectors. Now, there is need for extensive research on ICT effectiveness as well as cost-benefit analysis in the developing countries in which IT has been incorporated. There should be provision for annual audits, data storage, record keeping, and proper maintenance

protocols. The incorporation of IT in healthcare sectors requires proper understanding and training in these new technologies.

Conclusion

The role of ICT has been validated in developed countries; however, the utility is ICT has yet to be proved in the underdeveloped world. There are various modalities of ICT being incorporated, including: computers, the Internet, e-Learning, telemedicine, telehealth, e-library, patient and disease databases. In this regard, triangular partnership can provide vision, a master plan, implementation methods, economic support, and human resources for the proper incorporation and utilization of ICT in these areas. The tremendous efforts by TP are appreciable in this regard. However, ICT in developing countries is in its infancy. Triangular partnership can nurture ICT by making strong efforts to implement more training to medical professionals, conducting research and audits, and involving more professionals, countries and organizations.

Bibliography

1. Goldschmidt AJW, Josef H (2009) Health economy in Germany – Economical field of the future. Wikom Publishing House, Wegscheid, Germany, p 22.
2. Aronson B (2004) Improving online access to medical information for low-income countries. N Engl J Med; 350, pp 966-968.
3. Belachew DA, Zebenigus M, Schaller B, Guta Z (2008) Neurology training and practice in Ethiopia. Sudanese J Public Health, 3, pp. 50–60.
4. Bharati SJ, Chowdhury T, Cappellani R, Schaller B, Chowdhury M, Maguire D (2013) Anesthesia in developing countries; present scenario and future challenges. Submitted for publication.
5. Schaller B, Sandu N (2011) Clinical medicine, publich health and ecological health: A new basis for education and prevention? Arch Med Sci, 7, pp. 541-5.
6. Schaller B (2007) Medical education and the Bologna Process. Arch Med Sci, 3, pp. 3–4.
7. Schaller B (2003) Educational attainment and risk of stroke and myocardial infarction. Med Sci Monit, 9, LE27.
8. Tomasi E, Faccini LA, de Fatima Santos Maia M (2004) Health information technology in primary health care in developing countries: a literature review. Bulletin of the World Health Organization, 82; pp 867-874.
9. Waters-Bayer A, Tostensen A, Gebre-Michael Y (2005) Review of the Norwegian development fund portfolio in Ethiopia. CMI Report R, 16, pp 77.
10. Schaller B (2012) Scientific work and problem-solving in health care management: a way for the practitioner? Arch Med Sci, 8, pp. 817-8.

Ethiopian Diaspora: a Missed Opportunity?

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Introduction

Diasporic populations are becoming increasingly important in a globalizing world where migration is commonplace. Ethiopian migration that began in the wake of the 1974 revolution is almost four decades old and has acquired some measure of autonomy: living abroad nowadays is desired by a growing number of citizens of this country. This has led to diversification both in terms of social groups from which Ethiopian migrants are recruited and in terms of countries of destination. Among the developed countries, the United States by far attracts the largest number of the Ethiopian migrants, although they are in almost every country of the world.

Despite its rapid development, Ethiopian migration has generated very little research in either Ethiopia or the host countries (Tasse Abye: 2004, 2007, Elizabeth Chacko: 2003, Getahun Solomon Addis : 2007). Whilst there is a paucity of scientific research devoted to Ethiopian migration, the reverse case holds for media providing information and opinions on the subject. Moreover, there is a growing interest within the Ethiopian government about its nationals living in other countries. The government has not only legislated on several issues related to its diaspora (the most recent being Diaspora Policy, a document resealed by the Governement in December 2012) but has also,

in recent years, created a directorate dedicated to diaspora affairs at the Ministry of Foreign Affaires and appointed officers in charge of overseeing the Ethiopian Diaspora community in almost all Ethiopian embassies.

In the absence of a large programme of study, the analysis presented here focuses only on a relatively limited scope within the field of Ethiopian migration studies. The central question that this paper explores relates to the level and modalities of Ethiopian migrants' involvement in development projects in Ethiopia and particularly the development of higher education:

- Can Ethiopian migrants' areas of knowledge, capacities, resources and networks be tapped by Ethiopia for the development and expansion of quality higher education?
- What analysis and evaluation can be drawn from the past engagement of the Ethiopian Diaspora in Ethiopian higher education affairs?
- What are the salient issues and problems for harnessing the capabilities of the Diaspora in this field?
- What are the optimal conditions that could contribute to a strengthened collaboration between the Diaspora community and the national higher education and research institutions?

This chapter will attempt to develop a better understanding of the issues at hand in order to unpack the notion of brain drain in the Ethiopian context and will examine the relationship between the knowledge and skills possessed by the Ethiopia Diaspora and unmet human resource needs in the country. We will also explore the concept of brain gain and evaluate some experiences of supportive relationships in which migrants have engaged or are still engaged with institutions in their country of origin.

Ethiopian Migration: An Under-Studied Phenomenon

During this research, I consulted available sources on Ethiopian migration ranging from the World Bank to Ethiopian embassies, primarily in the USA and France. I also reviewed the few academic publications on the issue. This review revealed that the current research on Ethiopian migration has few reliable and consolidated sources of data regarding the extent of emigration from Ethiopia and the sociological characteristics of the migrants. Additionally, our appraisal of data published in various magazines and newspapers revealed that these publications rarely cited specific sources. Although they may be informative on some issues, the data published remain vague and must be considered with caution. Moreover, figures regarding the Ethiopian migrants advanced by various international institutions differ significantly and remain largely fragmented. The World Bank (2011) provides the most recent estimate of the total emigration of Ethiopians. It reports the total number of Ethiopian migrants in 2010 as 620,100. The U.S. Census Bureau (2010) informs us that 225,112 identified-Ethiopians lived in the United States in 2010, representing a little less than a third of the number announced by the World Bank. Interestingly, a recent undated report by the Ethiopian Embassy (2010) in the United States estimates Ethiopian migrants in the U.S. at 250,000.

Comparisons between different sources are difficult. The discrepancies among publications are wide because results depend on how data is collected, when it is collected, and the criteria used. For example:

- The Organization for Economic Co-operation and Development (OECD) estimates the total number of Ethiopian migrants in OECD countries in 2005 as 146,000 with only 46,000 in the U.S. (Sonja and Katie Fransen Kuschminder, 2009: 20)

- The U.S. census indicates 91,714 persons of Ethiopian origin obtained legal status in the United States from 1970 to 2005. This is almost double the OECD's estimate (Yearly Immigrant Statistics Book: 2005).

Part of the difference can be explained by the number of migrants of Ethiopian origin who acquired American citizenship after obtaining legal status in the United States: 88,716 did so between 1987 and 2011 (U.S. Census Bureau, 2011). Meanwhile, the OECD is concerned only with those holding legal status as migrants. Additionally, these institutions do not record a growing number of migrants who are living in different countries without legal residence permits.

Interestingly, according to S.A Getahun, quoted by Lyons, if the "second and third generation" were recorded, the number of persons of Ethiopian origin residing in the United States would be approximately 460,000 (Lyons: 2007). However, the notion of "second and third generation" migrants is a difficult one to take into consideration. To be born into a migrant family may not make a person a migrant.

Estimates by migrant associations in the U.S. that circulate within the Ethiopian community in Northern America and in the country of origin about Ethiopian citizens living in the United States are often as high as a million individuals.

Thus, for multiple reasons, official data seem to underestimate the number of Ethiopian migrants. In contrast, newspapers in Ethiopia, migrant associations, and the views of the general population1 tend to over-estimate the presence of Ethiopians in different parts of the world, particularly in the United States. For all these reasons more in-depth and systematic research is necessary to establish actual trends.

Migration of Highly Qualified Ethiopians: a Fragmented Data

In line with the fragmentation of data on the total stock of migrants from Ethiopia, the number of skilled Ethiopian migrants is difficult to estimate. For example:

- The World Bank provides an estimate of qualified persons as a percentage of the total migrant population, while the U.S. Census Bureau provides information for only those aged 25 and older.
- The World Bank estimates the number of migrants of Ethiopian origin with qualifications equal to or higher than the level of bachelor degree for the year 2010 to be 10% of the total migrant population of 620,100 individuals. Thus, this institution estimates approximately 62,001 Ethiopian migrants to be highly qualified.
- Moreover, while the World Bank includes only the share of migrants trained in the country of origin, the U.S. census, as well as the Canadian Census, provide figures for all qualified persons regardless of the countries where skills were acquired.

2010 data from the U.S. Census Bureau says that the total immigrant population aged twenty-five and older is 120,175. Those holding bachelor degrees or higher for this age group is estimated to be 24%, that is to say, about 28,223 individuals. Confirming the hypothesis developed in 2004 (Abye: 2004) in terms of trends, the comparison between the censuses of 1990 and 2010 indicates a decline in the share of those with the highest qualifications among migrants to the United States. While the absolute number of Ethiopian migrants grew dramatically between

1990 and 2010, the share of those with a qualification equal to or higher than the bachelor degree decreased from 29.5% in 1990 to 24% in 2010. This marks a drop of six points in twenty years.

In Canada, among the 23,405 migrants of Ethiopian origin, there are 13,055 aged twenty-five and older. In this group, 2,10O (nearly 17%) hold qualifications equal to or above the bachelor degree. However, the distribution of persons by level of qualification shows that the vast majority of qualified persons hold a bachelor degree or equivalent. Indeed, it should be noted that in Canada, the most common degree that Ethiopian migrants hold is the bachelors degree (1,295) followed by those holding a masters degree (560), intermediary university degrees (145) and doctoral degree (125). Eighty Ethiopian migrants hold professional degrees such as physician, dentist, etc. As in the Canadian census, the United States offers detailed information with regard to the level of education of persons of Ethiopian origin. Indeed, as in Canada, those with the bachelor's degree are the majority of qualified migrants in the U.S.

Finally, Abdeslam Marfouk estimates the number of Ethiopian migrants aged twenty-five years and older living in OECD countries to be 105,632 individuals. This information is based on data collected by Docquier and Marfouk in 2006. According to the author, there are around 51,392 highly qualified migrants, thus Ethiopia ranks eighth among African countries providing qualified migrants to OECD. These data increase the percentage of qualified migrants of Ethiopian origin by close to 50% compared to the data available at the World Bank (Abdeslam Marfouk, 2008: 11).

Whatever the sources of information analyzed, it appears that the proportion of qualified migrants of Ethiopian origin settled in the OECD countries, and particularly in the United States and in Canada, has increased remarkably in absolute numbers. While the absolute number of migrants from Ethiopia has increased, it seems a corresponding decline of the proportion of those highly skilled is observable throughout the past twenty years. This analysis, based on fragmentary empirical evidence and limited to the Ethiopian migration, contradicts the generally accepted idea of a continuous increase of the share of skilled immigrants from Africa to the United States and Canada, or as Abdeslam Marfouk reports, the share of highly qualified Ethiopian migrants in OECD countries.

Higher Education and Research in Ethiopia: A Sector Affected by a Brain Drain or Benefiting From a Brain Gain?

In the case of Ethiopia, we can write with some level of certainty that all economic sectors lack highly-qualified personnel. Although as a proportion of the population, Ethiopian migration is modest (less than 2%), the share with a high level of qualification and training is significant. While the gross enrollment rate at the upper secondary level of the same age cohort in Ethiopia was 8.1% in 2010 and 2011, 83% of those migrating to the United States and Canada hold a diploma from secondary-school or higher. Using the concepts of brain drain and brain gain and focusing on higher education this chapter will illustrate how skilled migration affects Ethiopia.

Ethiopian migration: brain drain or brain gain?

The concept of brain drain describes the departure of qualified human resources from a given country and its installation in another destination. This approach appeared in 1960 and continues to be fueled by various debates. Argu-

ments since the 1960s highlight the sense of lost skills and resources from less developed countries in favor of those more developed. However, contradicting these views, others argue that the departure of skilled individuals from these countries is far from being negative in that it produces positive consequences in favor of the least developed countries - a brain gain. These concepts are so loaded with ideological positions that Dilip Ratha (2011:142) proposes to use the notion of "departure of higly skilled, qualified people" that he considers neutral. The discourse of brain drain is used to trace the difficulties associated with the migration of high numbers of skilled migrants en route to the western countries. However, in the case of Ethiopian migration, it seems important to quantify the extent of emigration of the highly-skilled and to clarify how a highly-qualified migrant is defined. The terms of the debate on these issues are made difficult because they cover very different realities.

The notion of highly-qualified has been, and still is defined so broadly that it is difficult to make comparisons. An academic, a general practitioner physician, a fresh computer science graduate, a nurse, a lawyer with an international reputation, a senior official with extensive experience in the affairs of the state, in short, all those who at one time or another attended an institution of higher education, with or without professional experience, are included in the current literature on the topic of brain drain. Barro's and Lee's (Matthew Boussihas, 2001: 3), proposal goes even further by considering all those with more than twelve years' education (high school graduation equivalent) as highly-qualified individuals. This relatively broad definition of brain drain is almost systematically applied in the case of migrants leaving countries categorized as least developed. While in the case of migrants from other countries, especially those of European origin, for example, the debate on the brain drain seems to involve a very high level of qualification of individuals. A recent study by the Montaigne Institute is very informative on this point of view. Ioanna Kohler (2010) reports that whatever field of activity, the central argument is that those who migrate to the United States from France are overwhelmingly among the most prolific researchers, the most talented artists, and so on. This differentiation of appreciation of what is to be classified as a brain drain therefore requires a contextualized definition. It seems then that highly-qualified is defined in relation to the level of development of each country, especially in the development of human capital. The interest of the Montainge Institute is to focus on those that are possible Nobel Prize winners: those engaged in major research initiatives that affect important discoveries and may have major scientific and economic implications. At the other end, for the least-developed countries, all groups of individuals with a qualification level equal to or above the bachelor degree are most often considered in the analysis of brain drain.

Moreover, a review of the literature shows that in order to illustrate their position proponents of brain drain use "objective realities" that are at times difficult to verify, and in total contradiction to empirical evidence. While a migration of highly skilled individals leaving Africa and particularly Ethiopia is obvious, we note in several discourses and political declarations, journalistic writings, and some academic publications, a tendency to use data without a rigourous analysis of the accuracy of sources. It is as if there is a need to advance very high numbers of skilled migrants en route to western countries to justify the difficulties associated with brain drain for least developed countries.

The most striking example in the case of Ethiopia is probably the references to "Ethiopian physicians working in Chicago, which outnumber those found in Ethiopia" (IOM 2005: 173, Glenys Kinnock, Co-President of the Joint Parliamentary Assembly of the European Union –EU- and the African, Caribbean, and Pacific Countries -ACP-, 2005: 1). Truly, a significant number of highly skilled health professionals left Ethiopia to go to western countries.

However, the fact remains that the figures provided by the reports mentioned earlier are far from reality. For the information contained in the International Organization for Migration (IOM) report and quoted repeatedly to be valid, the number of doctors of Ethiopian origin serving in Chicago should be higher than at least 2000. We calculated this number based on data on medical doctors trained and working in Ethiopia. For example, Berhan (2008: 77) informs us that, "Since the creation of the first medical school in 1964 and up to 2006, the three (medical) training institutions (University of Addis Ababa, Jimma University and Gondar Univesity) awarded a total of 3,728 degrees of Doctor of Medicine." To determine the total number of those trained as medical doctors in Ethiopia, one should add to this figure those Ethiopians who graduated in medicine from foreign universities. Albeit very low, the World Bank estimates the total number of doctors trained in Ethiopia and practicing outside of their country of origin to be between 478 and 553. Trying to obtain accuarate information about the number of physicians present in the United States and particularly in Chicago, we analyzed the data provided by the Ethiopian Embassy in Washington and People to People (P2P), an association consisting of a great number of medical doctors of Ethiopian origin in the United States. The number of doctors registered by the databases of these two structures, even if they do not record all physicians in the United States, or even just those located in Chicago, indicate around 300 individuals for the entire U.S. territory. These two databases list six Ethiopian doctors working in the city of Chicago and its environment. Thanks to Dr. Kinfe Guebeyehu, a pediatrician practicing in Chicago and living there for more than three decades2, we know that there are less that twenty medical doctors and internists of Ethiopian origin in this city. In considering the number of medical doctors practicing in Chicago compared to those present in Ethiopia, data produced both by the Ethiopian Health Ministry and by the World Health Organization should also be reviewed. Statistics from the Ministry of Health informs that for 2010 to 2011, the ministry employed 1,427 physicians (MFOH and RHB's: 2010/2011). It is important to include both the doctors working at the Ministry of Health and those who have private practices, a rapidly developing phenomenon in the country. Alternative figures from the World Health Organization (WHO) indicate that the number of physicians practicing in Ethiopia in 2009 was 2,154 (WHO 2010). These data suggest that the number of doctors of Ethiopian origin practicing in Chicago is highly exaggerated.

Furthermore, a prudent estimate of the total number of physicians of Ethiopian origin in the United States, according to the president of the association P2P, Dr. Mehari Enawgaw, is a maximum of 1,000. Probably the suggestion of Mohamed A. El-Khawas, "There are more Ethiopians ... doctors in Europe and North America," and we will add the rest of the world, "than there are in the country of origin" (Mohamed El-Khawas 2004: 46), also not evidenced, may be closer to the reality. Our own estimate is that approximately one fourth of medical doctors of Ethiopian origin work outside the country.

Whatever the exact numbers, the negative impact of brain drain on the health systems of countries from the south, particularly in the case of doctors from Ethiopia, is dire. There is no need for exaggeration. About a fourth of the Ethiopian-trained physicians are working abroad. For a country of over ninety million inhabitants with less than four thousand doctors is a major disaster.

In contrast to the approach of the brain drain, proponents of the benefits of migration of skilled human resources for sending countries often emphasize the advantages of remittances. This claim has to be treated with caution. Research does not demonstrate unequivocally that the level of remittence of skilled migrants is more important than that of

medium or non-skilled. Rather, it suggests that remittances from Ethiopian migrants to their country of origin are inversely proportional to their skill level. The more skilled the migrants, the less likely they are to send back home a significant portion of their income. This conclusion, based on interviews conducted by the author, needs to be tested with further systematic research. The Ethiopian Central Bank's figures on remittances do not distinguish those sent by migrants from other forms of currency inflows, such as those from companies or foreign institutions. Nor does the available data provide information on the sociological background of those migrants sending remittances.

Reinforcing the positive aspects of highly qualified migration for the country of origin, recent studies seem to suggest that the skilled migration, in addition to the remitting, produce beneficial effects for the society at home. Among these supposed-benefits defended by this analysis, two areas are emphasized. The first is enthusiasm for education created by the existence of skilled migration. The second highlights contributions of skilled migrants to the transfer of knowledge and skills through multiple networks.

The first hypothesis is that a greater commitment to education would be a result of the existence of highly skilled migration, the "Brain Gain à la Stark," as termed by Boussihas Matthew (2011: 1) relies heavily on data produced by Carrington and Detragiache (1998). However, while this approach is undoubtedly interesting and true for some countries (Frédéric Docquier and Abdeslam Marfouk, 2006; UNDP, 2007), it does not seem supported in the case of Ethiopia. Indeed, it is impossible to make any relationship between the level of access to education in Ethiopia and increased migration of the highly-skilled. For this approach to be valid, it would have to demonstrate on one hand, the existence of a range of in-country training institutions under-utilized prior to the migration of skilled personnel and, on another hand, an increase in enrollment in the education system since.

Ethiopian history shows that the very low level of enrollment in the past was more a result of a significant underdevelopment of the educational system, rather than people choosing not to send their children to school. To illustrate this point, let us focus on the example of higher education. Ethiopia did not have the capacity to train more than 15,000 students until about twelve years ago. At present, over 450,000 students are in educational institutions. In Ethiopia, access to education is tied to political choices about investment and development in education rather than from the departure of qualified human resources. Moreover, it seems that migration of the highly-skilled undermines development. In Ethiopia, for more than four decades there was only one public university, compared to the thirty-one public and sixty private institutions of higher education available at present. There is no demonstrated relationship between the migration of skilled Ethiopians and the larger student enrollment in Ethiopian universities. Larger enrollment seems to be associated with having more universities.

Another benefit claimed by the proponents of brain gain is the links migrants maintain to their country of origin and their significant contributions to the development of local institutions, including those of higher learning and research. Countries often cited as having benefited from their diaspora include: China, India (R. Barré et al, 2003). The literature for Africa is limited (Richard Black, Richmond Tiemoko, 2003, Abdoulaye Gueye, 2010), making it difficult to determine the level of contributions needed from qualified migrants to compensate for their loss to their home country.

Another set of data to be taken into account is the profound transformation of the training system in Ethiopia over the last decade. It should be remembered that the rate of access to higher education, as noted above, was for a long

time less than 1%. This was one of the lowest rates in the world, very low even by the standard of Sub-Saharan Africa. The creation of thirty new pubic institutions of higher learning and another set of private higher education establishments during the past decade has enabled unprecedented student enrollment. The number has increased by more than ten-fold in less than ten years. During the academic year 2010 to 2011, all Ethiopian institutions of higher education registered more than 467,843 students. Compare this to an enrollment of less than 15,000 in the mid-1990s.

Although it is difficult to compare migration data to the number of recent graduates in the country, in order to illustrate our argument, we report here the number of graduates during the past five years and those of qualified migrants of Ethiopian origin in the United States and Canada. The total migrants living in these two countries for over four decades and holding at least a bachelor degree is comparable to less than 10% of graduates in Ethiopia during only the last three years (2010-2013). Their share would be much less if we added those who obtained their degree during the last four decades. A prospective analysis of the next five years, based on enrollment data indicates that the proportion of bachelor degree graduates in Ethiopia will be significantly higher.

At this point, we want to stress two observations. The first is an already-reported trend: decreasing numbers of Ethiopians with important qualifications among migrants to the U.S. and Canada. The second is the unprecedented growth of graduates in Ethiopia. The number of skilled migrants of Ethiopian-origin living in the two western countries is small in comparison with the skilled workforce of Ethiopia. The decrease in migration of the highly-skilled, combined with the growing number of bachelor degree graduates together means a rapidly-growing educational level in Ethiopia; however, this issue may be evaluated differently.

First, a deconstruction of the data by educational level shows that Ethiopian higher education institutions produce a significant number of bachelor degree graduates, while the share of those with post-graduate degrees from the Ethiopian higher education system has not grown at the same rate. This is very clear when it comes to persons holding final or PhD qualifications. Indeed, according to the Ethiopian Ministry of Education, all doctoral candidates, in all disciplines registered for the year 2010 to 2011 totaled 789. The second indicator is the number of graduates with a doctorate from Ethiopian universities. For the academic year 2012-2013, only hundred four were awarded the terminal degree. It should be noted that the number of graduates at the doctoral level was higher by far in the academic year 2012 to 2013 than in previous years. They were only Twenty-one graduates with a terminal degree in the year 2010-2011.

Finally, among the 15,192 Ethiopian academics and researchers working in its thirty-one public institutions of higher learning, only 979 hold doctoral level qualifications. The University of Addis Ababa, the oldest and probably the most important, has 451 PhD holders, representing 46% of the total of PhD holders in the country's higher education institutions. However, at Addis Ababa University, the best-endowed in terms of qualified academic staff, PhD holders represent only 27% of the total academic staff. This percentage includes expatriates working in the institution.

For the remaining twenty-four institutions, the distribution of PhD holders among the academic staff seems to be related to the number of years the institution has been in existence. All new universities have between zero and three PhDs, eight universities which have been in existence at least nine years have between thirteen and thirty-five PhD

holders, four institutions can claim between fifty-one and sixty-seven, and finally, one has 102 academic staff with this level of education (FMoE, 2010/2011).

From the perspective of qualified academics and researchers, it is not an exaggeration to say that Ethiopian universities are now in a desperate situation. In fact, it should be mentioned that 43% of university instructors hold a bachelor degree (6,477) and 43% hold a masters degree (6634) (FMoE, 2010/2011).

Attempting to compensate for the lack of doctorally trained personnel, the Ethiopian government has recruited 631 expatriate instructors and researchers, primarily from India, to add to its stock of 6,477 bachelor and 6,634 masters degree holders from Ethiopia (FMoE, 2010/2011) . Of the Indian instructors and researchers 321 hold PhDs, seventy-one hold doctorates in medicine and veterinary medicine, and 224 hold Masters degrees . On another hand, our own estimate shows that about 1,600 migrants of Ethiopian origin living in the United States and Canada hold PhDs. This data is likely to be an underestimate and excludes doctoral-qualified migrants living in other countries. These figures indicate that Ethiopian higher education suffers from the departure of highly-skilled migrants, especially from their non-return after training.

In this research we tried to identify the holders of doctorate degreed as well as instructors and researchers working outside Ethiopia. Despite several days searching through various databases, including sites of several universities in multiple countries, it was not possible to locate all instructors and researchers of Ethiopian origin working abroad. Several universities rarely, if ever, provide the list of graduates from their institutions by national origin or country of birth. Except for our own knowledge of the academic field, the only organized information available is that structured by Professor Eyassu Woldesenbet and a list established by the Ethiopian Embassy in Washington. These two lists provide similar information. However, while the list proposed by Professor Eyassu Woldesenbet includes individuals holding teaching or research positions not only in the U.S. but also in other countries and includes names of some academics working in Ethiopian Universities, the information gathered by the Ethiopian Embassy in Washington is specifically of those residing in the U.S. These two lists identify about eighty people in various American universities. Trying to go further in the research, we used keywords such as: Academic Staff of Ethiopian origin, Academic staff/researcher born in Ethiopia, lectures on topics related to Ethiopia, scientific publications including the term Ethiopia to identify individuals working in educational and research institutions in the United States and Canada. It was possible to identify 198 academic staff and or researchers of Ethiopian origin (one hundred twenty more than those identified in both lists) working in one hundred and fifty seven universities and research centers, and among them one hundred and forty eight working in the United States.

Although this list is not representative but indicative, it is interesting to note that seventy-two persons among those identified have the rank of full professor, fifty-four are associate professors, eight senior researchers and finally sixty-four with the rank of assistant professor. Although the majority of academics that we have located are instructors and researchers in disciplines of hard sciences (in physics, mathematics, engineering sciences and biology, medical science, and agriculture), the social sciences and humanities are also well represented.

These very limited data do not provide a complete picture. However, they indicate the global trends that inform our approach. The loss by the Ethiopian higher education system is not due only to the quantity of PhD holders, but more importantly includes the qualitative aspect of those working in the various institutions abroad. The multiple

research and teaching experiences acquired by academics of Ethiopian origin, occupying leading academic positions in the American university system is an important example. Indeed, as mentioned above, a third has the rank of full-professor. It should be noted that the requirements for acquiring a full professor position in terms of quality and quantity of scientific publications, as well as the capacity and ability in teaching and service rendered to the community at large, are significantly different in American universities, particularly in those prominent teaching and research institutions, compared to Ethiopian universities.

This information provides us enough evidence to posit a hypothesis that a significant proportion of talented academics and senior researchers are lost to the Ethiopian universities, thus depriving the country of their much-needed scientific contributions. It is interesting to note that until 2005, only thirty-two faculty members had the rank of full professor in the entire system of higher education in Ethiopia. Many reasons and problems can be invoked to explain this fact, including: the priority given by universities to teaching assignments, the relatively-marginal research organizations available, the scarcity of resources to conduct research, and finally the very limited access to international networks.

Despite the presence of excellent academics with significant research potential, in 2011 the number of Ethiopians holding the rank of full professor in the twenty-five educational and research institutions was approximately sixty-five. According to the document published in the academic year 2010 to 2011 by the Office of the Vice President for Academic Affairs at the University of Addis Ababa, only fifty-four Ethiopians claimed this rank, compared to thirty-six expatriates. Taking into account only the limited data that we gathered, there about the same number of Ethiopians with the rank of full professor in Ethiopian universities as those in universities outside the country. Further study in this is needed. For example, a comparison of the number of publications, patents, and inventions produced by scientific researchers in Ethiopia and those of Ethiopian origin working in foreign universities could probably give more information at a global level. However, we are aware that this type of comparison quickly finds methodological limitations. Comparisons in this area should not only take into account the quantity and quality of scientific publications but also focus on the conditions under which research is produced.

A Brief Attempt to Evaluate Highly Qualified Migrants Contribution to Ethiopian Higher Education Development

Migrants' initiatives for skills transfer and support for institutions in their countries of origin are numerous, although an exhaustive assessment is lacking. Thus, the data offered below is illustrative of important developments.

The association Ethiopian Scientific Society (ESS) is an early example of the many initiatives during the last twenty years. The association was created in the early 1990s by a group of researchers and academics in scientific fields of study in the United States. Members and founders of the ESS are high-level scientists working in areas of high technology, engineering and physics who have pioneered paths in prestigious U.S. institutions such as the National Science Foundation (NSA), the National Aeronautics and Space Administration (NASA), and internationally renowned universities. They have organized seminars and symposia on advanced technologies for policy makers, Ethiopian experts, and those interested in Ethiopia. Their objective is the transfer of technologies to Ethiopia and the desire to encourage vocations in science (Abye 2004).

This association created special awards to encourage excellence among students at Addis Ababa University. ESS has during its short but active life brought together people of very high caliber based on the principle of selectivity and elitism; however, it has never tried to expand the number of its members. The association has not been active at the University of Addis Ababa or in the emerging new universities for more than ten years and does not seem functional at present. To our knowledge, there are no specific reports available that give the opportunity to analyze this innovative experience and to understand the challenges ESS faced or the its impact on the higher education system and research in Ethiopia. However, two or three former ESS members still relate, albeit episodically, with the various departments of the University of Addis Ababa and in rare opportunities with the emerging universities. Some former members of the association show consistency, tenacity and willingness to bring their inexhaustible support to the teaching and research system in Ethiopia whenever opportunities arise.

Another initiative is the Association for the Development of Higher Education (AHEAD) created in 1999 by Ethiopian-Canadians living in Ottawa and Ontario. It positioned itself as a support system to Ethiopian higher education using a development perspective. Unlike the ESS, it was not formed only by a few personalities from the scientific community, although it contains a number of them, but mainly by individuals from other professions. It is ambitious and seeks "to contribute to development efforts in Ethiopia by mobilizing, coordinating, and transferring the necessary resources and expertise relevant to the academic institutions of higher education." Moreover, its specific objectives include the following:

- Assisting capacity building endeavours in Addis Ababa University and supporting academic needs in terms of infrastructure and resources;
- Mobilizing the Ethiopian diaspora and facilitating its contribution to development programs in academic institutions in Ethiopia;
- Facilitating partnerships between academic institutions and the Ethiopian government, non-governmental, and international organizations.

AHEAD is a volunteer organization with energy and conviction. Since its inception, it has organized activities for various components of the university community in Ethiopia, but the results belie its ambitious goals. AHEAD has collected from various libraries of higher education and health institutions in Canada and sent 1,000 books and assisted eighteen students through scholarships. Although highly dedicated, the association does not seem to have at this point the capacity to assist institutions of higher education or to provide substantial aid for developing academic skills, infrastructure or resources.

Another promising initiative is to build a center of excellence on water studies in Ethiopia. A professor of Ethiopian origin at the University of Connecticut developed this powerful project to take advantage of the African American Universities Partnership (AAUP). AAUP funds programs between the U.S. and Africa through the U.S. Agency for International Development (USAID). AAUP is built around a structured partnership between three Ethiopian universities (the University of Addis Ababa, Mekele University and the University of Arba Mich) and the University of Connecticut. The strong motivation of the professor who mobilized and convinced his colleagues at the University of Connecticut to invest in the preparation phase made this program possible. The project was selected among many international competitors and is contracted through the Association of Land Grant Universities and Colleges. The project uses its funding as a stepping-stone to mobilize more funds and resources from private companies in the

United States. While it is too early to make an analysis of its impact and sustainability, there appear to be significant achievements.

An important marker of the contributions of Ethiopian Diaspora academics is their participation in the development of PhD programs at Addis Ababa University. The University of Addis Ababa needed the support of a set of external actors, including universities around the world, national decision makers, social and economic actors as well as bilateral and multilateral donors agencies, to create a strategic plan aimed at developing graduate eduction. An international conference to launch the project was organized in June 2008, with 750 people participating. Among active participants in this conference were more than thirty scholars of Ethiopian origin living in the United States and in Europe. Some of these scholars not only participated individually but also convinced their universities and colleagues to take part. Participants in the conference supported the university afterwards in organizing research seminars, sending valuable books for doctoral students, and linking with overseas research laboratories and institutions. Finally, in addition to intensive teaching, some members of the diaspora helped supervise graduate research students at Addis Ababa University.

The People to People (P2P) is an effective organization in terms of its commitment and contribution to higher education in Ethiopia. That the publication of this chapter results from an initiative of P2P demonstrates the engagement of the association and of its members with the idea of the brain gain approach. P2P was created by Dr. Mehari Enawgaw and a handful of volunteers in 1999. P2P is now positioned as a global network and claims more than 5,000 members worldwide. It is legally registered as an independent organization in the U.S. and Canada and has members in Finland, Great Britain, Sweden and Switzerland as well as representatives in other countries. Currently, P2P has three offices, two in the United States (in Kentucky and Maryland) and one in Ethiopia working in the field of health.

Directed and managed mainly by Ethiopian doctors practicing in the U.S. (twenty-one out of twenty-eight members of the P2P Board are physicians), P2P is the initiator of many projects including some connected to teaching in the health disciplines. To consolidate and affirm its commitment to medical education, P2P has recently created the position of Vice-President of Medical Education, which is held by a highly qualified and respected researcher and practitioner of Ethiopian origin working in the U.S. Moreover, the association has moved to mobilize the Ethiopian diaspora. In an interview with its President, Dr. Enawgaw mentioned that "P2P is strongly oriented to be a bridge between the institutions of the country and the organizations in Western countries and international institutions." The President of P2P has been invited to multiple seminars and conferences organized by international institutions to speak. The association works with other diaspora associations, including NGOs located in Ethiopia and other international institutions. P2P also has partnerships with research institutions such as the National Institutes of Health (NIH) and Harvard University.

Members of the Ethiopian diaspora gathered around P2P are trying to support overall development back home. In the process, they blur the boundary of home and overseas, giving trans-nationality new meanings. Under the leadership of its President and founder, P2P is investing remarkable energy to increase the participation of the Ethiopian Diaspora in Ethiopia's development. P2P directs and funds programs of action on health and engages with its own individual members and development partners in Ethiopia to influence action and to claim a leadership position.

P2P contributes to the landscape of Ethiopian Public Health. With the help of the World Bank, P2P projects have included:

- Work to establish a telemedicine system
- Support for the reform and transformation of Emergency Medicine at the University Hospital, Black Lion
- Organizing an annual conference of the diaspora on health in Ethiopia
- Establish an Award for Excellence that recognizes individuals working to promote best practice in the health system.

The vitality and commitment of this organization is enhanced by the significant presence of physicians trained in the country of origin and their commitment to their training institutions back home. Their attachment and relationship with their institution seems to be an important driver in the dynamics of this association. The contributions or paying back of the educated diaspora to the institutions of Africa are recurring themes in the speeches and writings of the P2P.

The P2P association also hosts an electronic forum to give voice to people interested in issues of health practices, education, medical, and health institutions in Ethiopia. This online site is dedicated to exchanges of best practices and information between practitioners and academics in Ethiopia and their counterparts in the diaspora. The site is an interesting place for analyzing interactions and debates that deserve in-depth sociological analysis. Exchanges at different levels are symbolic of relationships tinged with ambivalence between those in the country and members of the Ethiopian diaspora. An analysis of the site can highlight themes and issues that bring together these two groups and themes that are of tension between the two groups. Some issues are articulated in term of insiders and outsiders; however, other themes seem to be shared between the two groups. It will be interesting to locate and research in the future in an exhaustive fashion key issues and debates presenting difficulties or facilitate cooperation between those in the country and those abroad. The People to People site provides the opportunity to observe and understand expectations of each group, as well as postures and positions adopted in their interactions. While P2P is thriving as indicated by its contributions to teaching and research and the recent appointment of a Vice-President of Medical Education, it is difficult to evaluate at present its impact on Ethiopia's health system.

Finally, in addition to the initiatives identified above, a recent gathering of academics and researchers was organized through a network called the Ethiopian Scientific and Academic Network (ESciAN). Initially developed by academics living in the United States, this network has promoted the development of debates by bringing together leaders in academia with diverse skills and discipline both from 'within and outside' the country. Since its inception, this network makes extensive use of new technologies and provides researchers, teachers and students in Ethiopia with important information that can facilitate research and teaching.

Many other initiatives attributable to interventions by the Ethiopian diaspora could be mentioned, including the development of the School of Social Work at Addis Ababa University which now provides training and education at the Bachelor, Master and doctoral levels, the development of the Institute of Ethiopian Studies, and the development of a post-graduate degree in Information Technology and Communication. This brief inventory requires further research to compile more comprehensive information and evaluate long-term impact and tangible results.

Conclusions

People of Ethiopian origins living in different parts of the world engage individually and collectively to contribute to actions that support Ethiopian development, especially in the quality of higher education. This chapter has indicated that Ethiopians living abroad can and do support the development of teaching and research in their country of origin. However, these initiatives are struggling to produce tangible results and significant transformation in the institutions of their country of origin. While institutions of higher learning and research can benefit from the input of highly-qualified migrants for their development and influence, several obstacles make their participation ineffective and inefficient. Amongst these are:

- The dispersion and multiplicity of organizations and lack of coordination between all actors and initiatives makes it difficult to create a powerful injection that can decisively initiate necessary changes.
- To be effective, the various organizations including those located abroad should have common aims and objectives and create common platforms and shared priorities.
- Harnessing the multiple benefits and contributions of the highly skilled diaspora requires high levels of organization, support, and structures in institutions located in Ethiopia. These are presently lacking.
- Most contributions of the diaspora are conducted outside of their regular work and professional time, on a voluntary basis. High expectations from the institutions of their country of origin may sometimes seem excessive.
- Ethiopian professional returnees are not only bearers of technical skills and expertise, they also carry a professional culture and that is not always in line with what exists in the country's institutions. Opportunities must be organized to allow exchanges among those insiders and outsiders so that they can learn from each other.
- Academic positions are held in high regard in Ethiopia while this is less the case in some parts of the world. Attitudes and postures can create conflict, when values and modes of action are not shared or at least discussed and understood.
- Financial investment mobilized by Ethiopian institutions directly or indirectly through partner institutions to attract the skills of the diaspora is not easily accepted or perceived positively by those colleagues working in the country every single day. The special attention given to those in the diaspora may create resentments that obscures the reality of the work (R. Barré et al: 2003). The comment "Should we leave the country to get equal consideration as members of the diaspora?" has become common among those working in these institutions. Government leaders and institutions in the country must find mechanisms to limit the frustrations that accompany those who feel disqualified.
- Finally, for over fifteen years, the Ethiopian government has tried to attract the Ethiopian diaspora through targeted communications and activities, and national institutions like the National Commission on Science and Technology, the former Ministry of Capacity Building, Embassies abroad, and the Ministry of Education. However, these are not always consistent with the medium and long-term needs of the country.

The Ethiopian case presented here shows that the conceptualization of these developments in simple opposition between the brain drain and brain gain is inadequate. Both approaches coexist and occur simultaneously. The loss of highly qualified personnel is difficult for Ethiopia because it adversely affects the structures of this country. However, well-structured organization and coordination of the contributions of the diasporia can produce important results for the country and its development.

Footnotes

1. In order to count a million Ethiopian living in the United States, there is a need to have in average of around 100 new Ethiopian migrants crossing the United States borders everyday single day during for at least 30 years. 92*365*30= 1, 007,400)
2. During several trips to the U.S., the author questioned multiple persons regarding their estimates of the number of migrants in the country. Invariably, the estimates that individuals questioned gave ranged from 500,000 to over a million migrants.
3. Dr. Kinfe Ggebeyehu has informed us that he has on several occasions explained that the data on medical doctors working in Chicago and cited in various documents are not based on evidence. However, institutions continue to provide these figures.

Bibliography

1. Abdoulaye Gueye, "Quelques réflexions sur la contribution des chercheurs africains expatriés à la recherché en sciences humaines et sociales en Afrique" in Les mondes universitaires face au marché: Circulation des saviors et pratiques des acteurs, edit. Michele Leclerc-Olive, Grazia Scarfo Ghellab and Anne Catherine Wagner, karthala, Paris, 2011, 325-337
2. Abdlslam Mafouk, "Africa Brain Drain: Scope and Determinants", working paper No. 80-07-SR, Department of Applied Economics, Free University of Belgium, March 2011, accessed online May 25, 2012
3. Abye Tasse, Les Ethiopiens en France et aux Etats-Unis: de nouvelles formes de migrations, Paris: l'Harmattan, 2004)
4. Abye Tasse, « Ethiopian migration: challenging traditional explanatory theories », in Lena Dominelli, Revitalising Communities in a Globalising World, Ashgate, 2007, 2019-230
5. Rémi Barré et al, Diasporas scientifiques: Comment les pays en développement peuvent-ils tirer parti de leurs chercheurs et de leurs ingnieurs expatriés, Edition IRD, Paris 2003, 58
6. Berhan Y., "Medical doctors profile in Ethiopia: production, attrition and retention. In memory of 100-years Ethiopian modern medicine & the new Ethiopian millennium " Ethiop Med Journal, January 2008, 46 Suppl 1:1-77.
7. Brah A., Cartographies of Diaspora. London: Taylor and Francis, 2007
8. Mercy Brown, "Intellectual Diaspora Networks: their Viability as a Response to Highly Skilled Emigration" in Rosita Fibbi and Jean-Baptiste Mayer, Diasporas, développements et mondialisations, Autrepart, Number 22, 2002 Edition de l'aube, IRD, 2002, 167-178
9. Canadian Census Office, 2006: http://www12.statcan.gc.ca/census-recensement/2006/
10. CARRINGTON, W. and E. Detragiache (1998), How big is the brain drain?, IMF working Paper WP/98/102.
11. Elizabeth Chacko, Ethiopian Ethos and the Making of Ethnic Places in the Washington Metropolitan Area, Journal of Cultural Geographie, Volume 20, issue 2, 2003
12. Cohen, R, Global Diasporas. London: Routledge, 2008.
13. Dominelli, L, Social Work in a Globalising World. Cambridge: Polity Press, 2010.
14. Eyassu Gebresenbet: http://www.angelfire.com/de/EthiopianProfessors/
15. Frédéric Docquier and Abdeslam Marfouk, "International Migration by Education Attainment" in International Migration, Remittances and the Brain Drain, editor: It GLAR-Özden and Maurice Schiff, a co-publication World Bank and Palgrave Macmillan, 2006
16. Getahun, S. A., The history of Ethiopian immigrants and refugees in America, 1900-2000: Patterns of migration, settlement, survival and adjustment. New York: LFB Scholarly Publishing LLC. 2007

17. Glenys Kinnock: Speech to ACP EU Joint Parliamentary Assembly, Edinburgh, 21 November 2005. Cited in Jeff Dayton-Johnson and Louka T. kateseli, Migration, Aid and Trade: Policy Coherence for Developement OECD, 2006
18. International Organization for Migration, World Migration Report, 2005
19. Ioanna Kohler, Gone for good? Gone for good? Expatriates French higher education in the United States, Institut Montaigne, 2010.
20. Lyons, T., Conflict-generated diaspora and transnational politics in Ethiopia. Conflict, Security & Development, 7 (4), 529-549. 2007
21. Ministry of Eduction Ethiopia, Statistical Abstract, Addis Ababa, Ethiopia, 2011
22. Mohamed El-Khawas, "Putting Africa Brain Drain Between rock and hard place", Mediterranean Quarterly, Fall 2004
23. Organization for Economic Cooperation and Development (OECD). (2005). "Migration Statistics: Ethiopia". Cited by Sonja and Katie Fransen Kuschminder, in Migration in Ethiopia: History, Current Trends and Future Prospects, Netherland, 2009
24. Richard Black, Richmond Tiemoko, "Migration, return and small enterprise development in Ghana: a route out of poverty? " International Workshop on Migration and Poverty in West Africa, March 13-14, 2003, University of Sussex, University of Sussex, March 2003
25. UNDP, Case Evidence on Brain Gain, Capacity Development Group, 2007
26. U.S. Bureau of the Census: 2006, http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml
27. World Bank, Leveraging Migration for Africa: remittances, skills, and investments, edited by Dilip Ratha, Washington DC, 2011
28. World Bank, "Migration and Remittances", The factbook 2011

Impact of Technology to Promote Triangular Partnership

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Introduction

In spite of the economic growth of Ethiopia in the last decade, the country is lacking highly skilled educated professionals in Geospatial Information Technology (GIT) fields. To overcome this problem, in the short term, it is necessary to create a Triangular Partnership (TP) between GIT professionals and experts between diaspora, western institutions, and Ethiopian institutions. The TP will mobilize experts to work together and build the GIT capacity.

Lack of capacity both in terms of skilled manpower and amenities, such as physical facilities, hardware, and software, are the biggest hindrances to utilize and advance GIT in almost all developing countries including Ethiopia. Establishing partnership and collaboration between highly trained scientists and experts in the field of GIT within and outside the country would optimize technology transfer and maximize any geospatial project implementation. A trilateral collaboration is always a better option than a bilateral one, which can work as checks and balances.

Positive economic growths, increasing democratization, liberalization of communication sector, and good governance have been gradually observed in many African countries since the last two decades. Although, recognition of geospatial technology as an engine for socioeconomic development is evident, geospatial technology has yet to be institutionalized in many African countries. Investment in geospatial technology in Africa has been mainly from central governments and international development organizations and donors. Also, investment on geospatial technology has been more on data collection using conventional techniques and the data is utilized mainly for defense applications not focused towards human capital and economic developments. Individual countries cannot afford solely on investment on geospatial technology through internal sources, they need to come together as consortiums and utilize multiple partnership such as north-south, public-private, and more importantly participation of diaspora and foreign institutions and nongovernmental organizations.

Balanced and sustainable economic development planning requires comprehensive and integrated data and information. About 80% of the data and information used in planning and decision making relate to geographic space, involving locations or positional data. Sustainable developments require data, information, knowledge and understanding of environment, natural resources, and socioeconomic opportunities. Resource assessment and management such as exploration and exploitation of resources, mapping and quantification of reserves such as minerals and oil, marketing, and distribution of products require trained and competent experts with knowledge and skills in geospatial technology. New means of creating, processing, integrating, analyzing, and distributing digital geospatial data products are emerging. Faster transmissions of large datasets due to development of smart phones, mobile apps, and wireless technology have made geospatial data affordable and easily accessible to ordinary people. For effective management and utilization of these resources, coordination among countries, diaspora and institutions is needed for human capital and institutional capacity building, application, and research. Diaspora and foreign universities, where diaspora are affiliated, can be instrumental in providing training and mobilizing resources and information from developed countries to developing countries. There is an extensive network of GIT scientists and organizations in Africa, which are connected through donors, Non-Governmental Organizations (NGOs), governments, and diaspora organizations. This linkage needs to be taken into new horizon through more coordination, collaboration, partnership and synchronization of common goals and activities.

The use of geospatial technologies have greatly benefited from recent advancements in computers and related technology. In particular, GIT has had a significant impact, and is currently heavily used in a variety of ways in developed and industrialized nations (UNCTAD, 2012; Fordelone, 2009; Ottichilo, 2009). GIT is used in many applications that include, but not limited to, environmental health assessment, agriculture, geology, natural resources management and protection, environmental monitoring, urban planning, hydrology and water resource management, disaster management, and monitoring the spread of infectious diseases. Industrialized nations have made heavy investment in building and deploying assets to monitor natural resources around the globe that can be utilized if a national GIT and Geospatial Database Portal System (GDPS) are established.

The following systems have not only matured but they represent integral parts of present-day Geospatial Information Technology (GIT):

- Geographic Information System (GIS)
- Remote sensing
- Global Navigation Satellite System/Global Positioning System (GNNS/GPS)
- Light Detection and Ranging (LiDAR)
- Digital photogrammetry
- Multispectral-hyperspectral-thermal imaging
- Digital mapping technologies

The databases created by these technologies herein called Geospatial Database Portal System (GDPS) are growing bigger and more complex; however, they are also becoming one of the most important and critical tools in solving the complex health and environmental problems facing by humanity today. The GDPS can be mobilized to measure the impact of climate change on the Quality of Health (QoH). In the present-day context of human civilization with Internet and social networking, the GDPS and QoH are intertwined in such a way that it is not possible to think of one without the other.

Impacts of climate change can be measured and or evidenced by varying temperatures, changing landscapes, rising sea levels, melting snows, fluctuating weather patterns, shifting drought-fire-flash-floods, accentuating human-wild-marine-plant lives, displacement of native species, biota migration, heat related illnesses and new diseases, and depleting fresh (surface and ground) waters around the world (IPCC, 2012). Moreover, climate change is adversely affecting the rural, urban, developed, developing, industrial, and agricultural economies. Climate change related disasters cost billions every year and strain existing infrastructures and the human health sectors; its impacts on QoH could be devastating, since its consequences are seen only in the long runs and thus are not fully quantified (IPCC, 2012).

Human civilization has been evolving owing to the human imagination and desire for better Quality of Life (QoL). The QoL can be referenced as general well-being of people or societies; in the larger context it may also be referred to international development, the quality of human health (physical, mental, spiritual), politics (liberty, equal-opportunity, competition), education, recreation and leisure, environment (air, water, land), and the social structures of people within the society (MEA, 2001; McGillivray and Clarke, 2006). The QoL and living standards are not the same; the standard of living is related with income and employment; however the QoL is more of overall human development. The major component of QoL is the Quality of Health (QoH) that is directly related to the environment, economy, and health information system available to the general public (UNDP, 2013). Measuring the quality of life is a complex process. It should be considered as Time-Dependent Knowledge-Based Phenomenon (TDKBP); TDKBP should explicitly measure coefficients of QoL such as: living standards, happiness, health, freedom, education, environment, and moreover it should measure in terms of futuristic, holistic, and on a balanced approach. The QoL and QoH should be better than the past ones to become an improved one. Quantitative as well as qualitative analysis should be utilized to measure the QoL and QoH.

Climate change and QoH are interrelated, and GDPS is the best tool available, since it can be optimized to analyze and measure the correlation. The GIT/GIS and GDPS could serve as panacea for advanced planning / preparedness for pandemic, epidemic, environmental health, and climate related (droughts, floods) human health hazards. The GIT/GIS and GDPS can be optimized to model early warning systems, forecasting extreme weathers will reduce the casualties and minimize spread of diseases. As per the World Health Organization (WHO) estimates the climate change (warming and precipitation trends) of the past thirty years is claiming over 140,000 lives annually. The GDPS should be linked to non-geospatial data such as socio-economic factors, changes in drug resistance, immunity, and all health-related data. The GDPS should host all climate/weather and health-related data which can be modeled utilizing data mining techniques to create early warning models. These models then can be uploaded to the cloud and be disseminated to the public via mobile phones, TV, radio, and news media.

If a picture is worth thousand words, then an orthorectified image should be worth a million words. If powers are categorized as: economic, military, and information; then geospatial information should be considered as a superpower that can benefit all of humanity. The GIT/GIS and GDPS (inclusive of socio-economic-health) modeled with data mining and disseminated using cloud computing will provide optimal solution in combating the impacts of anthropogenic climate change on the QoH.

Geospatial Information Technology

Geospatial Information Technology has not only matured but it has become one of the most important tools in solving complex environmental problems. However, its potentials have not been fully utilized even in the advanced countries, not to mention the situation with the developing countries. The biggest problem with developing countries is the datum definition and geodetic networks to fully utilize the Global Navigation Satellite System (GNSS). The national GNSS networks are critical for further densification or to utilize technology on independent basis for projects covering areas: nationwide, regional, and local levels. Geodetic networks or control points are the must to proceed further for any GIT project(s). The GIT is an assembly of the following technologies:

- Geodesy
- Surveying
- Digital Photogrammetry
- Remote Sensing
- Cartography

Geodesy

Geodesy is one of the oldest in the history of science. It has a noble tradition in the development of the classical physical science. Great names like Gauss, Laplace, Bessel, Kepler, Newton, and Euler have left their mark on science through their studies of geodesy. Geodesy has both scientific and practical objectives: the scientific objective of geodesy is the determination of the figure of the earth through its size and shape. Defining the exact geometry of the Earth is a difficult task; it does not have an exact figure that could be described by a mathematical relationship. Geodesists have been working for centuries to solve this problem, yet the solution of this problem requires more perfection. At present the figure of the Earth is approximately defined by two surfaces:

- GEOID: This is an equigeopotential surface of the Earth and the undisturbed mean sea level (MSL) as a physical approximation of the Earth's figure within the global oceans and its continuation under the continents. In the continental area of the Earth, this surface is the basis for defining the figure of the Earth.
- ELLIPSOID OF REVOLUTION: This is a mathematical approximation of Earth's geometry, which is the basis for all the surveying and mapping systems. GPS/GNSS measurements are computed from this surface.

A challenging task for geodesists has been to bring these two surfaces to be as equivalent as possible (i.e., there are more than a dozen mathematical surfaces used around the world to define the mathematical figure of the same Earth). The most ideal mathematical surface of the Earth would be that surface which is equivalent in volume to the Geoid; and at present that surface is WGS 84. The refinement or more perfection in these two surfaces is a continuous process, since it needs a homogeneous, precise, and accurate observational data covering the entire Earth. The observational data should cover the entire Earth with: gravity, astronomic, geodetic, geophysical, and geological. The Geoid models (Geoid undulations) are used to convert GPS/GNSS derived heights (Ellipsoidal) into orthometric heights (Geoidal).

The practical objective of geodesy is based on the findings of physical geodesy to perform all necessary measurements and calculations that are required to determine locations of various geometric configurations on the surface of the Earth. Together with some way of representing the results of these calculations on a flat piece of paper that we call a map, these maps now can be produced or converted into a digital form that we refer to as a Geographic Information System (GIS) base-map. The exact nature of the Earth's shape and rotation has fascinated many great scientists, and this fascination pushed many scientists towards space technology. As a result, we have many imaging and positioning space programs today.

Gravity measurements and tide gauges and other measurements are used to determine the Geoid. After the Geoid is defined, the other surveys, like GNSS/GPS or differential leveling, can be optimized to measure surface elevations. Gravity measurements can also be used to determine variations of rock densities (as a geologic mapping tool) and to look for time changes of gravity (for monitoring elevation changes, magma intrusions, or water-table variations), and for metrology laboratories to calibrate weighing machines. Scientists have measured gravity at locations around the world, establishing stations with known gravity values. These known values then become baselines for other relative: satellite, airborne, terrestrial gravity measurements.

The satellite or airborne or terrestrial gravity data are processed to obtain free-air gravity anomalies in predefined grids that are used to compute Geoid models utilizing gravimetric method or Stoke's Integral (SI). Geoid models or Geoid undulations are used to convert GPS/GNSS heights or Ellipsoidal heights to Geoidal or orthometric heights.

In the last fifty years or so, the advancement in space technology and computer facilities have made tremendous impacts on geodesy and mapping sciences: i.e., Very Long Baseline Interferometry (VLBI), Lunar Laser Ranging (LLR), Landsat, Doppler, Global Navigational Satellite Systems (GNSS): NAVSTAR Global Position System (GPS), GLONASS-Russian GPS, and Galileo-European GPS. Japan, China, and India have started their own navigation satellite systems. Global Navigation Satellite System (GNSS) has revolutionized geodesy and mapping techniques in terms of accuracy and efficiency. Although, GNSS has made tremendous progress in terms of relative

accuracy achievements, technology transfer has been very slow. Technology transfer has also been impeded by the high cost of GNSS receivers, proper trainings, the lack of existing High Accuracy Reference Networks (HARN), and Continuously Operating Reference Stations (CORS). The CORS can maximize and expedite the use of GNSS towards sustainable and green infrastructure development.

Surveying

Surveying is defined as the science, art, engineering and/or technology that determines relative position of points above, on, or beneath the surface of the earth; i. e., establishing such points by means of angle, and distance measurements. Surveying can be considered as a subdivision or localized version of geodesy. Geodesy defines the exact shape of the Earth; surveying being localized utilizes plane surveying techniques to define the confined shape of the Earth in a local area. The surveying is performed about the land, property, water, boundary, engineering, construction, utility, etcetera, thus it is also specifically called as land surveying, property surveying, hydrographic surveying, boundary surveying, engineering surveying, construction surveying, utility surveying, etcetera. The property survey is also called cadastral survey. The cadastral survey requires performance of legal description, deed registration, creation of boundary map, installation of property corner markers, and certificate of title.

Cadastral surveys and the certificate of titles are very important to all of the humanity whether living in developed or developing nations. Land is the most precious property of any nation that provides food, shelter, water, and air to her citizens to survive and prosper. The QoL and QoH are directly related to the land, water, and environment of any nations. The first Principal Author of this chapter served briefly as a settlement officer in Nepal and has firsthand experience of the significance and criticalness of cadastral survey to the people of Nepal or any nation. The happiness and security of the common people rests on the ownership of land or any properties guaranteed and secured for their rightful use.

The boundary survey is a critical topic and can be categorized as:

- Individual property boundary
- County boundary
- State boundary
- Federal or national boundary
- International boundary

The first Principal Author of this chapter served as technical team leader for an expedition to demarcate the international boundary between Nepal and India during 1975 and 1976. Approximately 400 miles or 640 km of boundary from Kosi River in the east to Karnali River in the west was demarcated during the two years period. The same work could be completed in less than three months if technology such as GNSS/GPS is utilized. The accuracy achieved with the new technology would be of at least four folds.

He also supervised a countywide Light Detection and Ranging (LiDAR) 3-FT point posting, and 15-cm resolution color orthophotography project for Dunn County, Wisconsin. The County covers 864 square miles or 2,211 square kilometers of urban, suburban, and rural areas; this project was completed in about four months. The project could have easily taken two years if conventional photogrammetric techniques were used to process the 6300+ exposures

of stereo digital imageries, and the cost would have been at least in four folds. The biggest impediments for developing countries to optimize these new technologies are lack of trainings and basic requirements such as CORS and HARN networks.

History shows that the international boundary disputes if not resolved on time can turn into deadly wars between nations. The individual property boundary issues can ruin family relations and sometimes they can create rift between communities. The international boundary issues can be resolved fast if the cutting-edge geospatial technologies are utilized and if there is a political will to resolve the problems. The GDPS can be optimized and mobilized by nations to expedite green infrastructure development as well as to resolve individual or local or state or federal or international boundary disputes. The GDPS can assist in optimizing and balancing the use of land resource for the betterment of man, and nature. Charles Hansford's verse below portrays justifiable use of Mother Nature:

To strive with Nature little it avails.
Her favors to improve and nicely scan
Is all that is within the reach of Man.
Nature is to be follow'd, and not forc'd,
For, otherwise, our labor will be lost.

Peace and security can be considered as two sides of a coin and the GDPS could be deployed to accomplish the both!

Digital Photogrammetry

Digital photogrammetry is a recent technology that integrates conventional photogrammetry with remote sensing; and it is the core method available for any topographic mapping. The historical advancement of society can be directly correlated with the quality and accessibility of maps available to the general public for everyday applications. Maps or digital maps facilitate mobility, commerce, the free exchange of ideas, leisure travel, investment, mitigation of hazards, natural resource exploration and planning, record keeping, and social networking. As maps became more detailed, widely distributed and understood, quality of life would improve. Figure 1 shows the details that can be seen and measured with high degree of confidence in present-day orthoimagery; notice the objects inside the circle moved during the exposure time interval.

Figure 1:
Sample 5-cm Resolution Orthoimagery of Bernheim Arboretum & Research Forest;
Left: True Color, Right: Color Infrared (Source: EMI + KySU)

Remote Sensing

Remote sensing is the science and art of deriving information about an object from measurements made at a distance, i.e., without actually coming in contact with it. Remote sensing data is captured using different platforms (terrestrial, airborne, and satellite) and sensors (Analog and Digital Cameras, MSS, CCD, etcetera). Remote sensing data can include the entire spectrum of electromagnetic radiation (visible, infrared, thermal, microwave, radio wave, etc.) as compared to the photogrammetry, which uses only visible portion of the electromagnetic spectrum. In a vague term remote sensing can be recognized as a system that uses satellite platforms. The first remote sensing system was the Landsat program (Landsat 1-2-3-4-5-6-7) and now Landsat Data Continuity Mission (LDCM). Currently, we are on the eighth generation of the Landsat program collecting terrestrial image data. There are many other government remote sensing programs including French SPOT and Indian Remote Sensing Satellites. In the nineties, private satellite corporations started collecting high-resolution remote sensing data using polar orbiting satellites. The major contribution of remote sensing is in getting Land Cover Land Use Change (LCLUC) data that can be used for climate change studies.

Land Cover Change (LCC) is a very complex process that occurs due to four natural and man-made phenomena:

1. Earth's geologic processes - volcanoes, tectonic movements, and earthquakes
2. Earth's landscape processes - deforestation, agriculture, urbanization, surface transportation, irrigation and water supply, waterways, and aviation
3. Atmospheric processes - soil erosion, flooding, landslides, droughts, and forest fires
4. Global influences - solar radiation, meteoroids, magnetic and gravity field changes.

The Land Use Change (LUC), on the other hand, is caused by man-made factors such as agriculture and infrastructure development. Combined together, LCLUC analyses provide a comprehensive explanation for changes in the earth's surface. Image classification techniques are used to derive LCLUC data from satellite or airborne imageries. LCLUC analysis utilizing time series imageries combined with econometric model can predict long term impacts of climate change on forest, water, land, environment, flora and fauna, and the QoH.

Cartography, GIS, & Geospatial Database Portal System

Cartography is the study and profession of map making. Map projection, a technique of projecting the earth surface, which is ellipsoidal, onto a flat piece of paper has been a research for many centuries, Figure 2. Cartography combines science and aesthetics with generalization to exemplify and communicate geospatial information technology effectively. Cartography can be considered as combination of Computer Aided Drafting (CAD), map projection, and data presentation.

A Geographic Information System (GIS) is a system that imports GIT data and stores, manipulates, analyzes, models, and further extracts secondary data such as points, lines, and polygons. GIS is a combination of cartography, statistical analysis, computer science, and data modeling technology, soft computing; on the other hand a GIT consists of hardware, software, soft computing, and establishment of physical monuments on the surface of the Earth.

The GIT is also comprised of data collection platforms such as satellites, aircrafts or Unmanned Aerial Systems (UAS) or tripods, and sensors such as multispectral, hyperspectral, thermal, LiDAR, GNSS, theodolite or transit, and others. A well designed GIS not only contains information about the land (spatial) but also contains attribute and temporal data that can be used for optimal planning and execution of any urban and rural development projects, Figure 2.

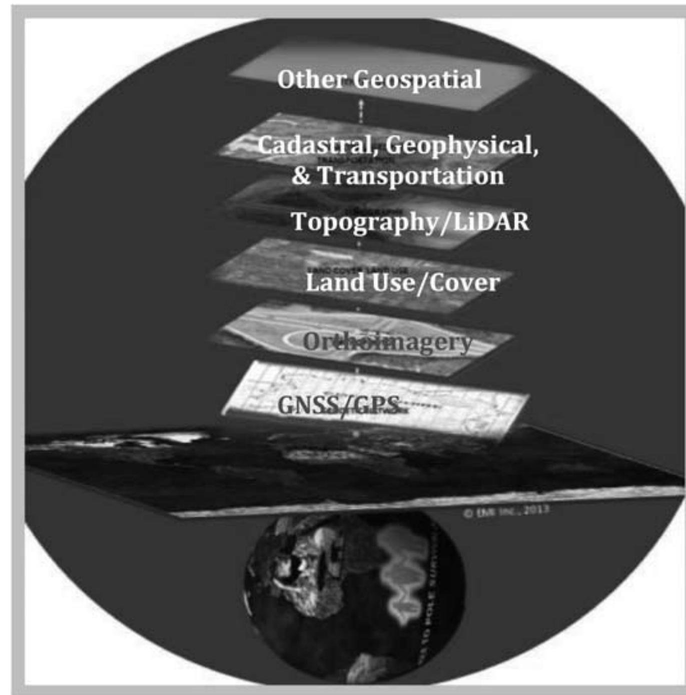

Figure 2:
Example Map Projection and GIS Layers (Source: EMI)

The GIT coupled with GIS should provide information for the overall sustainable development of any nation, which should be cost effective and should meet the requirements of multiple users. Sustainable Development is a process of developing (land, cities, business, communities, etc.) that "meets the needs of the present without compromising the ability of future generations to meet their own needs" according to the Brundtland Report, a 1987 report from the United Nations. The concept of sustainable development encompasses three dimensions of welfare: economic, environmental and social and involves complex synergies interactions and trade-offs among them.

The UN Commission on Sustainable Development (Chapter 40 of Agenda 21) calls on countries and the international community to develop indicators of sustainable development. Such indicators are needed to increase focus on sustainable development and to assist decision-makers at all levels to adopt sound national sustainable development policies. GIT/GIS can play very important role in development of these indicators. By looking at the indicators, any nation will be able to know where the thrust of the development should be. Geospatial Database Portal System (GDPS) is a proposed system that holds GIT and GIS data and disseminates to scientific community for further research and modeling of data for climate change studies, measuring QoL/QoH, expedited and ecofriendly infrastructure development, and resources optimization, Figure 3.

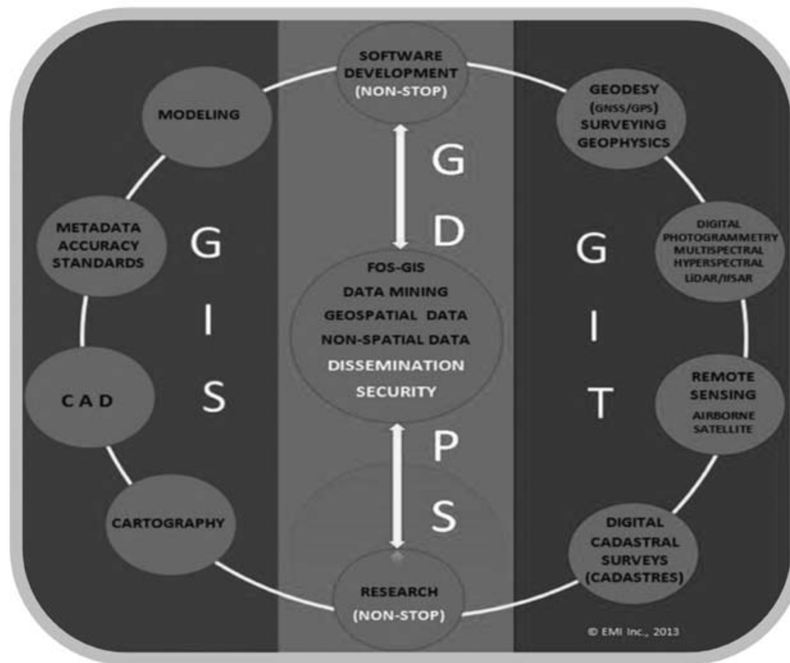

Figure 3:
A Conceptual GDPS (Source: EMI)

Climate Change

Impacts of climate change can be measured and or realized by varying temperatures, changing landscapes, rising sea levels, melting snows, fluctuating weather patterns, shifting drought, fire, flash-floods, accentuating human-wild-marine-plant lives, displacement of native species, biota migration, heat related illnesses and new diseases, and depleting fresh (surface and ground) waters around the world. Climate change is a function of greenhouse gases, aerosols, forces acting on earth's inner surface, and the solar system. Major sources of GHG emissions are from power plants, auto, deforestation, farming-soil, industries, and natural phenomena, Figure 4. The consequences are evidenced by the effect on the water cycle. The water cycle can be studied by modeling the surface and ground water hydrology and use of GIT (Tsegaye et al., 2003).

Figure 4:
Core Origins of GHG (Source: EMI)

Land Cover Change (LCC) is a complex process that occurs due to four natural and man-made phenomena:

1. Earth's geologic processes - volcanoes, tectonic movements, and earthquakes
2. Earth's landscape processes - deforestation, agriculture, urbanization, surface transportation, irrigation, water supply, waterways, and aviation
3. Atmospheric processes - soil erosion, flooding, landslides, droughts, and forest fires
4. Global influences - solar radiation, meteoroids, magnetic and gravity field changes.

Land Use Change (LUC) (Tsegaye et al., 2001), on the other hand, is caused by man-made factors such as agriculture and infrastructure development. Combined together, LCLUC analyses provide a comprehensive explanation for changes in the Earth's surface. The analysis of LCLUC is an essential measuring tool for climate change studies.

Energy and water cycles are intertwined as solar radiation (the vital input of our daily energies) changes the phases of water, and as a result, perpetual global circulation of energy and water cycle takes place. The anthropogenic aggression has been putting stress on the earth's crust and its biosphere to make water as its first victim. Houser links water and energy to all twelve science application themes such as: Carbon Management, Water Management, Agricultural Competitiveness, Public Health, National Security, Invasive Species, Energy Forecasting, Coastal Management, Ecological Forecasting, Aviation Safety, Disaster Preparedness, and Air Quality (Paul R. Houser-2006).

Humanity evolved in the vicinity of water resources. The World Resources Institute estimates that about half of the world's population currently lives within 200 kilometers of a coast and about a third (2.2 billion) lives within 100 kilometers of a coast (T. Gladwin, 2008); about 39% of the U.S. population lives in the coastal areas (NOAA March, 2013). Two thirds of the world's population will live along the coasts by 2030, according to The World Bank Report. The coastal areas of our planet will soon be stressed with over-population and environmental degradation unless efficient and environment-friendly planning to cope with this problem is put in place on time. Such a planning can be optimized through an integrated regional energy and water cycle model that is supported by GDPS. By coupling the relevant and state-of-the-art technologies, a new integrated and Comprehensive Water Cycle Model (CWCM) can be developed. The CWCM can assist towards optimal regional planning of water resources, environment-friendly developments, QoH, and emergency preparedness.

Impact of Climate Change on the Quality of Health (QoH)

Quality of Life is directly related to the Quality of Heath. Lack of education, poverty, and population growth are the three major interrelated problems. Solutions for these can be found by implementing proper public policies guided by cutting-edge and appropriate technologies, such as GDPS. A variety of diseases crop up due to changes in meteorological parameters such as rainfall, temperature, and humidity. These diseases include: malaria, cholera, yellow fever, and meningitis. In recent times, significant variations in climate extremes have been observed over many parts of the world that may have effect on these diseases. It has, for example, been observed that areas that were once classified as cold and malaria-free zones are becoming warmer. This warming makes the areas good breeding sites for mosquitoes and hence malaria epidemics. Altered temperature and rainfall patterns can also increase the incidence of new diseases.

Conclusion

The GIT/GIS and GDPS should be optimized to act as early warning systems, forecast extreme weathers, assist in containing the spread of diseases, and most importantly as a tool to predict and allow humanity to adjust to a rapidly changing climate. Geospatial science and technology needs to be integrated in the national economic planning or strategies. The national strategy should recognize diaspora/nonresident nationals (NRN) and institutions so as to be able to tap these resources for the benefit of the home country. The strategic plan should build upon resources and expertise currently available, using the network of expertise and excellence. Diaspora groups can develop collaborative national projects and platforms at a regional level. More efforts are needed to develop a sustainable mechanism for data quality, metadata update and authoring, data archiving, update for depository/inventory, and supply of high accuracy geospatial data. National governments must work to include the expertise and capacity of the diaspora to integrate them into government networks. A triangulation nexus of government-university-NGO-Diaspora links needs to be maximized.

Any development efforts made for improvement in the QoL/QoH will only make a long-term difference if they are strongly supported by public policies and commensurate arrangements of appropriate mechanisms for implementation. This is particularly important in the case of complex issues such as public health, water, sanitation and hygiene. These issues require a considerable degree of behavioral change on the part of both the people and policy-making bodies. In order for successful implementation of any community related endeavors, the public policy reform/formulation should emanate through a functionally interactive process between the community people and the policy making bodies which will help clearly to define responsibilities and make the concerned people responsible.

A unified datum should be developed to establish precise African Horizontal and Vertical Datum (Geoid Model). Spatial data structure information and access needs to be decentralized: made available at the grassroots level for improved development planning and management, food security and poverty alleviation. One way to do this is by linking spatial data structure information to global millennium development goals. More geospatial awareness and education programs are needed for geoinformation capacity building for African-government personnel and decision makers.

There will be far reaching benefits to Ethiopia's economies through the use of triangular partnership as well of GIT. The TPs strategy will assist in expediting the transfer of technology such as early warning systems and capacity building. The early warning systems will allow natural disaster preparedness to prevent or minimize the loss of life and property. The same system can be deployed to improve food security, food supply, optimize land and water resources, improve health care systems, and harmonize the wise use of natural resources without depriving future generations. The outcomes of the TPs strategy and utilization of GIT will be to transform Ethiopia into a self-reliant nation through expedited but balanced economic developments. The ultimate goals of the TPs are to maximize the use of GIT, GIS, GDPS, and other cutting-edge technologies to improve the quality life in Ethiopia.

Bibliography

1. Abiodun, A. A. 2000. Development and Utilization of Remote Sensing Technology in Africa. Photogrammetric Engineering & Remote Sensing 674-686.
2. Acharya B. 2009: Interlinking Rivers of South Asia for Improving the Quality of Life – WEES International Conference, New Delhi, India, Jan. 12-16, Vol IV, pp. 1939-1943
3. Acharya B. et al. 2006: Regional and Local Geoid Undulations for Computing Orthometric Heights from GPS Measurement, NASA S7.02-8952, Final Report, pp.32.
4. Acharya, B. 1992: National Geographic Information Management and Analysis - A National Strategy for GIS Implementation and Maintenance in Nepal, prepared for United Nations Development Program (UNDP), Kathmandu, Nepal, UNDP Project # NEP 88/009.
5. Acharya, B. 2002: Measuring the Impact of Mass Transit Investment on Land Value Using Satellite Remote Sensing Technology. USDOT –SBIR DTRS-57-01-C-10020 Report, pp. 57.
6. Acharya, B. and Bell, W. C. 1992: "Designing an Optimal and Scientific GIS Project" XVII ISPRS Congress, Washington D.C., August 4-14, Vol XXIX, Commission III.
7. Acharya, B. and Talbert Z. 1992: Choosing an Optimal Surveying Technique" Surveying and Land Information Systems, Vol. 52, No. 4, pp. 215-218.
8. Atkinson R., Castro D. et. al, 2008: Digital Quality of Life, Information Technology and Innovation Foundation's Publication, pp. 179.
9. Fordelone T. Y. 2009. Triangular Co-operation and Aid Effectiveness. A paper presented at the OECD/DAC Policy dialogue on Development Co-operation, Mexico City, September 28-29, 2009.
10. http://en.wikipedia.org/wiki/Demarcation_line
11. http://quod.lib.umich.edu/j/jii/4750978.0016.107?rgn=main;view=fulltext
12. http://stateofthecoast.noaa.gov/coastal-population-report.pdf
13. http://www.bing.com/maps/?FORM=Z9LH2#Y3A9MzMuOTU2MjAwfi04My45ODg0MDMmbHZsPTQmc3R5PXImcT1ldGhpb3BpYQ_
14. http://www.noaanews.noaa.gov/stories2013/20130325_coastalpopulation.html
15. http://www.who.int/mediacentre/factsheets/fs266/en/
16. https://maps.google.com/maps?hl=en&tab=wl
17. IPCC, 2011. Renewable Energy Sources and Climate Change Mitigation. Ottmar Edenhofer, Ramón Pichs-Madruga, Youba Sokona, Kristin Seyboth, Patrick Matschoss, Susanne Kadner, Timm Zwickel, Patrick Eickemeier, Gerrit Hansen, Steffen Schloemer, Christoph von Stechow (Eds.). New York, NY, USA: Cambridge University Press.
18. IPCC, 2012. Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation. Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (Eds.). Cambridge: Cambridge University Press.
19. McGillivray M. and Clarke M. 2006. Understanding Human Well-being. New York: United Nations University Press.
20. Millennium Ecosystem Assessment (MEA) 2001. Ecosystems and Human Well-being A framework for Assessment. Washington: Island Press.
21. Ottichilo W. 2009. Geospatial Science & Technology for Sustainable Development in Africa: Partnerships and Applications. A paper presented at Science, Technology, and Globalization Project, Belfer Center for Science and International Affairs, the Harvard Kennedy School, May 28–29, 2009.

22. Tsegaye, T. D., W. L. Crosson, C.A. Laymon, and M. P. Schamschula. 2003. Application of a Neural Network-Based Spatial Disaggregation Scheme for Addressing Scaling of Soil Moisture. p. 261-277. In Scaling Methods in Soil Physics. CRC Press, New York, NY.
23. Tsegaye, T., W. Tadesse, T. L. Coleman, M. Fikre-Mariam, and M. Floyd. 2001. Integration of Remote Sensing and Geographic Information System Technology for Monitoring Changes in the Northwestern Blue Nile Region of Ethiopia, IGARSS Proceeding, p. 456-458.
24. UNCTAD, 2012. Geospatial Science and Technology for Development with a focus on urban development, land administration and disaster risk management. New York: United Nations.
25. UNDP. 2013. Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World. UN Plaza, New York: the United Nations Development Program.
26. Willoughby, L. 2012: Flowing Through Time: A History of the Lower Chattahoochee River, University of Alabama Press, pp. 248.

Needs Assessment is the Rationale for the Triangular Partnership

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Introduction

The need for enhanced collaboration among Western Institutions, African Institutions and Africans in the Diaspora, particularly in the area of healthcare cannot be understated. On the continent, while populations continue to combat acute and communicable diseases, we continue to see a rise in the incidence of chronic conditions including cancer, obesity and cardiovascular diseases, the management of which is at the forefront of health policy, healthcare workers and financial decision making. Across many countries and sub-regions, there is a limited of supply of healthcare

workers including trained clinicians that serve these rising populations health are demands. In the midst of this, the rise of an emerging middle class, that now more than ever before is able to afford better healthcare services, is occurring.

We have also seen in more recent years the growth of the private sector (in many countries growing faster than public expenditure and donor funding), whose role has been to independently contribute to the larger healthcare system, sometimes partnering with international institutions and governments to improve access to and the quality of healthcare services. According to the International Finance Corporation (IFC) report on "The Business of Health in Africa", about sixty percent of the $16.7 billion spent on health in sub-Saharan Africa in 2005 was private, most of it out-of-pocket spending by individuals. Thus confirming that the private health care sector in Africa is already well established providing some sixty percent of services in some African countries. Although it may be seen as a service accessible only to the burgeoning middle classes, private healthcare is used by the 40 percent (figure 1) of the lowest economic quintile of the population in countries such as Nigeria and Kenya.[1]

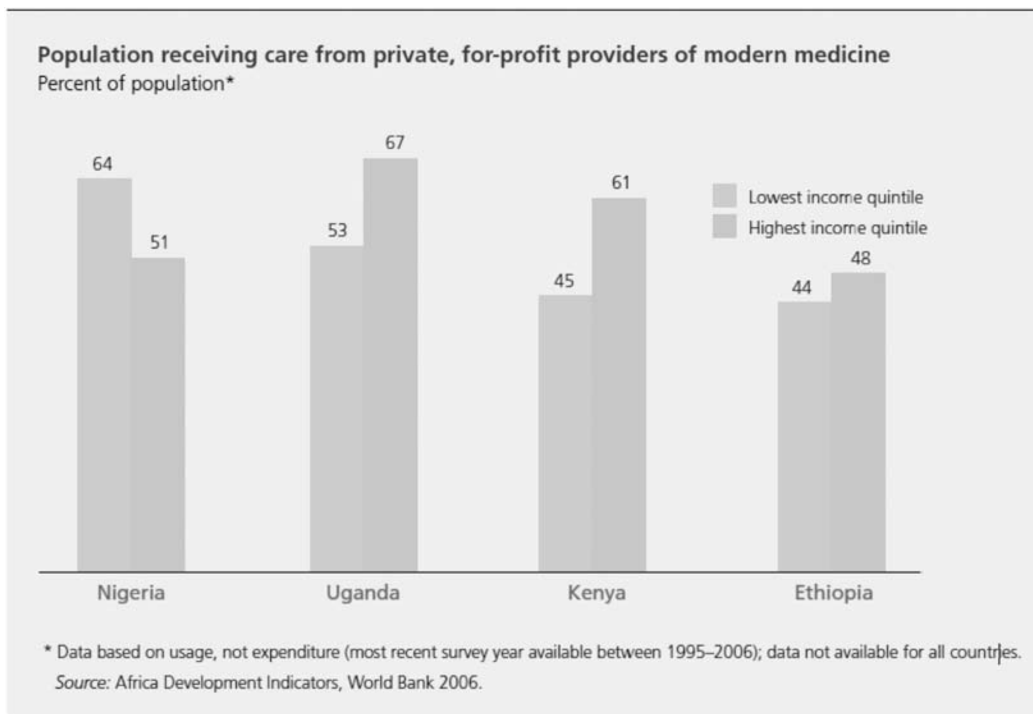

Figure 1: Proportion of Population receiving care from the For-Profit Private Sector

Like many other regions around the world, Africa must reassess its healthcare systems to ensure that they are viable over the next decade. A striking difference is that Africa must carry out this restructuring while grappling with a uniquely broad range of healthcare, political and economic challenges that influence the delivery of appropriate healthcare services.[2]

A Triangular Partnership would only be sustainable in the long run if it meets the needs of the various partners. In this chapter, we would try to understand the changing needs of each of arm of the triangle and the subsequent interactions. To better understand present needs, it is important that we revisit history to understand how previous events and activities may have caused some of these needs to emerge.

Changing Needs of African Institutions

Popular interest in Africa and the concept of assistance to Africa, from Western governments, institutions and citizens, has steadily increased over the years. However, in many cases the need is defined by the donors in areas they are most interested in (e.g. infectious diseases, polio eradication), which are very laudable but may ignore new health care needs, such as an increasing Non-Communicable Diseases Burden in several African countries, lack of adequate number of medical or nursing staff in-county.

The current model of donor funding may have contributed to an overreliance on foreign aid in health, to the extent that it has created a culture of corruption, entitlement and dependence in several country across the continent. Some country governments have health budgets where over fifty percent of their funding is aid-dependent. However, in more recent years, the continent has started to demonstrate a slight disillusionment towards foreign aid, as many country governments have begun to take ownership of their healthcare system and are implementing initiatives and structures to address their country's healthcare needs from a broader perspective including clinical training for health professionals (often neglected by donors). To concretize some of these perspectives, we will look at two country examples, Rwanda and Ghana that are pursing different paths to provide better health to their citizens.

Rwanda

A country that has been marked by a history of civil war and genocide, Rwanda, has made significant health improvements post-genocide and most recently.[3] While over half of the population lives below the poverty line, in a relatively short period of time, the country has made remarkable strides on key Millennium Development Goal (MDG) indicators, including: infant and child mortality; immunization coverage; maternal health and HIV prevalence. Progress can be attributed to ambitious reforms in the health sector, including the introduction of community health insurance and boosting of services through staff incentives and performance based schemes. Strong leadership, vision and commitment have characterized this progress. The widespread use and formalization of community health workers has brought services closer to communities and empowered them to participate in their own development. However, the focus on community health has been accompanied by improved clinical services with hundreds of clinics, all with basic equipment and a full cupboard of essential medicines. Each of Rwanda's thirty districts has a hospital, with at minimum fifteen doctors, offering basic surgical services, and has included construction of new hospitals such as the Butaro hospital that provides world-class services and partners with the Dana Faber Cancer Institute.[4]

The key drivers of change within this relatively small country's healthcare delivery system has been the implementation of community health insurance, commonly called mutuelles, which have helped level the playing field in terms of financial access to healthcare services. This system hinges on long term economic benefits by not only enabling access to services at an affordable cost, but covers diagnostic, preventive and disease management services, which reduces the burden of high treatment costs to the overall health system.

Rwanda has also established a value-based service of care delivery that incentivizes the quality of health services, which are rewarded on the basis of performance. This has required a fundamental restructuring of the health system, with the recognition that measuring and rewarding for service delivery is the primary goal that can unite the in-

terests of all health system. But perhaps the most remarkable success of Rwanda has been channeling donor funds behind their strategy. For example, only 45% of the costs of the mututelle system is from premiums, with the rest from government and donors or encouraging donor funding to developing not just the community system but also a functional hospital system.

Ghana

Ghanaians live on average twelve years longer, than South Africans or Nigerians, who come from richer countries.[5] Ghana's remarkable success lies in the efforts to collect and track surveillance data with a rigor that informs improved delivery, access and quality healthcare. With immunization rates at the ninetieth percentile for many childhood diseases, Ghana has markedly shifted from a cash and carry system of health care, where services where not offered until an initial payment was made. This somewhat punitive model contributed to high mortality rates, particularly among people who could not afford even the most basic of healthcare needs. In 2003, Ghana officially established an insurance scheme under the auspices of the National Health Insurance Authority that allowed citizens to receive healthcare services before being required to make a payment, regardless of their socio-economic status. The Ghanaian insurance system has being criticized by several international non-governmental organizations(NGOs) and donor agencies, concerned about its long-term sustainability. However, the Ghanaian Government (GOG) seems to have made a decision to continue its development of its insurance system perhaps based on its own historical perspective.

After independence in 1957, like many other African countries, the GOG adopted a tax-based health financing system in which the government paid for services in the public sector. By the early 1970s, general tax revenue in Ghana, with its stagnating economy, could not support a tax-based health financing system. Thus, Ghana introduced user fees in the public sector, known as cash and carry, which was shown to leave negative consequences in access to health services, especially by the poor people. In the beginning of the 2000s, the share of household out-of-pocket payments in total health expenditure in Ghana was considerably higher than the regional average for the sub-Saharan Africa (50% versus 39% respectively in 2006).

To address these negative consequences, the GOG created The Ghana National Health Insurance Scheme in 2003. A newly-created National Health Insurance Authority (NHIA) was commissioned "to secure the implementation of a national health insurance policy that ensures access to basic healthcare services to all residents." The NHIS is financed from four main sources: a value added tax on goods and services, an earmarked portion of social security taxes from formal sector workers, individual premiums, and miscellaneous other funds from investment returns, Parliament, or donors. The 2.5% tax on goods and services, called the National Health Insurance Levy (NHIL), is by far the largest source, comprising about seventy per cent of revenues. Social security taxes account for an additional 23%, premiums for about 5%, other funds or the remaining 2%.

Several independent studies have indicated that the NHIS has improved access to healthcare services to different categories of people in urban and rural by removing significant financial barriers to access.[6,7,8] However, insured people still incur out-of-pocket payment for care from informal sources, and for uncovered drugs and tests at health facilities. Nevertheless, they paid significantly less than the uninsured.

NHIS financing now accounts for two thirds of internally-generated funds at government facilities and over 40% of total health expenditure in Ghana (MOH 2009). While household and patient data reveal that NHIS has increased utilization of care and reduced financial barriers, the scheme faces a number of challenges. It is also more frequently used by wealthier quintiles. Fraud and weak administrative management threaten the sustainability of the scheme. The core symptom of these challenges is delayed reimbursement of providers, which negatively affects public and private health care actors all along the supply chain, but is particularly damaging to private providers.

In the meantime. Ghana's primary healthcare system remains one of the best not only in the West African region but also across the continent. However, in spite of this distinguishable achievements, the national government needs to continue to address regional variation in health outcomes and the increased levels of non-communicable disease (e.g. in 2008, 34% of years of life was lost due to Non-Communicable Disease and Injury in Ghana, compared to a regional average of 22%) and establish structures that will ensure the viability of these initiatives over the long term. It is critically important that foreign institutions invested in Ghana gradually shift from monetary aid to working alongside the government and local communities to develop effective strategies that will enhance healthcare development within the country.

The changing epidemiological picture, growing economies, and increasing participation of population in governance is changing the needs of local institutions. Not only must countries focus on addressing communicable diseases, which often require public health approaches (e.g. improved sanitation, water, immunization), they also need to address the demand for improved hospital services and better financial protection from ill health. For example, the most common cause of child mortality in Ghana is malaria, closely followed by prematurity (Figure 2). While interventions to reduce child mortality due to malaria may require limited hospital resources (e.g. focus on prevention, bed nets, anti-malarias for pregnant women), interventions to address prematurity are likely to involve significant hospital services and resources to address women in preterm labor and care of pre-term children. Specialist skills such as neonatologists or nurses with specialized neonatal skills are very limited.

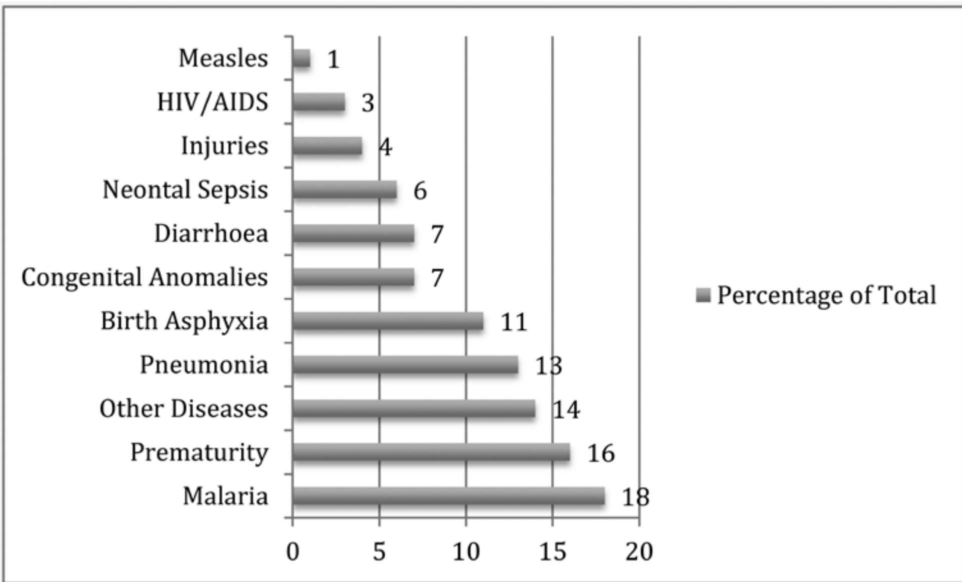

Figure 2: Distribution of causes of deaths in children under 5 in Ghana (2010)
Sources: Ghana Health Profile, WHO - http://www.who.int/gho/countries/gha.pdf

The demand for such specialist skills, which cannot be easily addressed by the rapid training of community health workers, as was successfully done in Rwanda, Ethiopia and elsewhere, indicates the underlying shortage of health workers across the continent.

Drastic changes are required to meet health care worker needs in Africa. According to World Health Organization (WHO) report 2006, sub-Saharan Africa has a critical shortage of midwives nurses and doctors (Figure 3). Key drivers of such shortages are a lack of medical / nursing schools[9] and high attrition rates (especially in Anglophone countries) amongst practitioners who immigrate to developed nations where remuneration and job security is much higher. The weight on the healthcare sector is set to increase as African countries have some of the highest population growth rates in the world with countries such as Kenya projected to grow by one million people per year.[10]

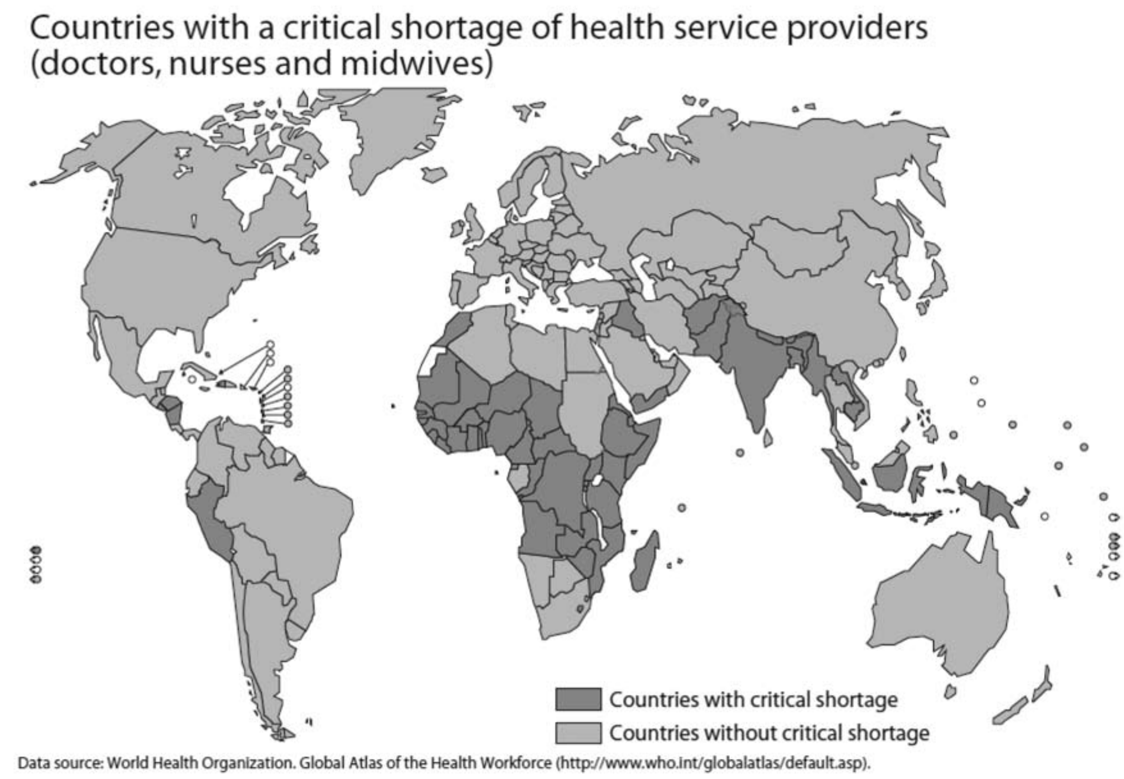

Figure 3: Shortage of Health Service Workers

Thus the role of training institutions in country is critical in addressing these critical shortages, which is present through out most of Sub-Saharan Africa (Figure 3). In several countries, the training of health workers is fragmented. For example, in Nigeria, the Ministry of Health is responsible for professional training of nurses, midwives and physicians; but the Ministry of Education is responsible for academic training for doctors (medical schools), nurses (nursing faculties), radiographers, etc. that occur at the universities.

In the past, many donors were reluctant to support tertiary education, preferring to focus on basic training. For example, at the initial phase of support for HIV/Programs in Africa, limited amount of donor funds went into advocacy or capacity building in HIV/AIDS in medical and nursing schools while significant amount of funds were being

directed to the field creating a situation where you had newly-trained physicians and nurses who were ill equipped to deal with the realities of the epidemic. This lack of support for tertiary education is perhaps demonstrated in the static curriculum of many medical schools in Africa. For example, the curriculum of University of Ibadan, perhaps the most prominent medical school in Nigeria, finalized its first major review of the curriculum in 2010, after over sixty years. The process was driven by an alumnus, a medical academic who returned to the University after over a decade training and working in Western Institutions.[11,12]

A recent review of over a hundred medical schools in Sub-Saharan Africa[13] indicated that countries are prioritizing medical school scale-up as part of health system strengthening. The study also drew attention to ubiquitous faculty shortages in basic and clinical sciences, weak physical infrastructure, and little use of external accreditation. It provided several recommendations for strengthening medical school education on the continent, including the use of international partnership -which is the essence of the triangular partnerships.

Global health partnerships that consider local needs and context are vital to speeding research discoveries to people who need them most, according to speakers at the fourth annual meeting of the Consortium of Universities for Global Health (CUGH). The era when experts from high-resource countries dropped briefly into developing countries to conduct study or teach a skill should be relegated to the past, according to Rwandan Health Minister Dr. Agnes Binagwaho. Such so-called parachute visits are no longer the norm in her country. "You used to come for two weeks and after that go back. Now you stay long-term to transfer capacity in a direct way," she noted.

Schematic of the Global Health Financing Landscape

McCoy D et al. Health Policy Plan; 2009, 24: 407-417

Figure 4: Global Health Financing Overview by Function

Shifting Landscape for Western Institutions

As the needs of African countries have changed, the global development assistance landscape for health has been transformed. The Global Assistance for health more than quadrupled, from $5.7 billion in 1990 to almost $27 billion in 2010.[14] Two decades ago, the major players in global health governance were WHO, a limited number of bilateral donors, the World Bank, and recipient governments. Now the main players have multiplied at all levels (Figure 4). For example, the number of donor government providers (Figure 4) increased from several non-OECD (Organization for Economic Co-operation and Development) countries (e.g. China, Saudi Arabia, South Africa) at the same time as private foundation finance has increased significantly. The Bill and Gates Melinda Foundation alone spent almost as much as WHO on health. The private sector (both for profit and not for profit), NGOs, and Academic institutions now contribute billions to global health. [15]

If the first function in global health is financing, the second is managing and is concerned with the management or pooling of global health funds as well as with mechanisms for channeling funds to recipients. There are several categories of players that are also changing - in addition to the official bilateral aid agencies of the U.S. and U.K. (the two largest health donors), the U.S. now has several agencies working in health including USAID (U.S. Agency for International Development), PEPFAR (President's Emergency Plan for AIDS Relief), the President's Malaria Initiative, and even the State Department with different rules and target audiences. Global health partnerships are a fairly new space, with most player organizations founded in the later 1990s or early 2000. These partnerships have an increasingly important funding role, such as the Global Fund to fight HIV/AIDS, tuberculosis, and malaria (managed $3 Billion in 2010).[16]

The third function in the global health financing landscape is spending, which has also expanded beyond the multilateral and United Nations (U.N.) Agencies, Lower and Middle Income Countries (LMIC) Governments, and International NGOs common in the 1970s/1980s. This area now includes domestic NGOs and Civil Society Organizations (CSOs), and increasingly in the donor countries, academic institutions. The role of academic institutions in global health seems to be changing from its formal role of training public health professionals around the world (e.g. the network of John Hopkins MPH alumni around Ministries of Health) to a more active dynamic role across all the three functions of the global health financing landscape.

For example, eight university presidents—from Boston University, Duke University, Emory University, Johns Hopkins University, University of Washington, McGill University, Stanford University, and the University of California—released a joint statement in September 2009 urging the United States to use the entire resources of universities to respond to global health needs and support a new generation of global health workers (not just traditional public health school partnerships, but including other areas such as engineering, architecture, basic sciences, clinical medicine etc).[17] In fact, in December 2011, the Consortium of Universities for Global Health merged with Global Health Education Consortium (GHEC) to achieve their shared vision of making the university a transforming force in global health – presumable members of the consortium. The result of this transformation of the global health environment in western institutions has made need analysis much more complicated.

Bilateral Aid Organization priorities are often closely linked with foreign policy and political considerations of a donor country. Purchasing and hiring constraints are usually designed to ensure that much of the assistance money

returns to the donor country. These programs may be oriented towards the donor country's industries and programs, and may be minimally responsive to recipient country priorities. In addition, in many countries developmental assistance may be politically vulnerable with very small constituency of support making it particularly more vulnerable during an economic crisis.[18] On the other hand, the increasing funding from the private sector are subject to different considerations such as the boards of for-profit companies, or the board of trustees or governing families for foundations. Thus the needs of each funder may differ but it is critical these needs are understood and met for sustainable programs.

African Diaspora ---- The Missing Link?

The migration of skilled professionals across the globe in search of better lifestyle and employment is not a new phenomenon. This migration was seen from Europe to the Americas in the nineteenth century, and early part of the twentieth, as well as several developing countries in Asia, Africa and Latin America over the last few decades. The movement of knowledge workers from less developed countries to the developed ones, in search of better lifestyle and employment opportunities has come to be known as brain drain.

In 2000, it was estimated that approximately 65,000 African-born physicians and 70,000 African-born professional nurses were working overseas in a developed country.[19] This represented about one fifth of African-born physicians in the world, and about one tenth of African-born professional nurses. The fraction of health professionals abroad varies enormously across African countries, from 1% to over 70% according to the occupation and country. In 2000, for every Liberian physician working in Liberia, about two lived in developed countries. For every Gambian professional nurse working in the Gambia, likewise about two live in a developed country overseas. Also notable in the figures is the extreme variation of these statistics across the continent. Niger has a tiny physician diaspora while Ghana's is enormous. It also appears that doctors from Francophone or lusophone African countries may face language barriers or other impediments in the destination countries with the most opportunities for foreign doctors.

Consequently, several developed countries such as the U.S. are home to several first and second-generation diaspora groups who as citizens understand the socio-cultural environment and ongoing experience in working with Western Institutions. Yet, especially for first generation diaspora, this is complemented by understanding the socio-cultural environment within which health care is delivered in several of these countries, and direct experience For example, there are also over 2,500 Nigerian registered physicians and 9,000 nurses in the U.S., many of whom are already contributing to health based programs in Nigeria and other African countries including Uganda and Sierra Leone.

A large proportion of these physicians are represented by the Association of Nigerian Physicians of the Americans (www.ANPA.org) that is starting to have significant impact in Nigeria. For example, Nigeria in recent years had become a major bastion of polio, but under the leadership of an ANPA member, the Nigerian primary health care agency has reduced the incidence of Wild Polio Virus (WPV) in Nigeria from eight hundred cases in 2008, to less than four hundred in 2009. As of the end of May 2013, there have been only twenty-three confirmed cases of WPV.

This perspective is confirmed by a 2009 Anadach analysis of medical school graduates (class of 1981) from one of the largest producer of African-trained physicians practicing in the U.S.,20 University of Ibadan, Nigeria. Approxi-

mately 65% of the (class of 81) physicians were practicing in North America, the U.K. and Ireland. Over 75% of the top decile at graduation were in the U.S or U.K.

Given that many of the medical diaspora may be (or could be) regarded as medical leaders in their country of origin (perhaps exacerbated by the disproportionate migration of high-performing medical students), this may be a professional group that could provide an effective link between Western Institutions and African Institutions.

This link is increasingly recognized by African Institutions. For example, the African Union (AU) launched an African Diaspora Health Initiative in 2008, after designating the diaspora as the sixth region of the organization in 2003 to sustain "political, economic, social and cultural relationships across the Atlantic". According to Dr Akukwe, the pioneer Chairman of the AU Africa Diaspora Initiative, Africa is in urgent need of help; the continent represents 10% of the global population but accounts for 25 percent of global burden of disease and 3 percent of the global workforce. The purpose of the Africa Diaspora Health Initiative is "to link specific health expertise within the African Diaspora with specific health needs in specific geographical locations in Africa., and creates a unique opportunity for Africans in the diaspora to support health programs in Africa. Several countries have recognized this opportunity across the continent. It is now the norm for Ministers of Health to attend Health Diaspora conferences in the U.S. and the U.K. (e.g. Nigeria, Ghana, Kenya and Ethiopia).

Several members of African Diaspora feel increasingly called to contribute to their country of origin. For example, it is estimated that more than two million Tanzanians live in foreign countries. According to the 2012 Tanzania Diaspora conference, even though some of these individuals have taken citizenship in foreign countries, their love for Tanzania remains undiminished. Many would like to contribute to the development of their home country by leveraging the expertise in various areas gained through formal education and work experience and their good knowledge of Tanzania. The desire to achieve their goal has been encountered with many obstacles due to the lack of a formal vehicle, which would coordinate and simplify their initiatives.

For individuals, who have been involved in successful capacity building programs in their country of origin have indicated different individual drivers, which often involve a link to western institutional support. Take the case of Dr. Shafique Pirani,[21] a Professor of Pediatric Surgery at the University of British Columbia. Dr. Pirani had not intended to tackle the problems of Ugandan public health on his visit to his country of birth, thirty-six years after his tumultuous exit. However, he found that with his professional expertise in orthopedics, he could treat clubfoot - an abnormality affecting about 1,500 Ugandan newborns on annual basis. Leveraging his Canadian and international contacts, Dr. Pirani was to secure $1 million from the Canadian International Development Agency (CIDA), and through partnerships with Makerere University and the Ugandan Ministry of Health, the project he initiated has been able to build capacity within the Ugandan Health Care System to screen, diagnose and treat clubfoot with the Ponseti Method. This represents a successful triangular partnership based on identified need in-country (children with clubfoot going untreated), and the need of a diaspora – Dr. Pirani - to do something for the country of his birth using his experience and professional contacts.

Framework for Need Analysis

For a triangular partnership to be successful, the needs of all three partners must be met on a sustained basis. We propose that the initial assessment of need should be focused around the country's need - often best articulated by local professionals as part of an interactive discussion. The days of know-it all from the west (either representatives of western institutions or diaspora members) are long gone. It is important especially for diaspora to remember, that even though may have trained or worked in the system years ago, that change is dynamic. Sometimes international teams (which may include diasporan Africans) make local professionals feel threatened on their own jobs, by failing to recognize the difficult environment that often exist e.g. lack of resources and current local health priorities. Such situations may lead to acceptance of a short-term project but no long-term local ownership and sustainability. In Table 1 are listed some broad areas that a particular project may wish to focus on – which could be further developed based on target audience and subject matter. For example, types of research capacity to be build can include: basic research skills in laboratories, clinical research, or operational research at the Ministry.

As discussed in the section on Western Institutions, the needs of various institutions are different. Government-funded programs tend to be more cautious with strong administrative requirements that must fit into government policy, compared to programs funded by foundations which may be more willing to sponsor riskier programs in the manner of venture philanthropy. In addition, various institutions have different needs. For example, university funded or university managed programs are likely to be most interested in building research capacity and education/training. Programs from academic institutions probably would probably need to ensure that in the process of building capacity that enough new knowledge is generated to ensure development of academic papers worthy of being published in peer-reviewed journals. Thus, if research capacity-building is chosen as a potential project, the participating institution needs to make a realistic assessment of the needs that must be met to create an enabling environment for long-term financing.

In terms of the third arm of the triangular partnership, we suggest that the chosen project must be something the diaspora group is interested in, excels at, and has a passion for - especially as this is often a volunteer initiative or at least has some elements of volunteerism. Increasingly, quite a few diaspora physicians are working through their professional groups to help build capacity in various countries on the continent. For example, Dr. Robert Lewis, Professor of Gastroenterology at The Mayo Clinic, plays a lead role in the American Gastroenterology Association. Dr. Lewis sponsored a post-graduate training program at Korle Bu Teaching Hospital in Accra. In another example, the collaboration of the Association for Academic Surgery and the West African College of Surgeons offers joint training programs in Togo, Liberia, Nigeria and Sierra Leone (where several faculty and at least one of the course directors are members of the African Diaspora). Because some institutions in Africa now include graduates of top western universities and increasingly also include returnees , the most successful projects often have diaspora members who are internationally recognized in their specific field. In some countries, especially those with large professional diaspora communities – often Anglophone-experience abroad is no longer adequate or enough to spark interest in a diaspora project especially in academic institutions. Thus diaspora organizations and members need to have a realistic assessment of their resources and ability to contribute towards the institution of choice.

To assist in a systemic assessment of sector in defining a potential project, we present a potential framework that can be used in identifying a win-win-win project from all ends – based on needs, resources and capabilities. We

suggest that after identifying two to three potential areas of interest, that key parties identify their strengths, weaknesses, opportunities and threats around potential projects during a participatory meeting on ground before finalizing project design. For example, should a diaspora group of medical academics working with a local institution decide to focus on building research capacity, we suggest a one to two day workshop (in person if possible or by teleconference given the improved telecommunication infrastructure in several countries) to discuss and agree on the project desired outcomes within a defined time frame, then focusing on the inputs and outputs required to achieve such outcomes.

Table 1: Analyzing potential areas to build perspective from a triangular partnership perspective

Potential Areas to Build Capacity	Country	Western Institutions	Diaspora
Research Capacity			
Clinical Practice			
Education / Training			
Technical Skills e.g. policy analysis, program management, epidemiology, health financing			
Entrepreneurship / Contributions to Private Sector Development			
Finance			

In summary, we believe that sustainable development projects involving the diaspora must meet the individual needs of the various partners, while ensuring the best balance of resources and outcomes.

Bibliography

1. International Finance Corporation, The business of health in Africa
2. The Economist. The future of healthcare in Africa .2011
3. Rodriguez Pose, R. & Samuels, F. Rwanda's Story: Progress on health in Rwanda: Leadership, performance and health insurance, 2011. ODI. From: http://www.developmentprogress.org/sites/default/files/rwanda_health_progress.pdf

4. http://opinionator.blogs.nytimes.com/2012/07/03/rwandas-health-care-miracle/
5. WHO country Profiles
6. Blanchet et al: The effect of Ghana National Health Insurance Scheme on Health Care Utilization; Ghana Medical Journal. June 2012 Volume 46, Number 2
7. Mensah J, Oppong JR, Schmidt CM. Ghana's National Health Insurance Scheme in the context of the health MDGs: An empirical evaluation using propensity score matching. Health Econ.2010;19(S1):95–106.
8. Nguyen et al: The financial protection effect of Ghana National Health Insurance Scheme: evidence from a study in two rural districts. International Journal for Equity in Health 2011, 10:4
9. The McKinsey Quarterly, Addressing Africa's health workforce crisis.
10. UN world population prospects 2009
11. http://samss.org/samss.upload/wysiwyg/Full%20Site%20Visit%20Reports/Ibadan%20-%20Nigeria.pdf
12. Olapade-Olaopa EO. College of Medicine, University of Ibadan, 2004 College Lecture "Curriculum change and the College of Medicine, University of Ibadan".Afr J Med Med Sci. 2006 Sep;35(3):395-405.
13. Mullan, F et al. Medical schools in sub-Saharan Africa The Lancet, Volume 377, Issue 9771, Pages 1113 - 1121, 26 March 2011
14. Murray CJ, Development assistance for health: trends and prospects. Lancet. 2011 Jul 2;378(9785):8
15. Sturchio JL and Goel A. The Private-Sector Role in Public Health: Reflections on the New Global Architecture in Health. Center for Strategic and International Studies (CSIS), January 2012
16. Wexler et al. Donor Funding for Health in low and middle-income countries 2002–2010. Kaiser Family Foundation. Jan 2013. http://www.who.int/workforcealliance/knowledge/resources/KFF_Jan2013.pdf
17. http://www.cugh.org/about-us/support
18. http://globalhealtheducation.org/resources_OLD/Pages/GlobalHealthPlayers.aspx
19. Clemens MA and Petterson G: New data on African health professionals abroad. CGD Working Paper Number 95. February 2007
20. Hagopian et al. The flight of physicians from West Africa: Views of African physicians and implications for policy. SocialScience&Medicine 61 (2005) 1750–1760
21. http://www.sfu.ca/diasporas/blogs_cure_for_clubfoot.htm

"People to People (P2P) developed the concept of the Triangular Partnership in an effort to give something back and make a difference in the Ethiopian health sector. The Triangular Partnership draws on the Ethiopian diaspora to connect western and Ethiopian health care institutions. The Ethiopian diaspora in the United States alone is estimated to number between a half million and more than a million persons. Among this number are an estimated 1,000 physicians of Ethiopian origin living in North America. Many other Ethiopians, including health professionals, have migrated to other parts of the world. While this book focuses on how the Triangular Partnership has worked in Ethiopia, it applies equally to diasporas from any country that now live in any other part of the world."

— from the Forword by David H. Shinn
Adjunct Professor, George Washington University
U.S Ambassador to Ethiopia 1996-1999

www.peoplepeople.org