IAMSE Webinar

Global challenges and Solutions in Health Professions Education

Challenges and Opportunities for Medical Schools in Africa

Quentin Eichbaum

MD, PhD, MPH, MFA, MMHC, MSc, FCAP, FASCP

Vanderbilt University Medical Center

Africa – large and complex

- ~ 54 countries
- ~1500-2000 languages
- Wide spectrum of cultures, geographies, economies, historical legacies
- Challenges & opportunities for health professional education?

Colonialist Legacies of Africa

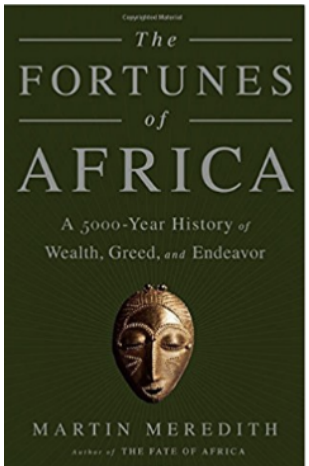
"The only excuse for colonization is medicine…The one thing that "…ennobles and justifies the [brutality of colonization]…is the action of the doctor." (Lyautey)

French Marshall Lyautey
1854-1934

"It is no accident that the redefinition of public health and biomedicine as scientific professions coincided with the moment at which European

powers began to build empires."

Greene, J et al. "Colonial Medicine and its legacies' in Reimagining Global Health, 2013



Is ‘Colonialism’ still setting the agenda?

“Knowledge frameworks carried forward from colonial times continue to influence both who is invited to the policymaking table and how global health agendas are then prioritized.”

Greene J, *Colonial Medicine and its Legacies*, 2011

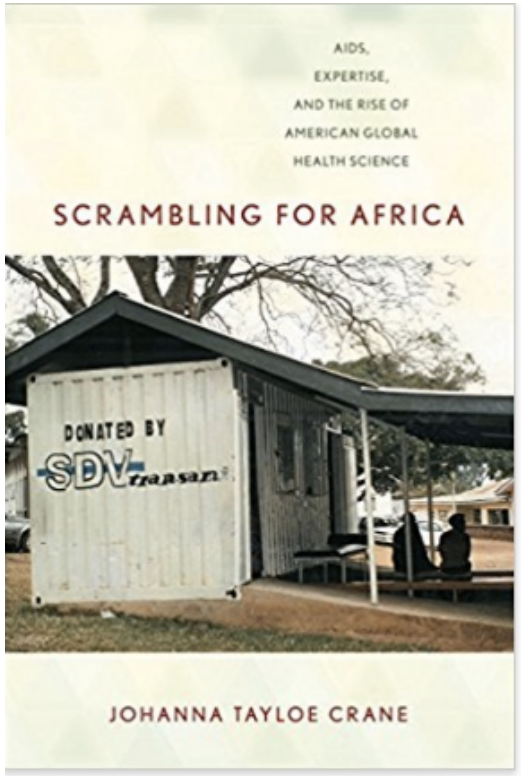
Rise and Impact of **“Global Health”** on science and medicine in Africa

“Global Health” & Medical Education?

- Jim Kim 2011 AAMC - Pres World Bank, (PIH)
- Medical schools should drive “global health:”
    1. Medical schools are the upstream training ground for doctors
    2. Medical schools have added access to multiple disciplines in universities that add value to global health

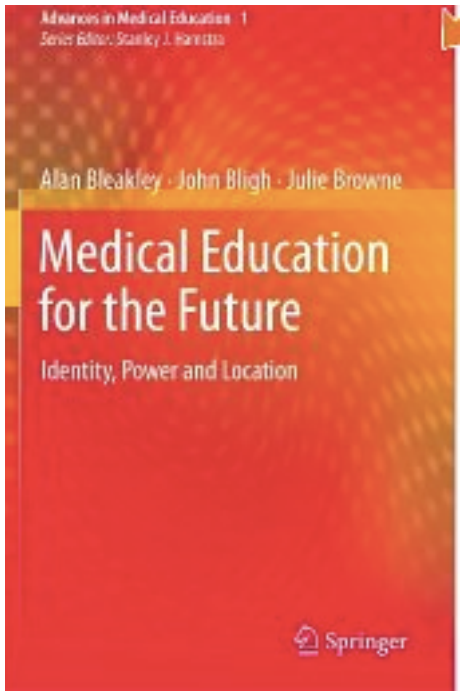
“Global Health” & the New Scramble for Africa

“The awkward relationship between science and development is…a defining characteristic of global health research. Since the waning of the colonial era in the second half of the twentieth century, relations between African nations and “the West” have been increasingly defined by the politics of aid and development, in which North American and European countries serve as “donors” to impoverished, formerly colonized “client” nations.”



‘Western’ medical education as ‘unwitting (re)colonizers?’

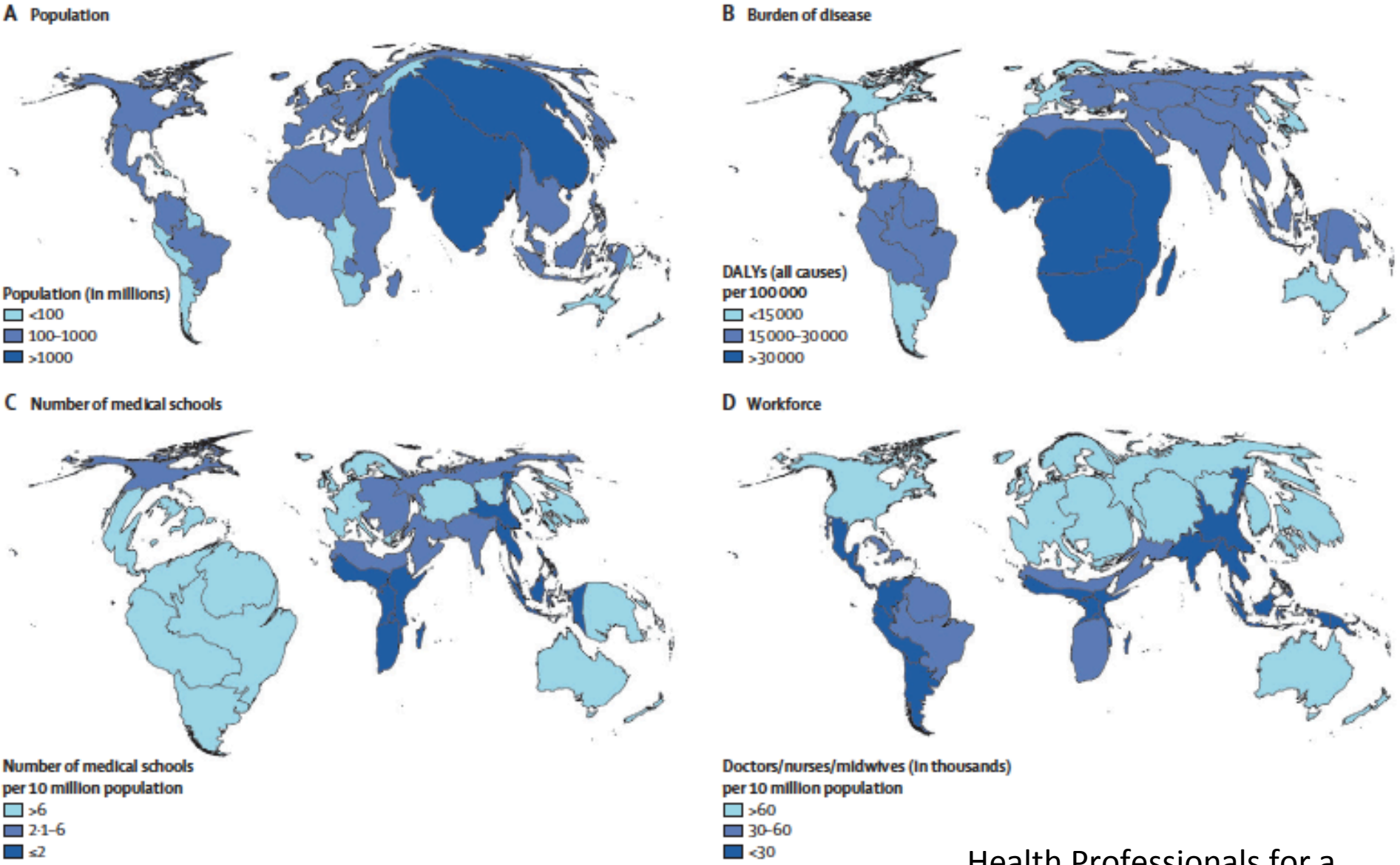
“What does it mean to be a medical educator who may unwittingly be colonizing an ‘Other’ with patently Western ideals and practices, a rhetorical tactic that serves also to construct the identity of the colonizer.”



EDUCATION OF HEALTH PROFESSIONALS FOR THE 21ST CENTURY:
A GLOBAL INDEPENDENT COMMISSION

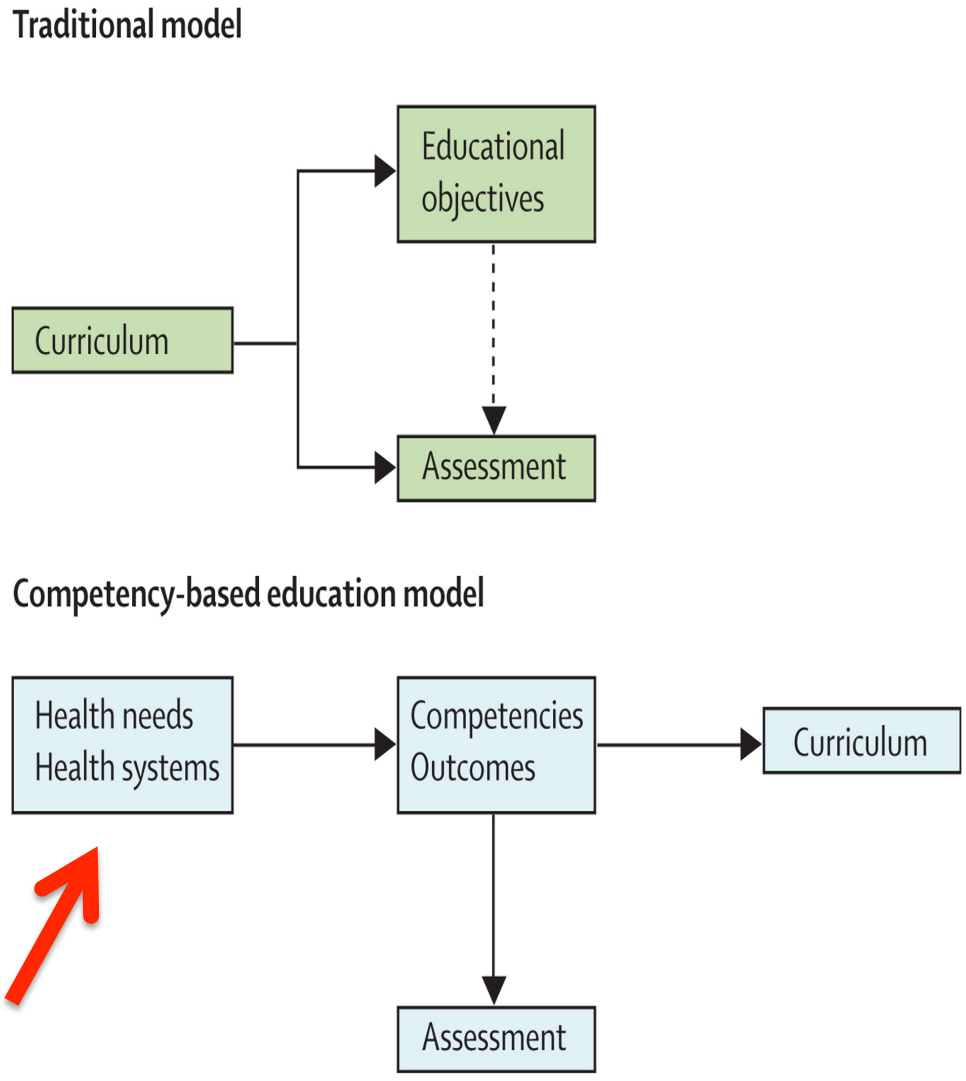
Health Professionals for a New Century –

transforming education to strengthen health systems in an interdependent world



Health Professionals for a New Century, Lancet 2010

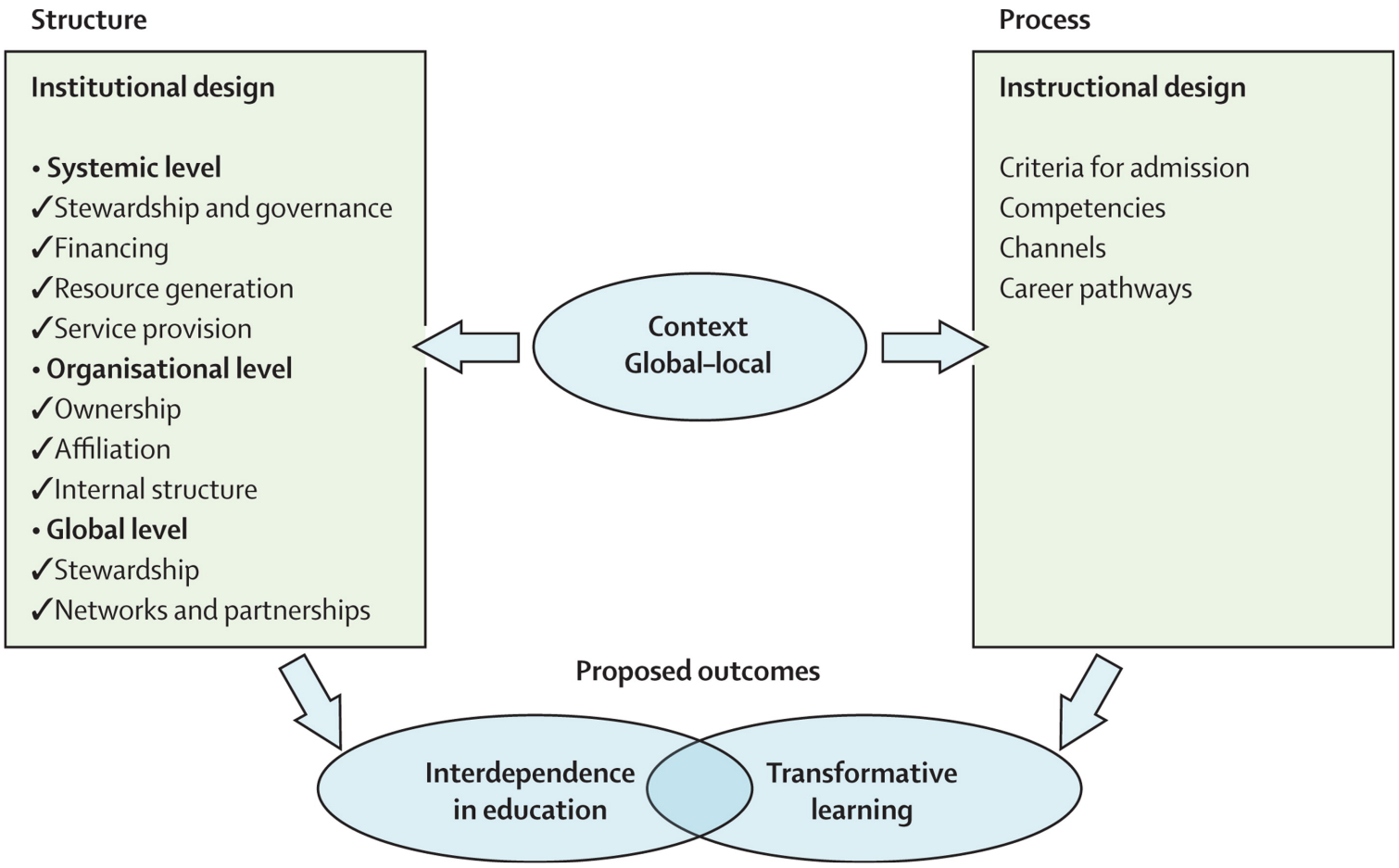
‘Health and Systems Needs’ VS ‘outdated static curricula’



"...a slow-burning crisis is emerging in the mismatch of professional competencies to patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates for underfinanced institutions."

(Frenk et al., LANCET 2010)

‘Interdependence-Context-Transformation’



Frenk et al., LANCET 2010

Contexts: Global VS Local?

- *Adaptation locally but harnessing of resources globally in a way that confers capacity to flexibly address local challenges while using global knowledge, experience, and share resources… (Frenk et al. Lancet 2010)*

- *"Global policies can be helpful in offering strategies and standards for care delivery, but they must be adapted to local context to minimize unintended negative consequences …"*

(Bleakley, Bligh and Brown 2011)

"Interdependence =

from **'isolated silos"** to **"networks, alliances & consortia"**

(Lancetl. 2010)

"Laudable efforts to address these deficiencies have mostly floundered because of the so-called tribalism of the professions – ie the tendency of the various professions to act in isolation from or even in competition with each other."

Shift from isolated to harmonized education and health systems…grom stand-alone institutions to **networks, alliances and consortia**

"Networks, alliances and consortia.."

"Global Networks, Alliances and Consortia" in Global Health Education—The Case for South-to-South Partnerships

Quentin Eichbaum, MD, PhD, MPH, MFA, FCAP,†‡ Peter Nyarango, PhD,§ Kasonde Bowa, MB BCh, MSc, MMed, DPH,|| Philip Odonkor, MB ChB, PhD,§ Jorge Ferrão, PhD,¶ Yohana Mashalla, MD, PhD,# Olli Vainio, MD, PhD,**†† and Sten H. Vermund, MD, PhD†‡‡*

Eichbaum et al. – JAIDS, 61(3), 2012

Medical Education Partnership Initiative

MEPI 2010-2015 –
capacitation of medical education in Africa

MEPI transitions into AFREhealth

Accra Ghana June 2017

MEPI

NEWSLETTERS WEBINARS HOME ABOUT MEPI LIBRARY SYMPOSIA

2017 AFREHEALTH SYMPOSIUM

→ 2017 Call for Abstracts

SYMPOSIUM ANNOUNCEMENT

The AFREhealth 2017 Symposium 1st- 3rd August 2017

Venue: Ghana College of Physicians and Surgeons, Accra, Ghana

Theme: **"Leadership and Capacity building for Health Professions Education and Research in Africa."**

AFRICAN FORUM FOR RESEARCH AND EDUCATION IN HEALTH (AFREhealth)

1ST ANNUAL SYMPOSIUM | 2017

1ST - 3RD AUGUST, 2017

GHANA COLLEGE OF PHYSICIANS AND SURGEONS

ACCRA, GHANA

CUGH - Largest academic global health organization in world – Education/Research

- 165 universities, > +30 000-individual network

AFREhealth-CUGH collaborative Working Group (2017)

Regional African Education Consortia

Medical Education for Equitable Services to All Ugandans (MESAU)

A Medical Education Partnership Initiative (MEPI)

CONSAMS

Consortium Of New Southern African Medical Schools

The Vision of CONSAMS

- To be an effective catalyst for the education and training of sufficient number of health care professionals in the region.

The Mission of CONSAMS

- To promote the establishment and sustainable development of new medical schools in Southern Africa

General Objectives

- Teaching and learning, service, research
- Advocacy

Specific Objectives

- To develop a medical curriculum that is appropriate to the needs of each of the participating countries in southern Africa context
- To promote the faculty and trainee exchanges between the participating medical schools
- To create a forum for the exchange of ideas between the participating medical schools
- To promote south-south partnerships with facilitation from northern partners
- To promote needs-based/translational-relevant research
- To monitor and support each other's progress (external examiners, accreditation of Medical Schools in Southern Africa?)

Proliferation of New Medical Schools

+100 new medical schools to open in Africa over next 10y!

Rural Community Programs

eg Namibia; & *'One-student-one-Family'* (UniLurio, Moz)

Resource applications

A Doctor of My Own: The First Medical Students of Namibia (2014)

9.4/10 14 | Rate This

51min | Documentary, History, News | 11 May 2014 (USA)

According to the WHO, Sub-Saharan Africa carries 24% of the world's burden of disease, but 3% of the health-care workforce. Within the next decade, 100 medical schools will open across ... See full summary »

Director: Trisha Pasricha

Stars: Julio Frenk, Quentin Eichbaum, Philip Odonker

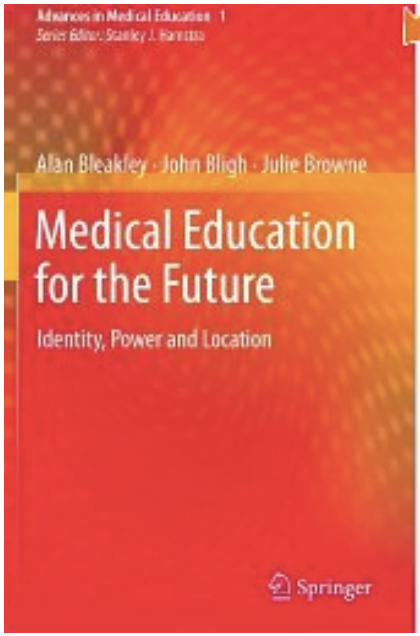
Challenges facing (New) Medical Schools in Africa

1. **Standards/accreditation**
2. Admissions
3. Assessment and Evaluation
4. Curriculum

Wanting to conform to 'Western' standards

- *"Nervousness about not being seen to conform to Western educational imperatives permeates…. [African] medical education…."*

- *"…medical educational strategies cannot be cooked up in [Western] Universities and then exported. They must be **context specific** and fit the purpose, formulated in the heat of practice."*



Exporting (franchising?) Western Standards

Thinking the post-colonial in medical education

Alan Bleakley, Julie Brice & John Bligh

Medical Education, 2008

"At its extreme, this emphasis on standardizing risks echoing the homogenizing process of Western-inspired 'McDonaldisation.' In this case, however, what is being traded in the global marketplace is knowledge rather than hamburgers."

Admissions

Admissions – challenges

- Most African schools follow the European medical education system
  - Admission straight after high school - 5-7 year degree>internship>MMED
  - Elite private VS poor public high schools – biased merit-based admissions
  - Narrow admissions criteria – exam results
  - Often lack standardized school testing and/or entrance exams

- M.O.H pressure on schools to admit & graduate more physicians

- Power influences over admissions process

- Rise of private medical schools viewed by some with suspicion

Admissions – alternate models

1. Quota system – University of Namibia SoM
   - Each region designated a quota of students admitted
   - More equitable?
   - Evidence rural students more likely to return to rural practice

2. Lower admissions criteria for some/all students?
   - Provide free rigorous academic support of a year or more (S.Africa)
   - Self paced learning; allows catch-up > equitable

3. 'Farming out' some admitted students to other schools/ countries – SA, Lesotho, Sudan…

Assessment and Evaluation

Assessment and Evaluation

- May lack expertise and/or resources in assessment/evaluation methods (especially new medical schools).

- Options
  1. Apply locally-developed tools/resources
  2. Use online resources
  3. **Develop regional "external examiner" system (CONSAMS)**
  4. International accreditation standards

- International examination examples:
  - NBME eg pilot of the IFOM in Namibia (other CONSAMS schools);
  - OSMOSIS (offered to CONSAMS)
  - Others: COURSERA; KAHN; NextgenU - a plethora?

Curriculum

"Fragmentary, outdated, static Curricula..."

(Frenk et al., LANCET 2010)

"...a slow-burning crisis is emerging in the mismatch of professional competencies to patient and population priorities because of fragmentary, outdated, and static curricula producing ill-equipped graduates for underfinanced institutions."

The conceit of curriculum

Cynthia Whitehead, Ayelet Kuper & Fiona Webster

Medical Education 2012

"Arrogance about our potential to shape our health systems through our curriculum will not serve us well….The suggestion that medical education can fix society diverts attention from structural societal inequalities…We must take care not to suggest that the ills of society can be cured by medical curricula. "

Curricula Outdate #1

Theoretical knowledge must precede applied medical practice?

"Medical education must continue to address (and redress) the primary historical symptom of the Flexner legacy – ***the disjunction between the pre-clinical and clinical years, reflected in the outdated notions that theory must precede practice and the abstract must precede the applied****. Rather, we call for early and intensive patient contact with integrated theory and practice informed by contemporary socio-cultural learning theory centered on workplace practice."* [Bleakley, Bligh, Brown, 2011]

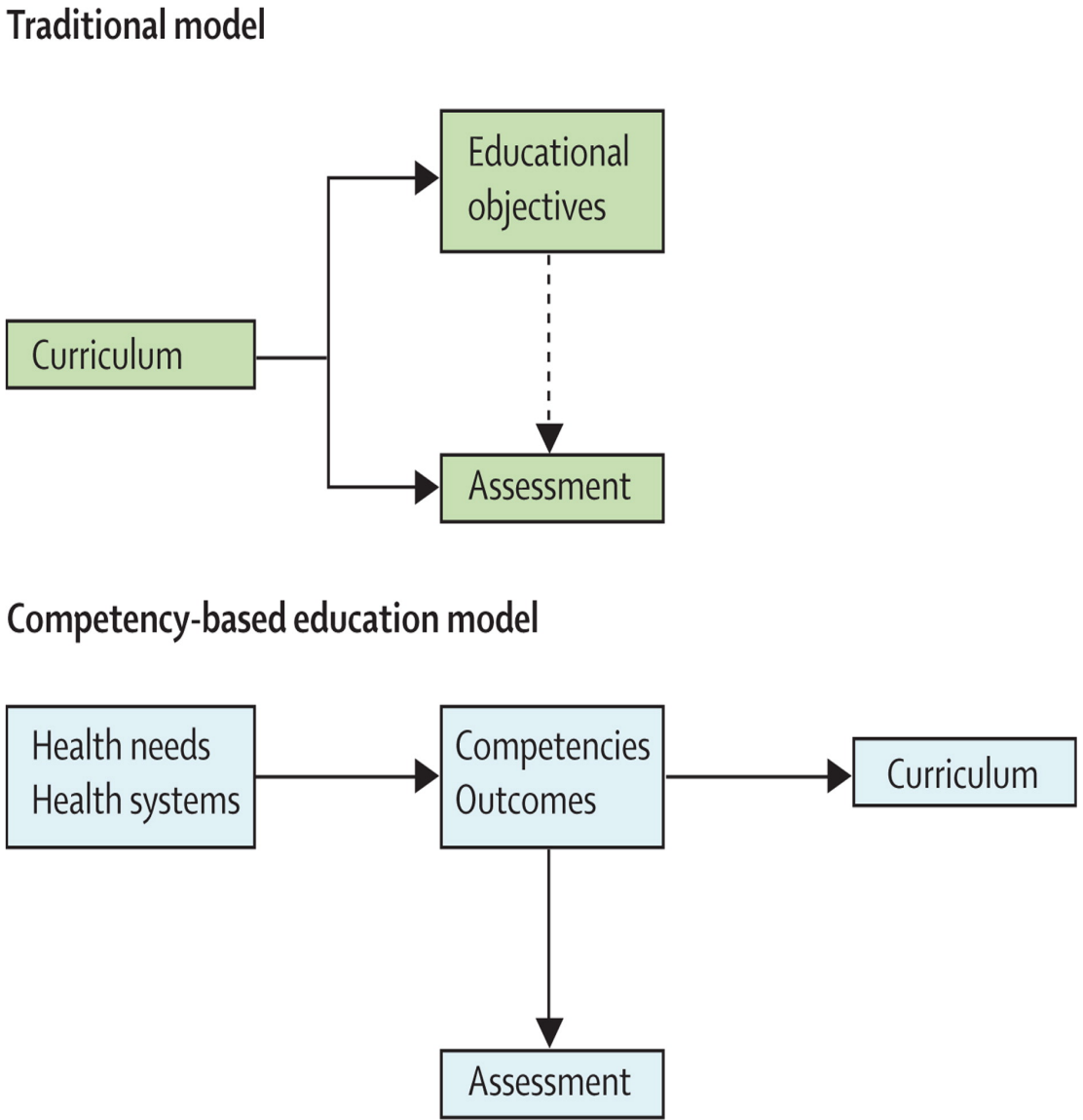
Curriculum Outdate #2

Doctor-centered hierarchies VS patient-centered

"…despite 30 years' worth of research-led development in teaching and learning communication in medicine, doctors in general communicate poorly and remain doctor-centered rather than patient centered" (Roter and Hall, 2006)

Competency-based education

(Frenk et al., LANCET 2010)



COMPETENCY BASED MEDICAL EDUCATION

Challenging a 'Western' Educational Concept in Global Contexts

Controversies with Competencies in Global health

Quentin Eichbaum
MD, PhD, MPH, MFA, MMHC, BSc(Med)(Hons), BA(Hons), FCAP, FASCP
Vanderbilt University School of Medicine

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Consortium of Universities for Global Health

www.cugh.org
@CUGHnews

Competencies in Global Health Education

The Problem With Competencies in Global Health Education

Eichbaum, Quentin MD, PhD, MPH, MFA, MMHC

Academic Medicine: April 2015 - Volume 90 - Issue 4 - p 414–417

Acquired and Participatory Competencies in Health Professions Education: Definition and Assessment in Global Health

Eichbaum, Quentin MD, PhD, MPH, MFA, MMHC

Academic Medicine: April 2017 - Volume 92 - Issue 4 - p 468–474

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The problems....

1. Insufficiently **inclusive** of input from LMICs/global south
   - Often developed self-interestedly by committee in HIC programs

2. Insufficiently **context** specific
   - Generic - to be 'conveniently' transferable across contexts

3. Unresolved **"individualist/collectivist disjunction"**
   - HICs vs LMIC cultural/learning differences

4. Inadequate **assessment** methods

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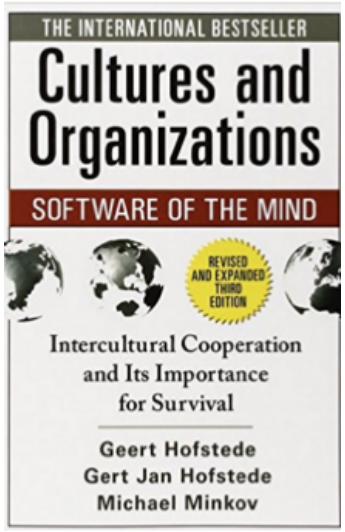
Individualist-Collectivist Disjunction

- **INDIVIDUALIST - high income countries (HIC)**
  - USA, European, Australia, NZ…(global north)
  - Understand themselves through individual achievement
  - Intrinsically competitive
  - Learning is "acquired and possessed" by the individual
  - Learning is transferable across contexts



- **COLLECTIVIST - low-and middle income countries (LMICs)**
  - Developing countries (global south)
  - Understand themselves in terms of group they below to
  - Intrinsically participatory, collaborative, place group's wishes over own
  - Learning is "situated/distributed" within and arises through participation and from dynamic social interaction
  - Learning is context-dependent and not fully transferable across contexts

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Contexts – free or linked?

- **If context-free**
  - Competent practitioner is “generally competent”
  - Competencies can be taught and practiced independent of the particularities of the context
  - Competency in one context predicts competence in others

- **If context-linked**
  - Practitioner is competent with respect to specific contexts
  - Competency MUST be linked & taught with respect to context
  - Competence in one context does NOT predict competence in others

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Assessment – shortcomings in LMICs

Low resource settings….

1. **Inadequate direct observation (eg Holmboe, 2014)**
   - Lack of faculty, over- crowded hospitals, clinics

2. **Lack a frame or reference to assess HIC trainees**
   - What are they expected to know?
   - How should they compare alongside local trainees?
   - How to assess visiting HIC trainees alongside local trainees'?

Assessment – shortcomings in LMICs

3. **Inadequacy of "checkbox" format**
   - Convenient but mechanistic
   - Can lead to overconfidence

4. **Inadequate intrinsic "competence" of LMICs settings**
   - Concept of competency training inadequately developed
   - Competence of specific training environment affected trainee's subsequent competence. Corraccio & Englander; Asch (2009) expt

5. **Lack of continuing education (CME) to maintain competency**
   - Competency wanes over time
   - Settings in LMIC can change quickly – epidemiology, sociopolitical – so competency needs adjustment

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Acquired & Participatory Competencies

- **Acquired Competency**
  - Knowledge & skills
  - Ophthalmology – Medical Knowledge
    - *"Must demonstrate competencies in their knowledge of cataract surgery, contact lenses, corneal and external disease, eye abnormalities, glaucoma…"* (ACGME -IV.A.5.b)

- **Participatory Competency**
  - Communication, collaboration etc
  - Ophthalmology – Interpersonal and Communications Skills
    - *"…communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds."* (ACGME – IV.A.5.d)

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MEPI/PEPFAR 2014 conference – Maputo, Mozambique

- ☐ Can interpret viral loads and CD4 counts in patients with HIV/AIDS.
- ☐ Counsel a dying patient.

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Acquired vs Participatory competencies

Competency Domains of four major global/public health organizations

Association of Schools of Public Health (ASPH) – Global Health Competency Model (Final Version 1.1) (2011)[19]	World health Organization (WHO) Global Competency Model[20]	Consortium of Universities for Global Health (CUGH) – competency domains for initial Competency Ranking[21]	Joint US/Canadian Committee on Global Health Core Competencies 2008-2009[22]
1. Capacity Strengthening	1. Communicating in a credible and effective way	1. Global burden of disease	1. Global burden of disease
2. Collaborating and Partnering	2. Knowing and managing yourself	2. Globalization of health and healthcare	2. Health implications of travel, migration and displacement
3. Ethical and Professional Practice	3. Producing results	3. Social and Environmental Determinants of Health	3. Social and economic determinants of health
4. Health Equity and Social Justice	4. Moving forward in a changing environment	4. Capacity strengthening	4. Population, resources and environment
5. Program Management	5. Fostering integration and teamwork	5. Teamwork/collaboration and communication	5. Globalization of health and healthcare
6. Socio-cultural and Political Awareness	6. Respecting and promoting individual and cultural differences	6. Ethical reasoning	6. Healthcare in low-resource settings
7. Strategic Analysis	7. Setting examples	7. Professional practice	7. Human rights and global health
		8. Health equity and social justice	
		9. Program management	
		10. Social, cultural and political awareness	
		11. Strategic analysis	
		12. Communication	

Participatory Competencies - assessment

- Not amenable to standard observational/psychometric methods
- Require multidimensional approach involving input from other co-assessing healthcare teams/individuals including trainee – not just single preceptor!
- Use qualitative and mixed methods from social sciences
  - Self-directed
  - Narrative
  - Ethnographic
  - Realist enquiry
  - other

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Self-Directed Assessment Seeking

Eva and Regehr (2008)

- Trainee proactively seeks feedback and assessment from a range of relevant sources (being empowered by faculty, system) and translates this feedback into improving performance.

- Collectively involve peers, teachers, other sources of info
  - More reliable than single assessor (Moonen van Loon et al, 2015)

- Collectivist settings > aligns with “Transprofessionalism” (Lancet 2010) to include ancillary health workers in low resource settings

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SUMMARY

1. Competencies may be **context-free or context-linked**

2. Some competencies may be individually "acquired" as knowledge/skills and transferred across contexts, but others (most?) are situated in dynamic social settings, linked to contexts, and are learned through "participation."

3. *Acquired* and *participatory* competencies require different methods of assessment – more work on assessing participatory competencies

4. Need more inclusive processes (global south) & more nuanced classification of competencies

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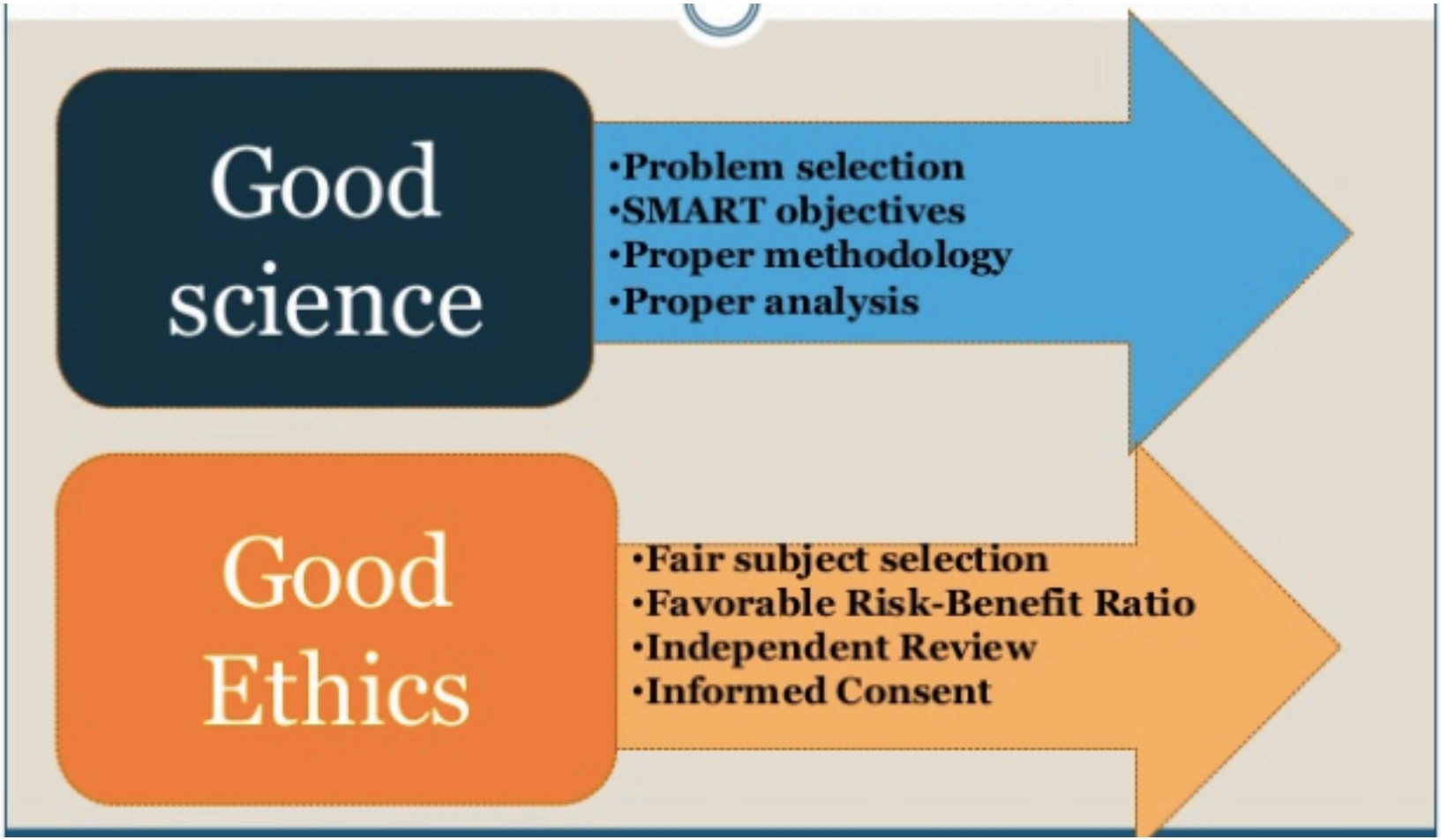
Part 2

Corollary topics

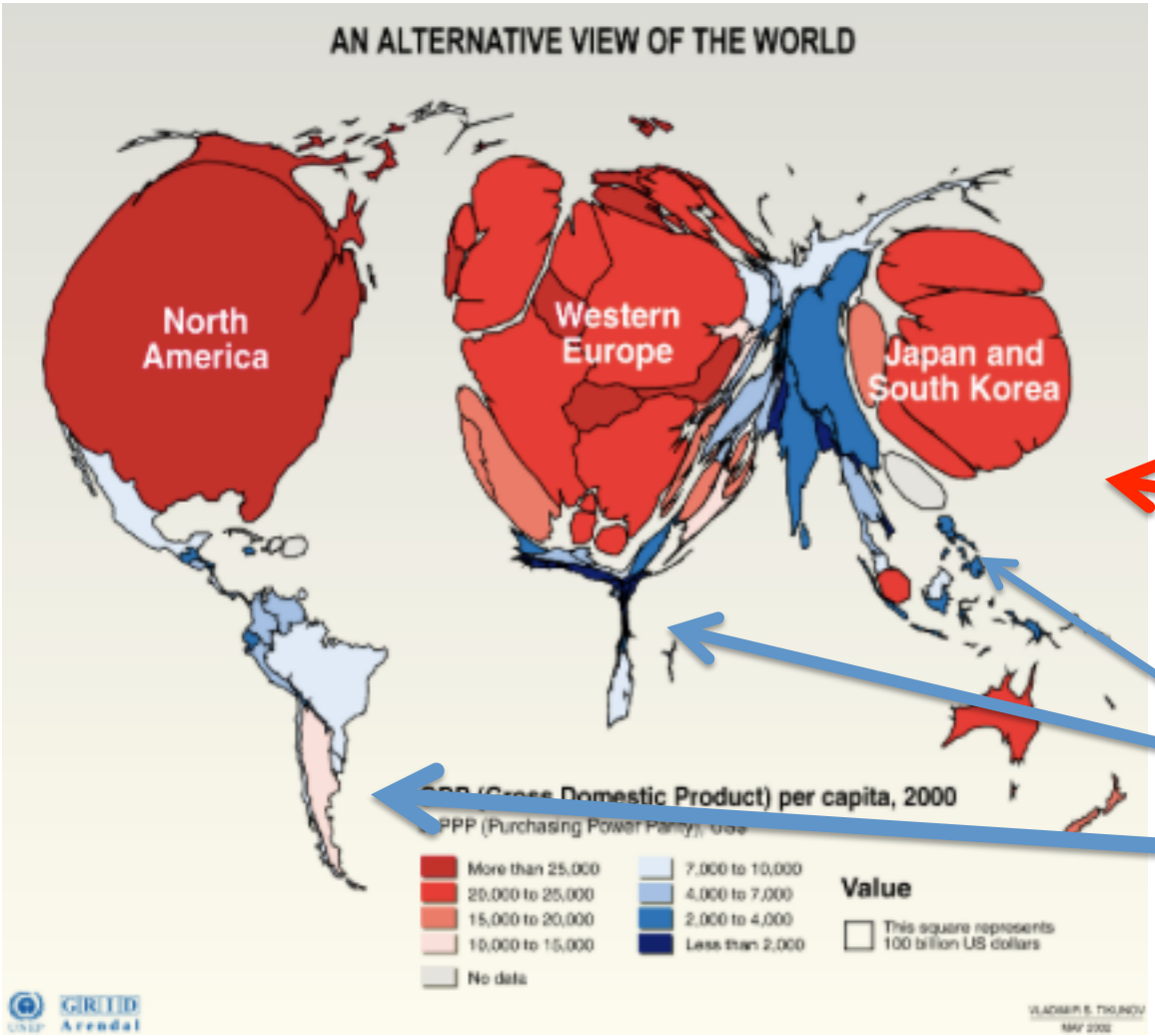
(If time permits –
or skip to **Conclusions**)

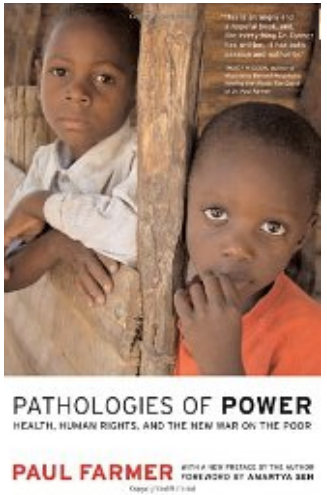
1. Challenges of Research Ethics and Capacitation

Good science = Good ethics



The HIC-LMIC Power Differential





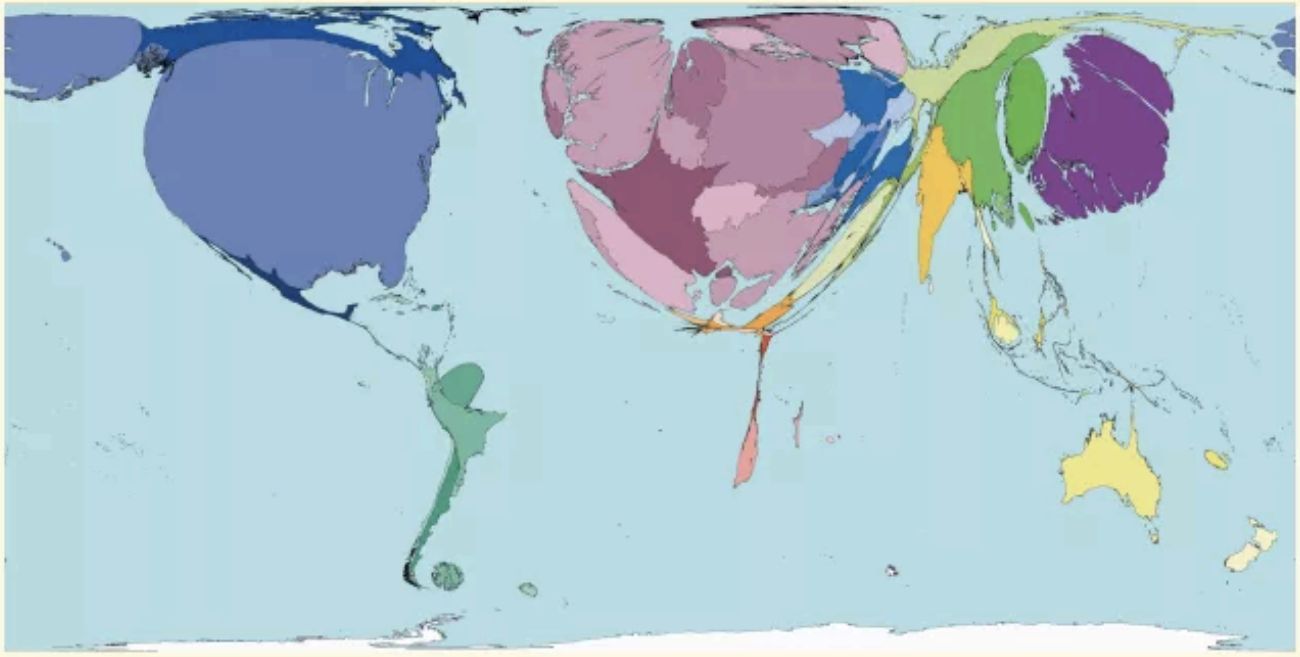
Research designed and funded by….

"International"/ global health research done here

Where is science research published?

Science Research

Produced by the SASI group (Sheffield) and Mark Newman (Michigan)



Scientific papers cover physics, biology, chemistry, mathematics, clinical medicine, biomedical research, engineering, technology, and earth and space sciences.

The number of scientific papers published by researchers in the United States was more than three times as many as were published by the second highest-publishing population, Japan.

There is more scientific research, or publication of results, in richer territories. This locational bias is such that roughly three times more scientific papers per person living there are published in Western Europe, North America, and Japan, than in any other region.

Territory size shows the proportion of all scientific papers published in 2001 written by authors living there.

Land area

Technical notes

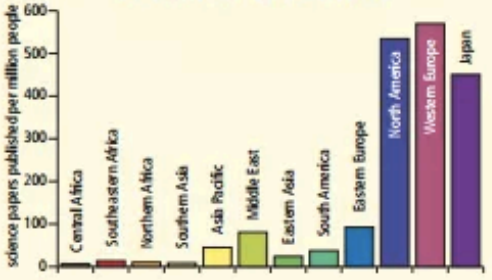
- Data are from the World Bank's 2005 World Development Indicators.
- *Territories with data estimated from the regional averages are not included in table.
- See website for further information.

MOST PROLIFIC PUBLICATION OF SCIENTIFIC PAPERS

Rank	Territory	Value	Rank	Territory	Value
1	Sweden	1159	11	Norway	723
2	Switzerland	1126	12	United States	690
3	Israel	1030	13	Singapore	620
4	Finland	980	14	Belgium	581
5	Denmark	924	15	Iceland	580
6	United Kingdom	806	23	Austria	559
7	Netherlands	783	26	Germany	529
8	New Zealand	764	27	France	524
9	Australia	758	28	Japan	450
10	Canada	723	29	Slovenia	438

*scientific papers published per million people in 2001**

SCIENTIFIC PUBLICATIONS



"Scientific research is as much the product of the society that enables it, as of the individuals who author it."

David Dorling, 2006

Publication & Research Capacitation?

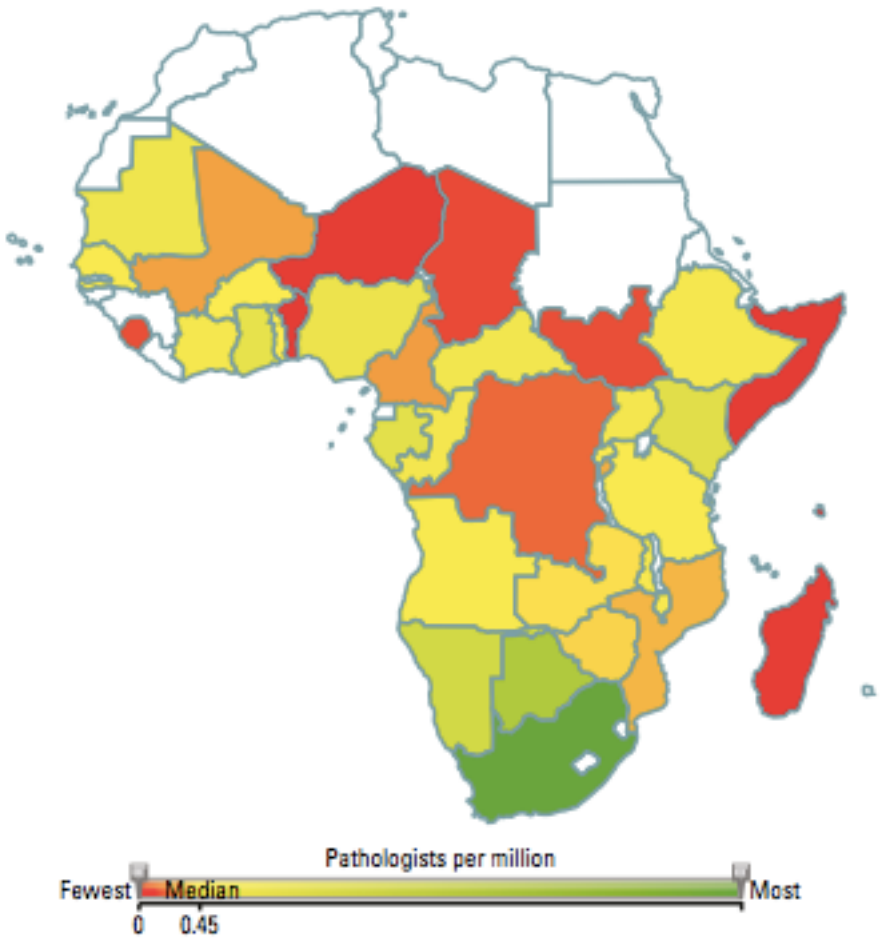
RESEARCH ARTICLE

Improving Decision Making for Massive Transfusions in a Resource Poor Setting: A Preliminary Study in Kenya

Elisabeth D. Riviello[1]*, Stephen Letchford[2], Earl Francis Cook[3], Aaron B. Waxman[1], Thomas Gaziano[3,4]

1 Department of Medicine, Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts, United States of America, **2** Africa Inland Church Kijabe Hospital, Kijabe, Kenya, **3** Harvard School of Public Health, Boston, Massachusetts, United States of America, **4** Department of Medicine, Division of Cardiovascular Medicine, Brigham and Women's Hospital, Boston, Massachusetts, United States of America

Clinical Capacitation
Eg: Pathology in Africa



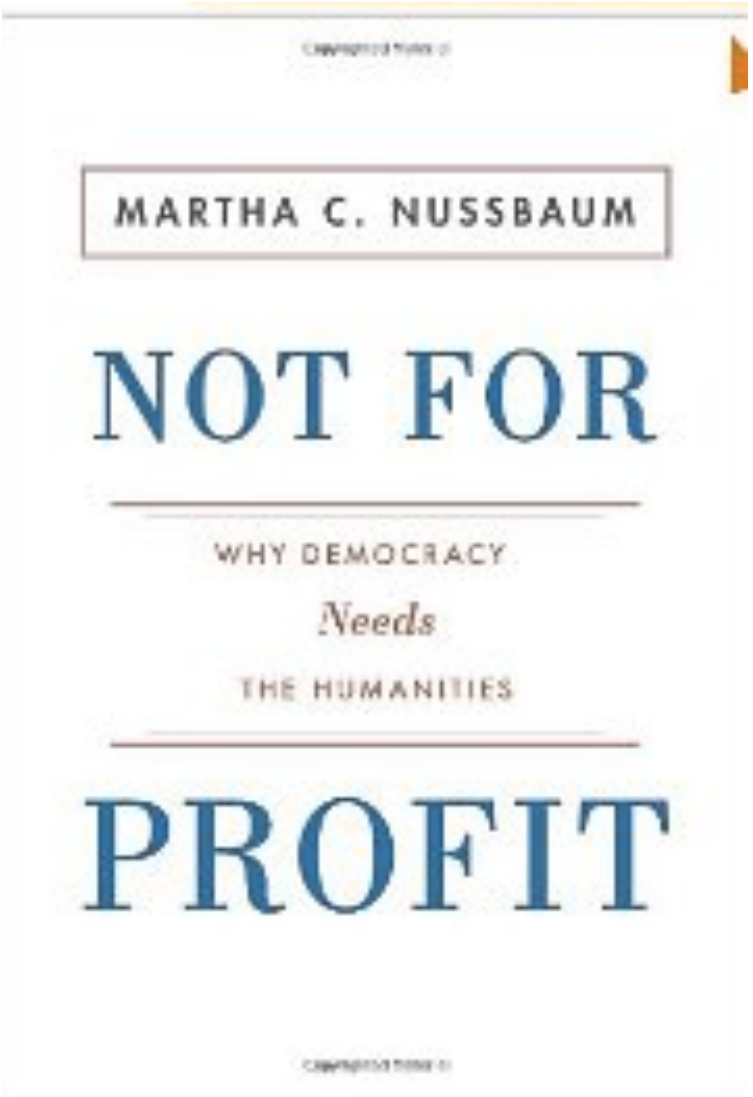
Country	Population (No.)	No. of Persons per Pathologist	Pathologists
Angola	24,906,000	2,075,500	12
Benin	10,567,000	NA	0
Botswana	2,156,000	359,333	6
Burkina Faso	18,184,000	2,273,000	8
Burundi	9,684,000	3,228,000	3
Cameroon	21,636,000	3,606,000	6
Central African Republic	5,462,000	1,365,500	4
Chad	13,439,000	6,719,500	2
Cote d'Ivoire	24,926,000	1,661,733	15
Democratic Republic of Congo	74,081,000	4,938,733	15
Ethiopia	89,060,000	1,619,273	55
Gabon	2,337,000	779,000	3
Ghana	27,379,000	912,633	30
Kenya	43,558,000	725,967	60
Madagascar	22,747,000	NA	
Malawi	16,056,000	1,784,000	9
Mali	17,512,000	3,502,400	5
Mauritania	3,716,000	1,238,667	3
Mauritius	1,262,000	84,133	15
Mozambique	25,392,000	3,174,000	8
Namibia	2,217,000	554,250	4
Niger	18,529,000	9,264,500	2
Nigeria	182,336,000	1,072,565	170
Republic of Congo	4,638,000	1,546,000	3
Rwanda	11,180,000	2,236,000	5
Senegal	13,950,000	1,992,857	7
Sierra Leone	6,432,000	6,432,000	1
South Africa	54,425,000	224,897	242
South Sudan	12,165,000	6,082,500	2
Tanzania	48,126,000	2,187,545	22
Togo	6,967,000	2,322,333	3
Uganda	35,225,000	1,467,708	24
Zambia	15,254,000	2,542,333	6
Zimbabwe	13,426,000	2,685,200	5

2. Science VS Humanities?

Relevance of humanities to medical education in Africa!

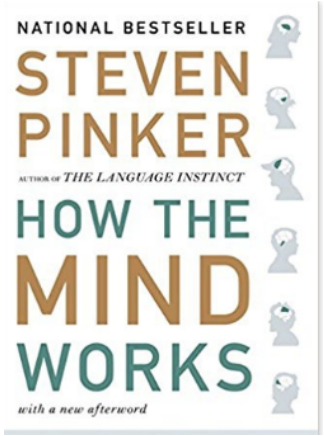
Why we need the 'humanities'

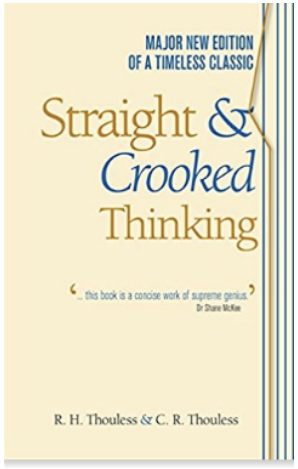
"…education is not just about the passive assimilation of facts and cultural traditions, but about challenging the mind to become active, competent, and thoughtfully critical in a complex world."

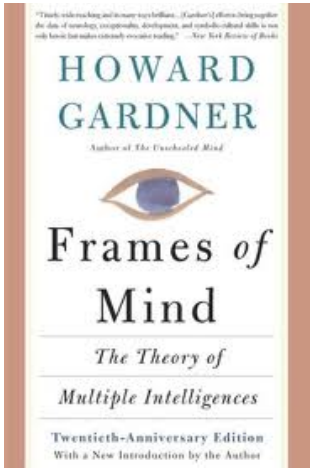


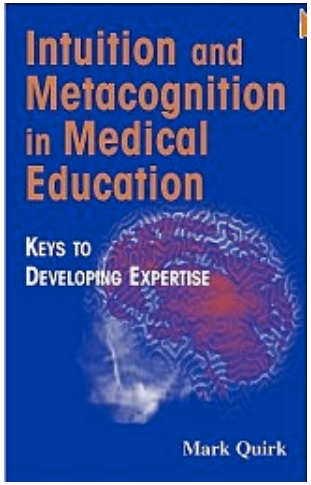
Grappling with complexity - Understanding how the Mind Works…

"….being comfortable with uncertainty, knowing how to ask the right questions…." (Quirk, 2011)



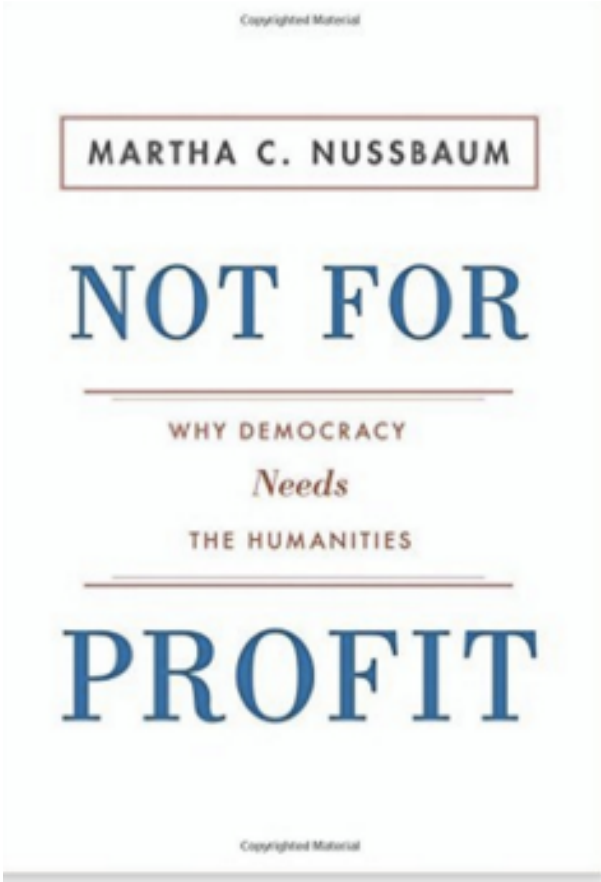






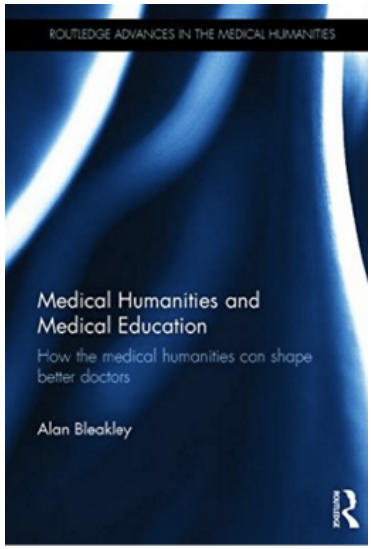
Democracies need the humanities

"Art is the great enemy of …obtuseness, and artists …are not reliable servants of any ideology…they always ask the imagination to move beyond its usual confines, to see the world in new ways."



Humanities – for 'democracy' and 'close noticing'

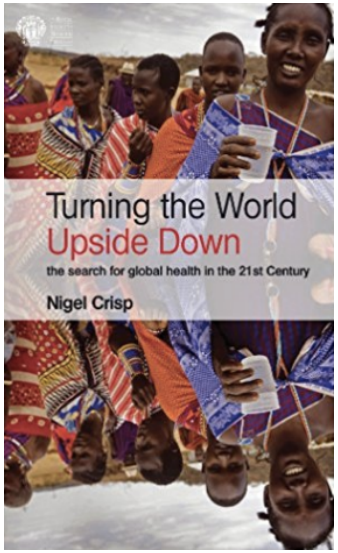
"The arts and humanities are given a central role (i) ***politically*** *– in democratizing medicine, where the also educate for tolerance and ambiguity, and (ii)* ***aesthetically*** *– in…learning how to communicate professionally and… how to engage in* ***close noticing in physical examination and diagnosis****.*

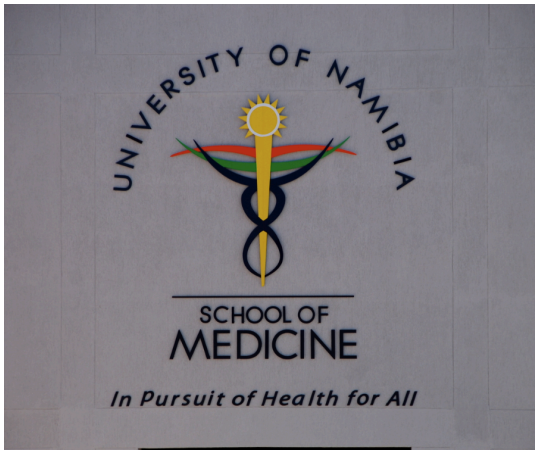


3. Bidirectional learning

Hippocratic oath example - University of Namibia SoM adapted at US medical school (VUSM).

"We vow to honor and respect life on earth, in all forms, crawling and reasoning, with intellect or with handicap, to be ambassadors of healthy living and a prosperous future"





Conclusions

1. Africa – a large place with complex cultures, politics legacies (colonialist & other) > no 'once-size-fits-all.'

2. Medical education in Africa spans a wide range of resources and modalities in pedagogy, standards/accreditation, curricula, admissions, assessment and evaluation

3. Key concepts in global education – contexts, interdependence
   - *Consortia, alliances, networks* – MEPI, CONSAMS, AFREhealth, CUGH
   - Role of "global health" in driving change global education, research
   - Risks of exporting 'western' education into local African contexts

4. Problem with competencies in AFrican 'collectivist' settings

5. Ethics of research; capacitation; science vs humanities

Thank you for your attention!
Questions?

quentin.eichbaum@vanderbilt.edu

615-936-5124

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