

포용적 과학기술 ODA의 새로운 패러다임

A new paradigm for Inclusive Science and Technology ODA

World Ocean Forum

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POSTECH, IME



Development as catching up?



*Only if there is **one** possible path*



Leapfrogging

Or,** we may take the **road less travelled



Sixpack? Everyone's dream!



Who has a better chance?



Leapfrogging

*If I knew **then** what I know **now**,
what would I do **differently**?*

Zeitgeist

An *impossible* dream ?



Postmodern Design



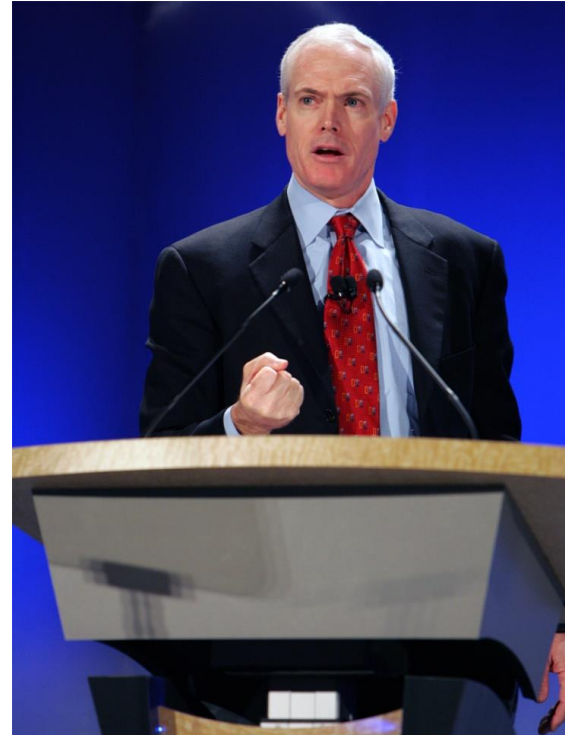
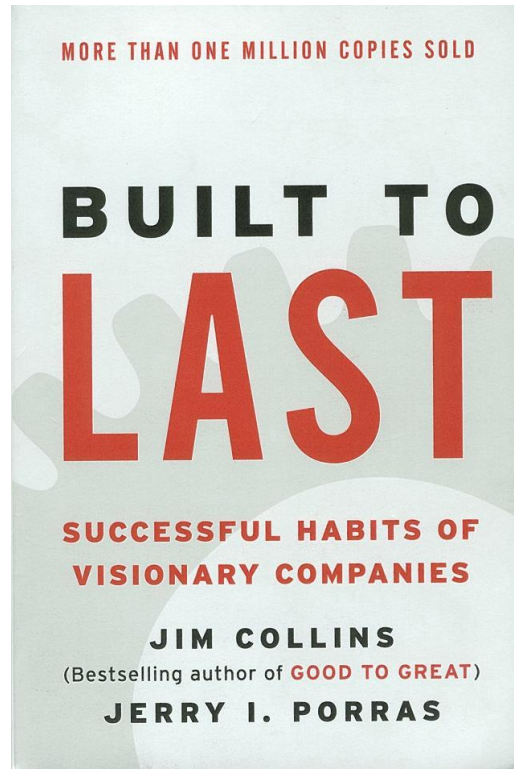
Ancient Oriental Wisdom





Genius of AND

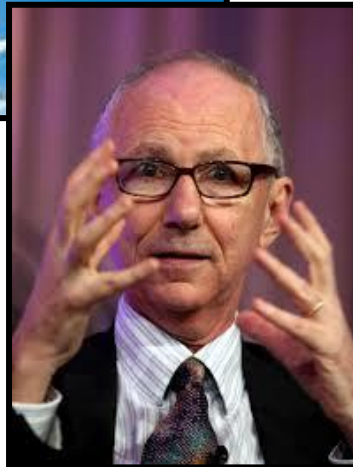
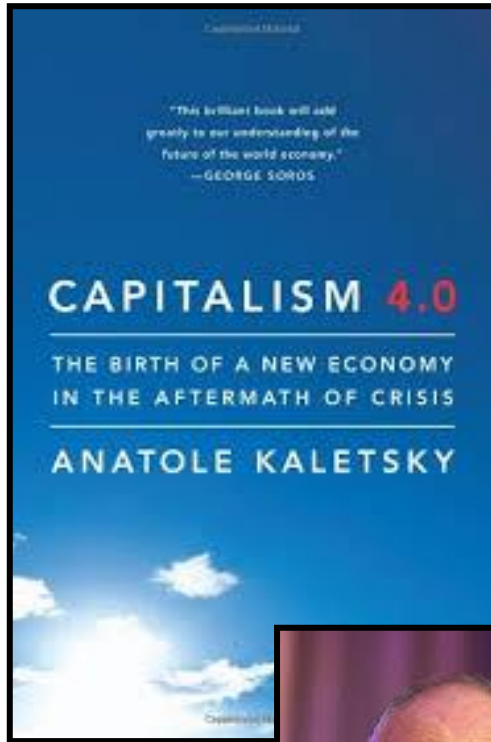
Tyranny of OR



Great company seek BOTH
Private Interest & Common Good



Genius of AND

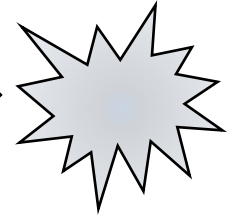


Capitalism 1.0

laissez-faire

1930's

Great Depression

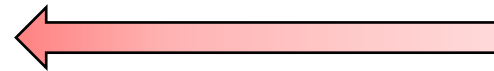


1970's

Energy Crisis
Recession

Capitalism 2.0

Keynesian



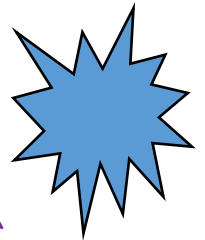
Capitalism 3.0

Neoliberal

2008 / 2009

Financial Crisis

market fundamentalism



Capitalism 4.0



Genius of AND

From MDG to SDG

The 8
Millennium
Development
Goals



17 Goals 169 UNSD Indicators

UNSD: UN Statistics Division



Genius of AND

Inclusive Development

Donor & *Recipient*



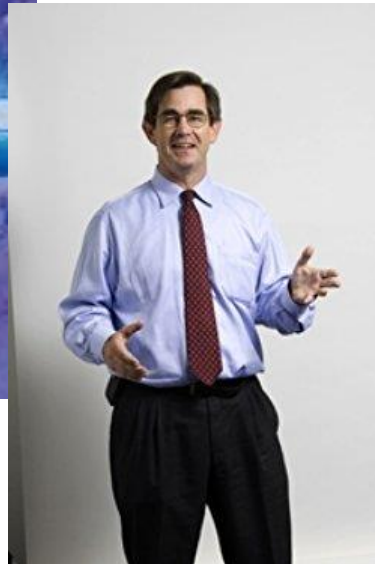
Technological drive

New Innovation Theory

Democratization of Technology



Henry Chesbrough, UC Berkeley



Eric Von Hippel, MIT

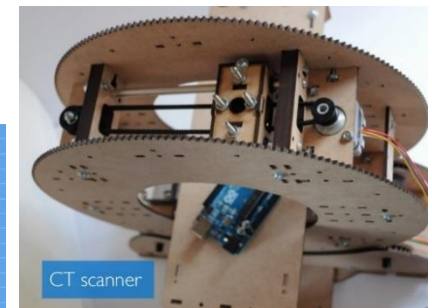
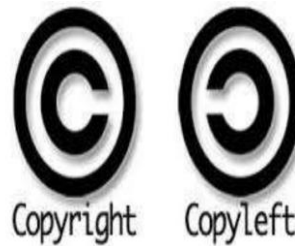


Technological drive

Open Source S/W & H/W

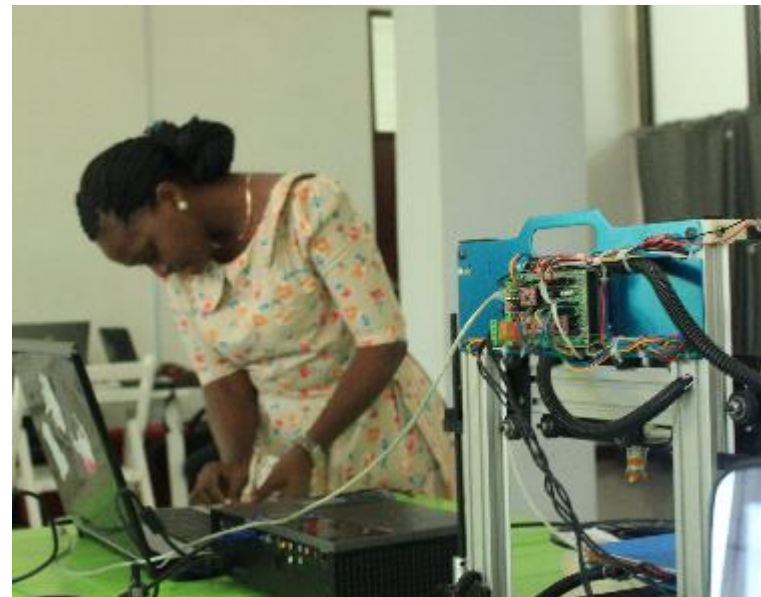


2015 the future of OPEN SOURCE



Technological drive

Bonguino: Tanzanian version of Arduino



Sensing and driving actuators

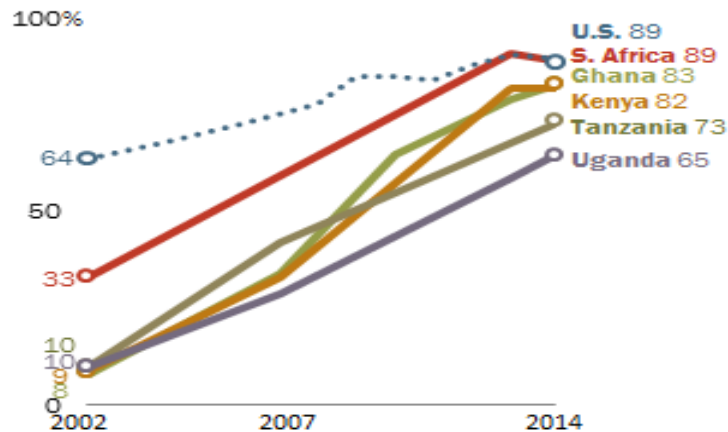
Technological drive

Empowerment by mobile phone

Mobile Phone in Africa

Cell Phone Ownership Surges in Africa

Adults who own a cell phone



Note: U.S. data from Pew Research Center surveys.

Source: Spring 2014 Global Attitudes survey. Q68.

PEW RESEARCH CENTER

UNESCO Mobile phone project

UNESCO Education Natural Sciences Social and Human Sciences Culture Communication and Information Media Services

About us Themes Worldwide Communities Events Join us Resources

United Nations Educational, Scientific and Cultural Organization

ICT in Education

UNESCO » Themes » ICT in Education » Mobile Learning » Policy Work

Mobile Phone Literacy – Empowering Women and Girls

Identification of factors for effectiveness and scaling up good practices

The Mobile Phone Literacy project was launched on 26 May 2011 on the occasion of the visit to UNESCO of Ms. Hillary Clinton, United States Secretary of State. It is being implemented within the framework of the UNL Fund and the Global Partnership for Girls' and Women's Education. This project is made possible through the support from the United States government.

Why is the Mobile Phone Literacy project needed?

Women and girls constitute the majority of the 775 million illiterates in the world. One of the main reasons for low literacy rates is that neo-literates often tend to relapse into illiteracy after a basic literacy course. One reason is difficulty using the newly acquired skills due to the absence of meaningful and relevant reading materials. Another is loss of interest, sometimes coupled with economic constraints and a reluctant social context, particularly in the case of women.

Mobile phones are an attractive and affordable means to maintain literacy skills and to obtain information, and hold great potential for reaching marginalized girls and women and providing them with access to further learning and development.

To ensure that this innovative approach makes a real impact, it is important to start by understanding the factors and conditions which make mobile literacy projects effective and sustainable, with the aim of scaling up to a larger level.

[Back to top](#)

RELATED INFORMATION

- Rationale
- Objectives
- Project Activities

Mobile Learning

- Mobile Reading
- Policy Work
- Teacher Development
- Empowering Women and Girls
- Mobile Learning Week
- Publications

Open Educational Resources

Lifelong Learning

E-Learning

Education Management Information System

ICT in Education Prize

Technological drive

M-PESA in Kenya



44% GDP of Kenya in 2015



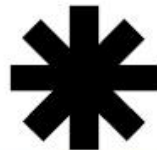
Technological drive

The 6th Industry



1st

Primary



2nd

Secondary

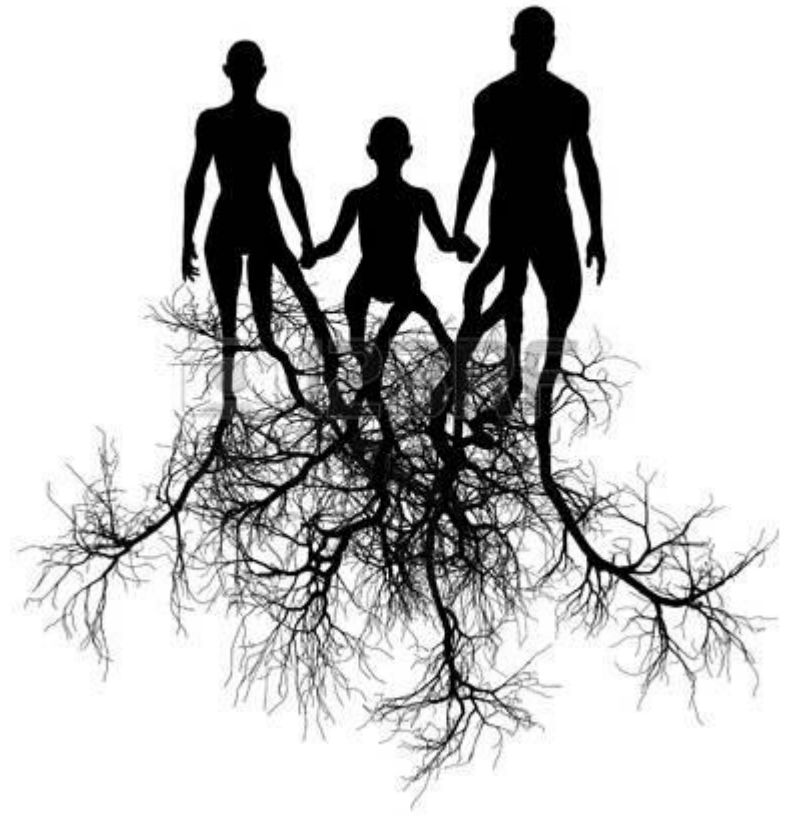
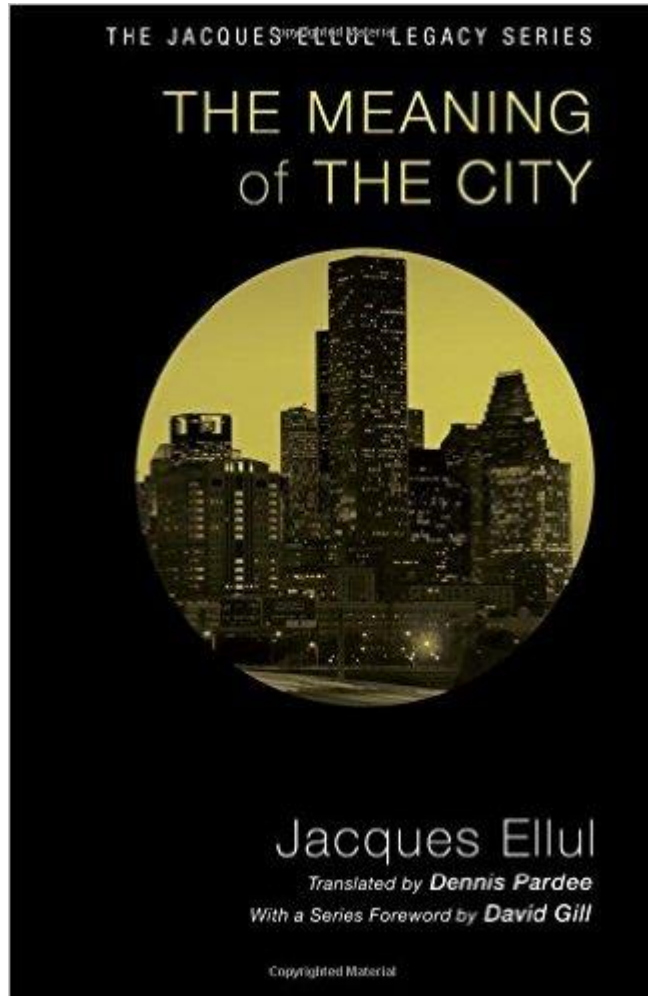


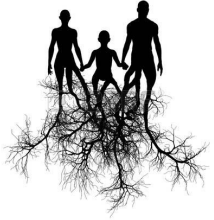
3rd

Tertiary



Human! a Being with a root





MIT Personal Farming

For 1 billion more farmers



Caleb Harper

https://www.youtube.com/watch?v=AMbZyVIHF_k

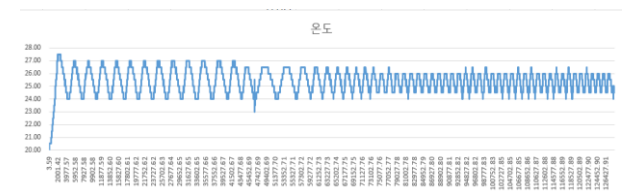
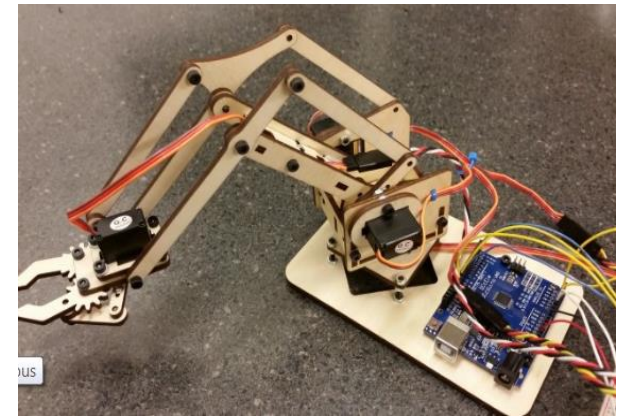
Smart farming at POSTECH

Open source

Dome

Farming Robot

Camera and image processing



Temperature Control for Food Processing

Suggested ideas to be considered

Platform driven

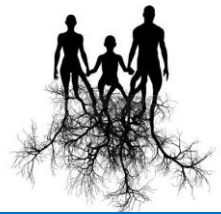
Tradition of Social Innovation

Elderly Ratio



1 billion more farmers

Youth Unemployment



Platform driven

Tradition of *Social Innovation* 1-1

From “*Saemaul*” to Open source platform : *Living Labs*



1-2

Korean economy has *never* been *Laissez Faire*.

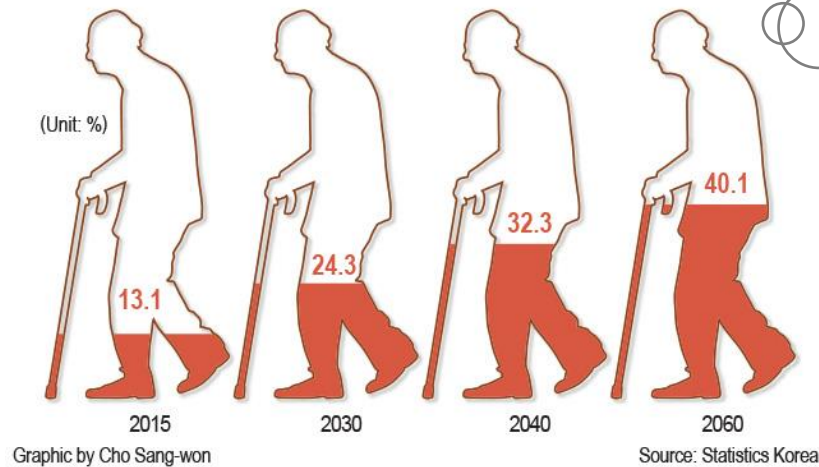
Collaborative commons: Platform Economy

2-1

Elderly “baby boomers”



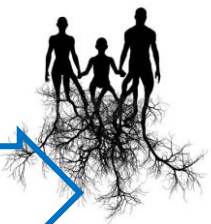
Ratio of elderly over 65



Key players in Korean economic development
Scientists, Engineers & Policy makers

2-2

1 billion more farmers



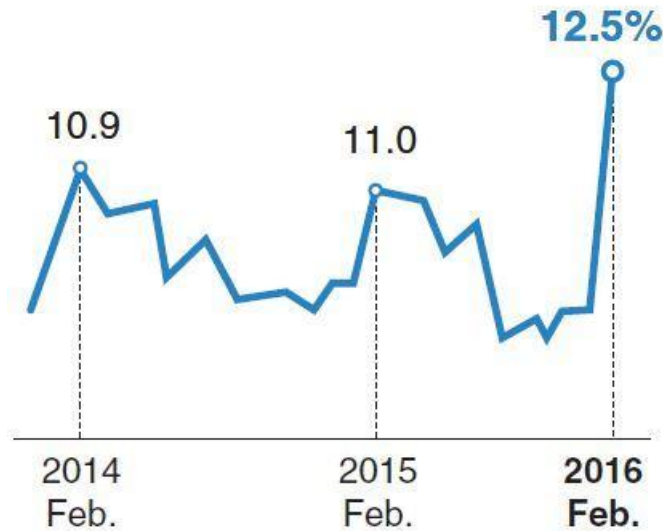


Unemployed Youth: “Tech geek” Kids

3-1

Youth unemployment rate

(15~29 years old)



Source: Statistics Korea

SCORES IN PISA 2012 Computer-Based Assessment of Problem Solving

	Singapore	562
	South Korea	561
	Japan	552
	Macau	540
	Hong Kong	540
	Shanghai	536
	Taiwan	534
	Canada	526
	Australia	523
	Finland	523

SOURCE: MINISTRY OF EDUCATION



3-2

1 billion more farmers

In closing,

Experience is
the name everyone gives to his *mistakes*.

Oscar Wilde

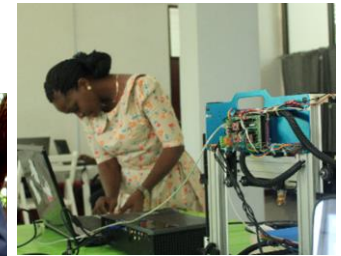


Sixpack?

Who has a better chance?



Road less travelled



For every *advantage* a new technology offers,
there is always a corresponding *disadvantage*

Neil Postman "Faustian bargain"