Open Access and the Evolving Landscape of Scholarly Communication

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Addis Ababa, Ethiopia
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Outline

- Background
- Open Access and Scholarly Communication
- Stakeholders Roles
- Policy Frameworks
- Challenges and Opportunities
- Emerging Trends and Institutional Initiatives
- UNT’s OA Related Activities
- Summary
The Open Access movement is transforming scholarly communication

While the notion of Open Access to scholarly information is not new, various factors, including local and national mandates for sharing the products of (funded) research drive scholars to rethink traditional scholarship models.

There's been some concerns, questions, and misconceptions about various issues, ranging from intellectual property and Copyrights to predator publications and quality issues.
**Open Access:** Provision of unrestricted online access to results/outputs of research & development such as publications, reports, journal articles, and data, through self-archiving and open access publications.

**Green Vs. Gold Open Access**
- **Gold OA:** Publishing in journals for a fee
- **Green:** No fees to authors or funding agencies
Availability of Peer-Reviewed Papers in Open Access

Figure 4 Per cent of freely available peer-reviewed papers, 2004-2011

Basic Assumptions about Open Access

- Open Access leads to:
  - Generation of more new ideas & discoveries
  - Wider availability and accessibility of those ideas & discoveries
  - Increased use of results of research & development
  - Translation of research results (into practice)
  - Improved education, economy, welfare, etc.
Registries such as ROARMAP (Registry of Open Access Repositories Mandatory Archiving Policies) can play a huge role by serving as:

- Repositories and clearing houses for open access policies
- Catalysts for creating a standard/uniform open access policy that applies across institutions, businesses, publishers, states, countries, and internationally
Open Access Registries

- **SHERPA/ROMEO** ([HTTP://WWW.SHERPA.AC.UK/ROMEO/](http://WWW.SHERPA.AC.UK/ROMEO/)):
  - provides a searchable database with summaries of permissions that are normally given as part of each publisher's copyright transfer agreement.

- **DIRECTORY OF OPEN ACCESS JOURNALS (DOAJ)** ([HTTP://WWW.DOAJ.ORG/](http://WWW.DOAJ.ORG/)):
  - aims to be comprehensive and cover all open access scientific and scholarly journals that use a quality control system to guarantee the content.
Repository by Continent

Source: (Pinfield et al., 2014: http://eprints.whiterose.ac.uk/76839/15/wrro_76839.pdf)
Repository by Type

Source: (Pinfield et al., 2014: http://eprints.whiterose.ac.uk/76839/15/wrro_76839.pdf)
Policy Framework
Policy Frameworks

- Open Access Declarations:
  - The Budapest Open Access Initiative
    - (Feb. 14, 2002)
  - The Bethesda Statement on Open Access Publishing
    - (Apr. 11, 2003)
  - The Berlin Declaration on Open Access
    - (Oct. 22, 2003)
  - The Lyon Declaration on Access to Information and Development
    - (Aug. 2014)
Open access mandates/policies by:
- International organizations – UNESCO, World Bank
- Governments – US (OSTP), EU (Horizon 2020), UK
- Funding agencies – NIH, NSF
- Institutions (academic, etc.) - several
- Publishers – CHORUS

Right policy and mandate encourage participation
- Guidelines
- Tools
- Enforcement mechanisms
Open Access (OA) Policies

• Encourage the provision of open access
  o Voluntary
  o Mandatory

• Address the routes
  o Green
  o Gold
  o Hybrid

• Specify the type of repository
  o Central
  o Disciplinary
  o Institutional
Institutional, multi-institutional, sub-institutional, and thesis mandates within the ERA and in selected countries

Stakeholders Roles and Levels of Influence

- Institutional
  - Funding & budget support
  - R&D Policies
  - Declarations & Statements
- State
  - Funding
  - Require
  - Infrastructure
- Country
  - Funding
  - Require
  - Infrastructure
  - Compliance
  - Repositories
- Regional
  - Funding & budget support
  - R&D Policies
  - Require
  - Compliance
  - Larger/Wider scale Infrastructure
- International
  - R&D collaboration and consortium
  - Larger/Wider scale Infrastructure
  - Support
  - Encourage
Not all policies are created equal

Mandates and Policies by governments and funding agencies generally have a much wider coverage than institution-specific policies as they often introduce meaningful incentives and sanctions:

◦ “…they are often more likely to create significant levels of change in author behavior” (Pinfield et al., 2014)
Right Policy Matter

Compliance Rate of Investigators Funded by the NIH

Voluntary (2004--2007) 5%
Mandate (2008--2013) 80%

http://www.sparc.arl.org/resource/emerging-open-access-policy-framework-us
“In China and Russia, where there are relatively low numbers of repositories, most of the repositories in existence are institutional. This means that the low number of repositories cannot be explained by a more centralized approach to repository development. In both cases then a combination of factors, including existing IT infrastructure, language, culture, policy, and funding, should be brought to bear to explain the current situation” (Pinfield et al., 2014)
Challenges and Opportunities
For open access to take off and flourish, especially in developing countries, institutions & governments need to:

◦ Invest in R&D and open access infrastructure
◦ Create or formulate open access mandates and policies
◦ Encourage all stakeholders to ensure compliance and policies implementations.
◦ Encourage a cultural change in academic & scientific communities (collaboration & sharing)
Global Research Communication Infrastructure


At the Heart of Global Research and Education Networking

GÉANT and partner networks enabling user collaboration across the globe

September 2014
Challenges and Opportunities for Developing Countries

- To enhance the development of a global information society, increased attention has been given to the importance of addressing the digital divide.

- ICT enable economic growth and have strategic spillover effects on other sectors.

- Similarly, OA empower people and help create greater access to information for all.

- In a world that links knowledge with economic growth, building an indigenous knowledge base and the ability to publish and disseminate local/national or regional research outputs critically important.
<table>
<thead>
<tr>
<th>Country</th>
<th>2012 GDP (PPP)</th>
<th>2012 R&amp;D as % of GDP</th>
<th>2012 GERD*</th>
<th>2013 GDP (PPP)</th>
<th>2013 R&amp;D as % of GDP</th>
<th>2013 GERD*</th>
<th>2014 GDP (PPP)</th>
<th>2014 R&amp;D as % of GDP</th>
<th>2014 GERD*</th>
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<td>5</td>
<td>781</td>
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<td>5</td>
<td>803</td>
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<td>Norway</td>
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<td>5</td>
<td>287</td>
<td>1.7%</td>
<td>5</td>
<td>293</td>
<td>1.7%</td>
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<td>4</td>
<td>531</td>
<td>0.8%</td>
<td>4</td>
<td>557</td>
<td>0.8%</td>
<td>5</td>
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<td>4</td>
<td>543</td>
<td>0.7%</td>
<td>4</td>
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<td>1.5%</td>
<td>4</td>
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<td>3</td>
<td>200</td>
<td>1.7%</td>
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<td>Saudi Arabia</td>
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<td>955</td>
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<td>3</td>
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<td>Ukraine</td>
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<td>Indonesia</td>
<td>1,237</td>
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<td>2</td>
<td>1,303</td>
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<td>2</td>
<td>1,374</td>
<td>0.2%</td>
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</tbody>
</table>

Subtotal (Top 40)  
73,362  2.0%  1,478  20.0%  1,518  20.0%  77,896  20.0%  1,576  
Rest of World  
10,071  0.4%  39  0.4%  40  0.4%  10,837  0.4%  42  
Global Spending  
83,434  1.8%  1,517  1.8%  1,558  1.8%  88,733  1.8%  1,618  

R&D Expenditure (2012-2014)
2014 Global R&D Funding and Future Forecast

Total investments in R&D (as a percentage of GDP) will stay relatively steady throughout the world in 2014.

<table>
<thead>
<tr>
<th>Region</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americas</td>
<td>2.5%</td>
<td>2.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Asia</td>
<td>1.8%</td>
<td>1.9%</td>
<td>1.9%</td>
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<tr>
<td>Europe</td>
<td>1.9%</td>
<td>1.9%</td>
<td>1.8%</td>
</tr>
<tr>
<td>Rest of World</td>
<td>0.9%</td>
<td>0.9%</td>
<td>0.9%</td>
</tr>
</tbody>
</table>

But GDP growth in Asia will continue to drive higher absolute levels of gross expenditures on R&D.

Linkage Between R&D and National Priorities

Long-Term Outlook for R&D Expenditures

Even if the historic stability of the U.S. and European commitment to research intensity (i.e., spending as a percent of GDP) continues, growth in China’s economy is likely to propel it to the top position in absolute R&D spending by the early 2020s.

Source: Battelle and R&D Magazine
Linkage Between R&D and National Priorities

Different Priorities Among Research Leaders

- **U.S.**
  - Basic Research
  - Applied Research
  - Development

- **China**
  - Basic Research
  - Applied Research
  - Development

- **EU30**
  - Basic Research
  - Applied Research
  - Development

China places more emphasis on development, less on basic research.
• Mark Phillips, Assistant Dean of the UNT’s Digital Libraries Division will discuss the technological infrastructure needed to support and sustain a global, interoperable repository system. He also review various emerging trend and summarize UNT’s initiatives in supporting OA movement
Technological Infrastructure and Emerging Trends
Higher education institutions and academic libraries worldwide are undergoing transformation in the current digital and open environment.
Technological Infrastructure

• A goal towards a global:
  – Research communication Infrastructure
  – Network of Interoperable digital archives
  – Content network framework
  – A federated system of national, regional, and global network of digital archives
Technological Infrastructure...

- Submission system
- Crawling
- Indexing
- Preservation
- Archiving
- Harvesting
- Mirroring
- Search interfaces
Technological Infrastructure...

- OAI–Compliant Solutions
- Web Services and API technologies
- URI
- FTP
- Servers, repository systems, high speed Internet
Institutional Initiatives
Institutional Initiatives

- Facilitate depositing various output (in different formats) in the UNT Scholarly works repository.
- Encourage utilizing Creative Commons licenses
- Promote New Distribution Models
  - SPARC is an international alliance of academic and research libraries working to create a more open system of scholarly communication.
OA Related Initiatives

Understanding basic copyrights:

- Distribute
- Reproduce
- Create derivatives
- Display
- Perform your copyrighted works.
Creative Commons Licenses

- **Attribution**: CC BY
  - The most accommodating as long as they credit you
  - Recommended for maximum dissemination and use

- **Attribution-ShareAlike**: CC BY-SA
  - New creations under the identical terms

- **Attribution-NoDerivs**: CC BY-ND
  - Passed along unchanged and in whole

- **Attribution-NonCommercial**: CC BY-NC
  - Let others build upon your work non-commercially

- **Attribution-NonCommercial-ShareAlike**: CC BY-NC-SA
  - Attribution + NonCommercial + ShareAlike

- **Attribution-NonCommercial-NoDerivs**: CC BY-NC-ND
  - The most restrictive of our six main licenses.
UNT’s Services in Support of OA.

http://www.library.unt.edu/scholarly-publishing

UNT LIBRARIES SCHOLARLY PUBLISHING SERVICES

The UNT Libraries provide services to help members of the UNT community disseminate the results of their research:

- information related to scholarly communication in general
- Scholarly Open Access E-Journal Support: a hosting service for journals based at UNT
- UNT Scholarly Works: a repository for UNT faculty and staff to deposit the results of their research, whether published elsewhere or not
- UNT Data Repository: a central archive for the research datasets of UNT scholars

In addition, the UNT Libraries Scholarly Publishing Services offers:

- Eagle Editions: publishing works of scholarship from the UNT community
- Editors’ Roundtable: supporting members of the UNT community in their publishing endeavors
- individual consultations about publishing projects (please contact us for more information)

For works published under Eagle Editions and other publishing projects, we maintain a roster of freelancers and vendors providing editing, design, and other services. Please see our call for freelancers and vendors.

We gladly accept donations, which are eligible for deduction from US federal income taxes according to IRS guidelines, to help offset the cost of publishing the results of research at UNT.
**Individual commitments:**

- I support the Open Access movement and will endeavor to ensure that all of my research is available online, free of charge, to readers in all nations. As a humanist, I believe I have a responsibility to make my scholarship available as widely as possible, and to advocate on behalf of others who wish to share their work beyond the academy.
- **I pledge that I:**
  - will not give free labor, including editing, peer review, or consulting to closed access, or Gold OA journals.
  - will blog my work and post preprints whenever possible.
  - will publish only in Green OA or wholly OA journals.
  - will withdraw as an author if coauthors refuse to be open.
  - will work to educate my students and colleagues on the principles and value of Open Access for research, teaching, and learning in the humanities.
  - will support experimental modes of publishing and scholarly communication, including open peer review.
  - will advocate for the principles of Open Data as defined in the Denton Declaration.
Institutional Repositories

- Institutional Repository store, manage, provide access, facilitate use, re-use, and preservation

- Stages in IR development:
  - Interest in OA grows in early stages
  - Policy development
  - IR development

- IR Provisions
  - Pre/post prints, final versions
  - Articles, papers, books, chapters, reviews, presentations, reports, posters, patents, performances (audio/video)
  - Metrics, usage statistics, impact factors, creative licences
Open access is a set of principles about author rights and public access that guide scholarly communications strategies.

Open Access informs distribution model
- Major players: SPARC, COAPI, R2R, Sherpa/Romeo, OASPS

Principles of OA include:
- Scholars should be able to retain the rights of their work
- Access to scholarship should be free
- Public access to scholarship is good for scholars/society
- Transparency in research helps ensure good scholarship and maintain public trust
Open access collections are more inclusive than non-open access collections.

Their coverage tends to be multidisciplinary and international.

They provide more visibility for authors from developing countries than they would have gotten (because a significant number of journals from developing countries are not indexed in traditional databases).

OA has greater impact in developing countries.
Thank you!

本当にありがとう (Enameseginalen)!

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