

**LIBRARIES AND
SCHOLARY PUBLISHING
IN A TIME OF
DISRUPTION AND TURMOIL**

**THE PROSPECTS FOR
RADICAL COLLABORATION**

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BORING TITLE!!!

NEW TITLE NUMBER ONE

**YOU CAN'T COUNT THE APPLES
IN THE SEED**

**ASSURING VITALITY AND RELEVANCE FOR
SCHOLARLY PUBLISHING**

NEW TITLE NUMBER TWO

PIONEERS NEED FRONTIERS

**ARE WE READY FOR
NEW MODELS OF RESEARCH
AND TEACHING/LEARNING?**

NEW TITLE NUMBER THREE

**THE TROMPE L'OEIL
SCHOLARLY PUBLISHING
IMAGE AND REALITY**

NEW TITLE NUMBER FOUR

CHAOS BREEDS LIFE

**RETHINKING THE WAYS RESEARCHERS WILL CREATE,
COMMUNICATE, AND PRESERVE
THEIR WORK**

NEW TITLE NUMBER FIVE

**SOMETIMES...A SCREAM
IS BETTER THAN A THESIS**

KUMBAYA

RADICAL COLLABORATION

SYSTEMIC PARTNERSHIPS

**WHAT ARE THE KEY TRENDS
DRIVING THE DEVELOPMENT OF THE
UNIVERSITY AND ITS LIBRARY?**

WHAT IS PROVOKING NEW THINKING ABOUT THE 21ST CENTURY LIBRARY?

- **Rapidly Shifting User Behaviors/Expectations**
- **Redundant Inefficient Library Operations**
- **Aging Service Paradigms**
- **Increasing Emphasis on Unique Resources**
- **Need to Achieve Scale and Network Effects
Through Aggregation**
- **Acceleration of Collective Innovation**

WHAT IS PROVOKING NEW THINKING ABOUT THE 21ST CENTURY LIBRARY?

- **Mobility of User**
- **Cloud Computing**
- **Semantic Web**
- **Open Content**
- **Globalization**
- **Collective Intelligence**
- **Online Education/MOOC**
- **Assessment**
- **Customization/Personal Web**
- **Economic Context**
- **Radical Collaboration**
- **E-Research**
- **Information Policy**
- **Mutability**
- **The Internet of Things**

NEW TECHNOLOGIES AND THE 21ST CENTURY UNIVERSITY

- **Mobiles and Tablets (single, portable multi-purpose device)**
- **Cloud Computing (distributed processing and applications)**
- **Geo-Everything (geolocation and geotagging)**
- **Personal Web (customized management of online content)**
- **Linked Data (connecting and relating structured information)**
- **Semantic-Aware Applications (meaning to provide answers)**
- **Smart Objects (links physical world with information)**

NEW TECHNOLOGIES AND THE 21ST CENTURY UNIVERSITY

- **Open Content (wide distribution and repurposing)**
- **MOOC (massive open online courses)**
- **Electronic Book (platforms, applications, redefinition)**
- **Data/Big Science (research information management)**
- **Games As Learning Tools (participation and interaction)**
- **Visualization and Simulation (more meaningful and intuitive)**
- **3-D Printing**

WHAT ARE THE IMPLICATIONS FOR PROFESSIONAL SKILLS AND STAFFING?

DO 20TH CENTURY SKILLS STILL MATTER?

- Information Selection
 - Information Acquisition
 - Information Synthesis
 - Information Navigation
 - Information Dissemination
 - Information Interpretation
 - Information Understanding
 - Information Use
 - Information Application
 - Information Archiving
-
- In Support of Teaching and Learning
 - In Support of Research and Scholarship

THE SHIFTING VISION OF THE LIBRARY

- **Legacy**
- **Infrastructure**
- **Repository**
- **Portal**
- **Platform**
- **Application**
- **Enterprise**
- **Public Interest**

WHAT ARE THE IMPLICATIONS FOR STAFFING?

- **Professionals With Diverse Academic Backgrounds**
- **Wide Range of New Professional Assignments**
- **New Roles of Support Staff and Students**
- **Messy/Fluid Organizational Structures**

- **Impact on Values, Outlooks and Styles**
- **Impact on Campus Understanding, Recognition and Respect**
- **Impact on Organizational Relevance and Impact**

CAPABILITIES OF THE 21ST CENTURY LIBRARY INFORMATION PROFESSIONAL

- **Deep Subject, Process, or Technical Expertise**
- **Deep Service Commitment**
- **Commitment to Research and Development**
- **Commitment to Assessment and Evaluation**
- **Communication and Marketing Skills**
- **Project Development and Management Skills**
- **Political Engagement**
- **Resource Development Skills**
- **Commitment to Rigor**
- **Entrepreneurial Spirit**
- **Commitment to Collaboration**
- **Commitment to Social Justice**
- **Leadership/Inspirational Capacity**

**ARE SCHOLARY INTEGRITY
AND
PRODUCTIVITY AT RISK?**

BUILDING THE DIGITAL LIBRARY

QUALITY=CONTENT+FUNCTIONALITY

- **Published/Licensed Content**
- **Primary Content**
- **Open Web Content**
- **Institutional Content**
- **Research Data Content**
- **Multimedia Content**
- **Integrated Services**
- **Software Tools**

PRESERVE AND ARCHIVE THE CONTENT

- **Archive as Repository** **HOLD**
- **Archive as Persistence** **ACCESS**
- **Archive as Curation** **SECURE**
- **Archive as Steward** **CARE**
 - **Analog**
 - **Digital Conversion**
 - **Born Digital**
 - **Disaster Preparedness**

BORN-DIGITAL CONTENT AND ISSUES OF SCHOLARLY INTEGRITY

- **Ability to Consult Evidence/Sources**
- **Ability to Pursue Research Study When Primary Sources Gone/Changed**
- **Repository Chaos/Research Study Deposited and Accessed in Multiple Sites**

**Integrity: adherence to code or standard of values
complete and unimpaired and undivided**

BREADTH AND DIVERSITY OF BORN-DIGITAL CONTENT

- **Licensed/Published Works (E-Journals, E-Books)
(Commercial, Academic, Independent, Self-Publishing)**
- **E-Video and E-Audio**
- **Digital Government**
- **Online Learning Materials**
- **Research Data**
- **Social Media**
- **E-Archives (Personal Papers, Organizational Records)**
- **Web Sites and Web Documents**

BREADTH AND DIVERSITY OF BORN-DIGITAL CONTENT

- **Visual Images**
- **Spatial Data (Longitudinal Observations)**
- **Software/Applications (Proprietary, Open Source)**
- **Video Games**
- **Medical Data (Personal Health Records)**
- **Live Feeds (RSS, News)**
- **Visualizations/Simulations**
- **Interoperable Metadata (MARC, BIBFRAME, schema.org)**

ADVANCE THE REPOSITORY MOVEMENT

- **Discipline Repositories**
- **Institutional Repositories**
- **Community Repositories**
- **Data Repositories**
- **Departmental/School Repositories**
- **Individual Repositories**
- **Learning Repositories**
- **Government Repositories**
- **National Repositories**
- **Publisher Repositories**
- **Research Data Repositories**

THE RIGHT TO TEXT AND DATA MINE

SUPPORT THE NEEDS OF BIG DATA

- **Federal/Funding Agency Mandate**
- **Massive Data Sets**
- **Unstructured Data/Curation**
- **Extraction**
- **Distribution**
- **Collaboration**
- **Visualization**
- **Simulation**
- **Preservation**

SUPPORT THE NEEDS OF RESEARCH

- **Navigate, Analyze, Synthesize**
- **Open Research/Continuous Scholarly Communication**
- **Scholarly Products to Scholarly Process**
- **Expertise Databases/Subject Ontologies**
- **Data Management Consulting**
- **Integration of Disparate Sources/Grey Literature**
- **Special Library/Informationalist Model**

DIGITAL LIBRARIES SOME META ISSUES

- **Massive Surveillance**
- **Security Meltdowns**
- **Network Neutrality**
- **Corporate Control**

**HOW DO WE RESPOND TO THE
SHIFTING NEEDS OF OUR USERS?**

WHAT ARE MEASURES THAT MATTER?

PREPARE FOR ACCOUNTABILITY AND ASSESSMENT

- **Institutional Expectations**
- **Government/Funder Mandate**
- **Measures Of User Satisfaction**
- **Measures Of Market Penetration**
- **Measures Of Success**
- **Measures Of Impact**
- **Measures Of Cost Effectiveness**
- **System Design For Usability**
- **Insanity of Most ROI**

VALUE RESEARCH

FINANCIAL VALUE

IMPACT VALUE

MIGRATION FROM PRODUCT TO SERVICE

RELATIONSHIP BETWEEN ACTION AND BENEFIT

RESPOND TO USER EXPECTATIONS

- **Content**
- **Access**
- **Convenience**
- **New Capabilities**
- **Cost Reduction**
- **Participation**
- **Individual Productivity**
- **Individual Control**
- **Organizational Productivity**

EMBRACE THE “HUMAN” OBJECTIVES

- **Success (turn out well, attain desired end)**
- **Happiness (well-being and contentment)**
- **Productivity (achieving results or benefits)**
- **Progress (forward movement or betterment)**
- **Relationships (personal connections or attachments)**
- **Experiences (observation or participation)**
- **Impact (significant effect)**

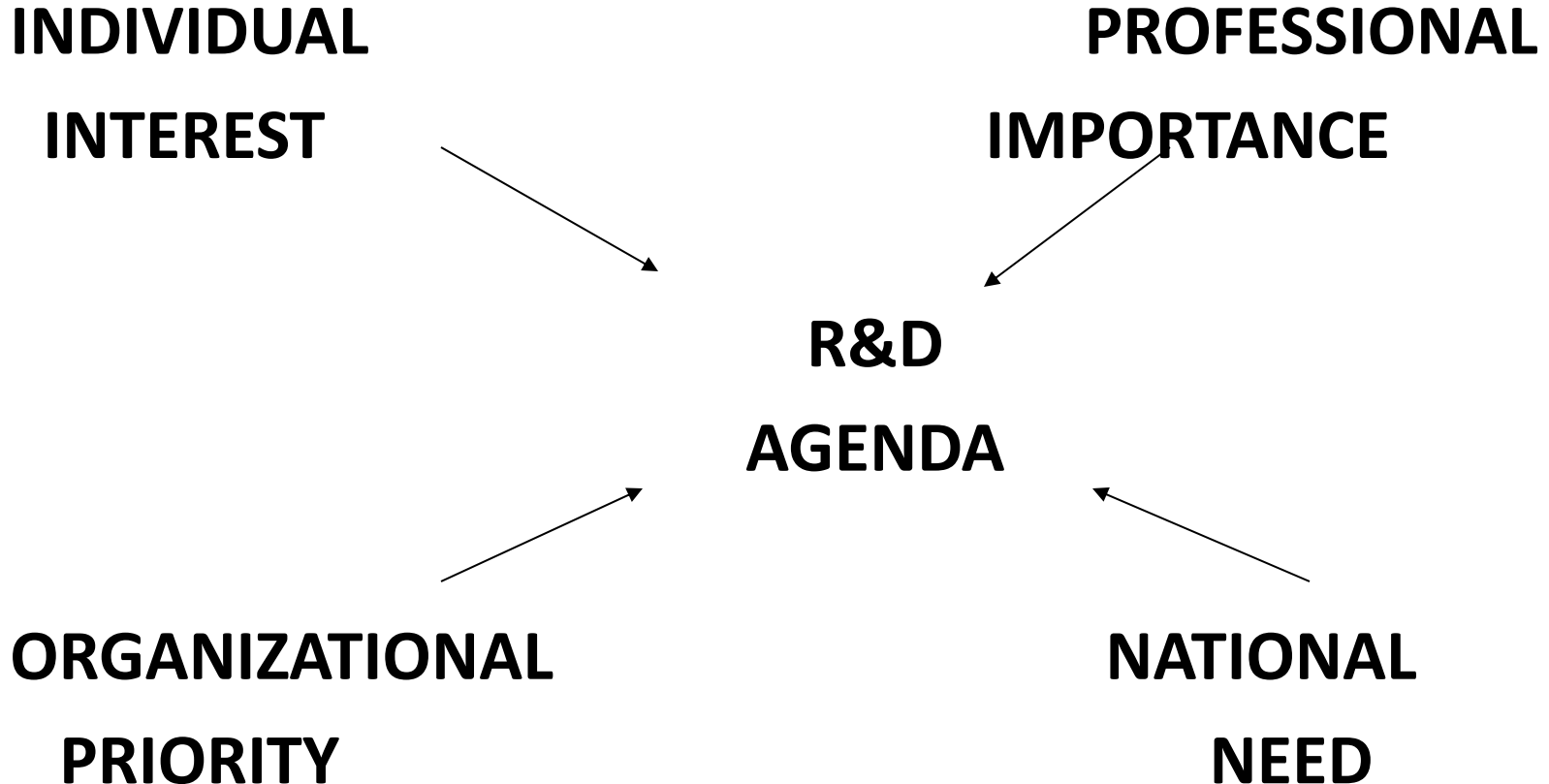
HOW ARE WE ESSENTIAL TO OUR COMMUNITIES AND DECISION MAKERS?

- **Student /Citizen Success**
- **Faculty/Researcher Productivity**
- **Campus/Community Economy**
- **Institutional/Community Values**
- **University/Community Reputation**

VIRTUAL/VIRTUOSO/VIRTUOUS

**HOW CAN WE BUILD A MORE
EFFECTIVE R&D
CAPABILITY AND IMPACT?**

SETTING THE R&D AGENDA



THE R&D ENTERPRISE

- **New Knowledge Creation**
- **Laboratory for Experimentation**
- **Magnet for New Skills/Capabilities**
- **Venue for Faculty Collaboration**
- **Venue for Corporate Collaboration**
- **Solve Information Problems**
- **Solve Technology Problems**

THE R&D ENTERPRISE

- **Potential for Capitalization/Technology Transfer**
- **Foundation and Federal Funding**
- **Credibility and Visibility**
- **Support for Decision Making**
- **Organizational Culture**
- **Digital Library Program Development**
- **Organizational Risks**

CONTEXT FOR INFORMATION WORK

(Marina Gorbis, EDUCAUSE Review, May/June 2016)

- **Smart Machines: Human Machine Symbiosis**
- **Coordination Economics: Social Structured Value Creation**
- **Immersive Collaboration: Blended Reality**
- **Maker Mindset: Democratizing Creation**
- **Opportunities for Globalization and Inclusion**

**CAN WE WORK TOGETHER
MORE EFFECTIVELY
ON INFORMATION POLICY PRIORITIES?**

ADVOCATE THE INFORMATION POLICY AGENDA

- **INTELLECTUAL FREEDOM**
- **PRIVACY**
- **CIVIL LIBERTIES**
- **EDUCATION PROGRAMS**
- **RESEARCH PROGRAMS**
- **INTERNET DEVELOPMENT**
- **TELECOMMUNICATIONS**
- **GOVERNMENT INFORMATION**
- **APPROPRIATIONS**
- **WORKFORCE POLICY**

- **FIGHTING THE COPYRIGHT WARS**

HOPE/POWER/ACTION THROUGH COLLABORATION

POLITICAL ADVOCACY

THE LIBRARY ROLE

- **Knowledgeable Resources for the Community**
- **Political and Legislative Advocates for Community Interests**
- **Educators of Community on Priority Issues**
- **Documenters of Impact of Legislative Actions**
- **Promoters of Campus and Community Coalitions**
- **Enablers of Successful Models Which Support Political Agenda**

**HOW DO WE TRANSITION FROM
KUMBAYA
TO MORE RADICAL COLLABORATION?**

FORUMS FOR COOPERATION

- **Library Systems**
- **Local and Regional Cooperation**
- **State Projects**
- **Multi-State Projects**
- **National Consortia/Projects**
- **International Partnerships**
- **Researcher Collaboration**
- **Publisher Collaboration**
- **Collaboration with Technology Organizations**
- **Corporate Partnerships**
- **Business Partnerships**

REACHING OUT TO CULTURAL COMMUNITY

**PROMOTING NEW COMBINATIONS THRU
PUBLIC-PRIVATE PARTNERSHIPS**

RADICAL COLLABORATION

- **Centers for Excellence**
- **Mass Production**
- **New Infrastructure**
- **New Initiatives**

Quality/Productivity/Innovation

WHAT DO WE MEAN BY INNOVATION?

- new method, idea or product
- systematic application of new knowledge to new resources to produce new goods or new services

MARKET

- process of lowering the costs or increasing the benefits of a task

VALUE

- result of thinking deliberately about existing problems and unmet needs

SOLUTIONS

EVOLUTIONARY (incremental)

REVOLUTIONARY (disruptive/discontinuous)

WHAT DO WE MEAN BY TRANSFORM?

- **to change in composition or structure**

WHAT WE ARE/WHAT WE DO

- **to change the outward form or appearance**

HOW WE ARE VIEWED/UNDERSTOOD

- **to change in character or condition**

HOW WE DO IT

**HOW CAN WE BUILD NEW
COLLABORATION AROUND THE
SCHOLARLY COMMUNICATION PROCESS?**

SCHOLARLY COMMUNICATION

CREATION

EVALUATION

DISTRIBUTION

USE

PRESERVATION

**SHIFTING ECONOMICS/TECHNOLOGIES/PLAYERS
AND POLICIES**

SCHOLARLY COMMUNICATION

- **Community of Creation**
- **Community of Production**
- **Community of Distribution**
- **Community of Consumption**
- **Community of Use**

The Urge To Publish

- **Communication**
- **Academic Culture**
- **Preservation of Ideas**
- **Prestige and Recognition**
- **Profit**

NORMS OF SCHOLARLY WORK AT THE UNIVERSITY

- **Open and Free Exchange of Ideas**
- **Publication in Scholarly and Scientific Journals**
- **Meritocracy**
- **Organized Skepticism**
- **Common Ownership of Goods**

SCHOLARLY COMMUNICATION FUNCTIONS

- **Information Generation and Creation**
- **Authoring**
- **Informal Peer Communication**
- **Editorial and Validation**
- **Ownership, Privacy, and Security**
- **Distribution**
- **Acquisition and Access**

SCHOLARLY COMMUNICATION FUNCTIONS

- **Storage**
- **Preservation and Archiving**
- **Information Management**
- **Location and Delivery**
- **Recognition**
- **Diffusion**
- **Utilization of Information**

THE GOALS OF THE EDUCATION COMMUNITY

Develop policies for intellectual property management which enable broad and easy distribution and reuse of materials by scholars and students and which

Foster a competitive and supportive market for scholarly communication and creative work.

RESEARCH CORE INTERESTS

- **Competitive Market**
- **Easy Distribution and Reuse**
- **Innovative Applications of Technology**
- **Quality Assurance**
- **Permanent Archiving**

RESEARCHER EXPECTATIONS

- **Personal Advancement/Recognition**
- **Contributions to Scholarly Literature**
- **High Quality Instructional Experiences**
- **Successful Students**
- **Work on Innovative Projects**
- **Collaboration with Interesting Colleagues**
- **Financial Compensation**
- **Remuneration for Own Work**
- **Excellent Laboratory, Library and Technology Support**
- **Opportunities to Experiment with Technology**

HOW CAN WE EFFECTIVELY ADVANCE THE PUBLISHER/LIBRARY RELATIONSHIP?

ADVANCING PUBLISHER/LIBRARY RELATIONSHIP THROUGH ELECTRONIC SCHOLARLY COMMUNICATION

- **Regular consultation to develop priorities and strategies for collaboration.**
- **Joint innovative electronic publishing projects.**
- **Shared information policy agenda/advocacy strategy.**
- **Forums for communication with researchers and authors.**
- **Shared continuing professional development and training programs for staff.**
- **Agreement on principles for licensing/model contract.**

ADVANCING PUBLISHER/LIBRARY RELATIONSHIP THROUGH ELECTRONIC SCHOLARLY COMMUNICATION

- **Identification, development, adoption of standards.**
- **Usability research and testing.**
- **Research and development agenda/Impact assessment.**
- **Venture capital for joint activities.**
- **Integrate and share expertise.**
- **Joint programs for preservation and archiving of digital content.**
- **Content and information services for distance learning community.**
- **Focus on new scholarly work: courseware, software, datafiles and simulations**

SO WHERE ARE WE GOING?

THEORY OF LIBRARY DEVELOPMENT

-1950	Period of EXCLUSIVITY
1950-1970	Period of POPULARIZATION
1970-1990	Period of DISCORD
1990-2010	Period of DECADENCE
2010-2015	Period of POLYGAMY/KUMBAYA
2015-2020	Period of PARABIOSIS/SYNERGY
2020-	Period of PARTICULARISM

ARL STRATEGIC DESIGN AND ACTION

LIBRARY SERVICES AS 4 LAYERS OF INTERACTION

- **AUGMENTED INFORMATION LENS – relationships with individual users**
- **BOUNDLESS SYMPOSIUM – conversations within the institution**
- **META-LIBRARY ECOSYSTEM ENGINE – conversations among networked institutions**
- **COMMUNITY KNOWLEDGE MESH – societal role**

ARL STRATEGIC DESIGN AND ACTION

KEY COMPONENTS

- 1. Coordinated Management of Collective Collections – A Platform for Sharing Knowledge Throughout the Ecosystem**
- 2. Scholarly Publishing at Scale**
- 3. ARL Academy**
- 4. Building a Boundless Symposium**
- 5. A First Suite of Smart Libraries**
- 6. Innovation Lab and (Venture) Capital Fund**

SOME FINAL THOUGHTS

The library is being driven by five fundamental shifts. Primal innovation: creativity as an essential component of our organizational and individual DNA. Radical collaboration: new, drastic, sweeping and energetic combinations across and outside libraries. Deconstruction: taking apart traditional axioms and norms, removing the incoherence of current concepts and models, and evolving new approaches and styles. Survival: persistence and adaptation which focuses more on the “human” objectives of our users, that is success, productivity, progress, relationships, experiences, and impact. Particularism: deep specialization and rich responsibilities in the face of rampant shared and open resources. How do we respond to these revolutionary trends through our shifting geography, our essential expertise, and our advocacy of the public interest? How do we remain indispensable to the researcher?

WHERE ARE WE GOING?

RELEVANCE

IMPACT

VALUE

SURVIVAL

EXTINCTION

PHYLETIC – one species evolves into another

TERMINAL – termination of species/no descendants