NEXT-GENERATION LIBRARIES (AND UNIVERSITIES)

WHAT FUNDAMENTAL SHIFTS ARE NEEDED?

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BORING TITLE!!!

NEW TITLE NUMBER ONE

YOU CAN'T COUNT THE APPLES IN THE SEED

ASSURING VITALITY AND RELEVANCE FOR THE LIBRARY

NEW TITLE NUMBER TWO

PIONEERS NEED FRONTIERS

ARE WE READY FOR
NEW MODELS OF RESEARCH
AND LEARNING?

NEW TITLE NUMBER THREE

THE TROMPE L'OEIL
LIBRARY OF THE FUTURE

IMAGE AND REALITY

NEW TITLE NUMBER FOUR

CHAOS BREEDS LIFE

RETHINKING THE WAYS SCHOLARS WILL CREATE, COMMUNICATE, AND PRESERVE THEIR WORK

NEW TITLE NUMBER FIVE

SOMETIMES… A SCREAM IS BETTER THAN A THESIS

KUMBAYA

RADICAL COLLABORATION

SYSTEMIC PARTNERSHIPS

SOME DEFINITIONS

- Primal Innovation

  creativity as first importance, as a fundamental component of organizational and individual DNA

- Radical Collaboration

  drastic or sweeping energy, and not Kumbaya

- Deconstruction

  taking apart the axioms or rules, or the incoherence of a concept, position or word

- Survival

  not relevance or impact, but persistence and adaptation

WHAT DO WE MEAN BY LEGACY?

- something handed down from the past / a bequest

  HERITAGE

- outdated technology, while still functional, does not work well with up-to-date systems

  EFFICIENCY / ROI

- something which is still used although no longer the most modern or advanced, because it would be very expensive or difficult to replace

  EXPENDABILITY

- the idea that a thing which exists as a result of something that happened in the past can later be used in a different way

  FUNGIBILITY

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

CORE RESPONSIBILITIES OF THE ACADEMIC LIBRARY

- 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
- In Support of Community Development

CHANGING LIBRARY ROLES

- Libraries as Consumers
- Libraries as Intermediaries and Aggregators
- Libraries as Publishers
- Libraries as Educators
- Libraries as R&D Organizations
- Libraries as Entrepreneurs
- Libraries as Policy Advocates

THE SHIFTING VISION OF THE ACADEMIC LIBRARY

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

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?

- Advanced Open Architecture
- Mandate for Systemic Change
- Acceleration of Collective Innovation
- New Economic Context

KEY CONTEXTUAL TRENDS

- Ubiquitous Computing, Network, and Digital Content
- Customization/Personalization
- Web 2.0/Social Networking and Collective Intelligence
- Massively Distributed Collaboration
- Constant Partial Attention

KEY CONTEXTUAL TRENDS

- Permanent Beta/Mutability
- Radical Restructuring and Reengineering
- Authorship and Writing Revolutions
- Self Service/ATM Expectations
- Openness/Rhetoric and Reality of Sharing

KEY CONTEXTUAL TRENDS

- Digital Preservation/Integrity and Sustainability
- Repository Movement/Version Control
- New Majority Learner
- Accountability and Assessment
- Entrepreneurial Imperative/Resource Attraction

NEW TECHNOLOGIES AND THE 21ST CENTURY LIBRARY

- 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 LIBRARY

- 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)

SOME ISSUES: Massive Surveillance
Security Meltdowns
Network Neutrality
Corporate Control

SOME ASSUMPTIONS

- Academic Research Libraries Will No Longer Develop Comprehensive Collections In All Formats
- Collections Will Increasingly Align With Shifting University Academic Priorities and Funding Realities
- Coordination of Collection Development Across Research Library Community Will Remain Marginalized
- Academic Research Libraries Will Increasingly Focus On Distinctive and Unique Collections

SOME FURTHER ASSUMPTIONS

- Preservation and Archiving of the Cultural and Scientific Record Will Remain Balkanized and By Default
- National and Global Information Policies Will Not Facilitate the Deep Collection Collaboration Needed
- User Communities Will Create Their Own Strategies and Tools for Discovering, Disseminating and Managing Context
- Work of Collection Building Will Require New Approaches to Professional Staffing and Organization

SOME QUESTIONS

- How do we balance investments in physical and digital collection management?
- How do we leverage existing collaborative programs and build understanding of the collective collection environment?
- How will collection development change in the context of increasing collaboration?
- How do our mechanisms for discovery and delivery shape our collection development programs?
- How do we define and measure what comprises a high quality research library in the future?

SOME FURTHER QUESTIONS

- How do we assess examples of existing or emerging collaborative programs?
- How do we transition from a competitive model of collection development and management to a collaborative model?
- How do we identify and define partners in collaborative efforts?
- How can we effectively construct collaborative collections around “collections of record” and “collections for use”?
- How do we manage expectations on campus and help our users understand the reasons we need to operate differently?

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)

BORN-DIGITAL CONTENT
SOME INTERESTING CHALLENGES

- Form/Text/Function
- Content ≠ Format
- Importance of Context
- Executable Content/Renderability
- Data Formats/Versioning Over Time
- Physical/Format Obsolescence
- Authenticity/Provenance
- Standards/Globally Unique Identifiers

LIBRARY CAPABILITIES TO SUPPORT E-SCIENCE

- Policies and Principles Related to Open Exchange of Scholarly Information
- Development and Maintenance of Institutional and Domain Repositories
- Integration and Interoperability Tools for Information Distribution and Discovery
- Business and Technical Strategies for Long-Term Archiving
- Understanding of Archival and Life-Cycle Aspects of Scientific Information

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

SCHOLARLY COMMUNICATION

CREATION

EVALUATION

DISTRIBUTION

USE

PRESERVATION

SHIFTING ECONOMICS/TECHNOLOGIES/PLAYERS AND POLICIES

THE URGE TO PUBLISH

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

SCHOLARLY COMMUNICATION

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

SCHOLARLY COMMUNICATION

- Notification Service Layer
- Registry Layer
- Discovery Layer
- Content Aggregation Layer

With: Organization-Based Open Access Policies
Favorable Author Licensing Terms

ELECTRONIC SCHOLARLY COMMUNICATION RESEARCHER OBSERVATIONS

- Discipline Diversity
- Importance of Trust
- Importance of Credibility
- Velocity of Communication
- Meritocracy
- Organized Skepticism
- New Economics
- Vertical Integration
- New Modes of Discourse
- Democratization
- Expanded Readership
- Open and Free Exchange

SCHOLARLY COMMUNICATION CONCERNS

- Choking on the Proliferation
- Location of Quality Marking
- Corporate Economy Overtakes Guild Economy
- Dysfunctional Market
- Intellectual Property Ownership
- Darwinian/Capitalistic/Socialist Solutions
- New Models of Digital Scholarship

OPEN ACCESS

- Business Model
- Publishing Strategy
- Library Pledge Model
- Publisher Contract Model
- University Policy
- Subsidy Strategy
- National Policy
- Social Policy
- Disciplinary Strategy
- Individual Decision

RESEARCHER AND LIBRARY CORE INTERESTS

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

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

REPOSITORY CHAOS

- Discipline Repositories
- Institutional Repositories
- Format Repositories
- Departmental/School Repositories
- Individual Repositories
- Learning Repositories
- Government Repositories
- National Repositories
- Publisher Repositories
- Research Data Repositories
- Preservation Repositories

THE RIGHT TO TEXT AND DATA MINE

WHO ARE OUR USERS?

- Students (diversity abounds)
- Faculty (expectations galore)
- Researchers (tribal differences)
- Administration (the bottom line)
- Community (local politics)
- Working Professionals (practical applications)
- Alumni and Donors (largely ignored)
- World on the Web (the new majority)

WHERE DO WE INTERSECT WITH USERS?

- Physical Spaces
- Web Spaces
- Collections
- Services
- Applications
- Technologies
- Classroom
- Laboratory
- Bedside
- Collaborations
- Anyone
- Anywhere
- Anytime
- Anyhow

HOW DO WE KNOW ABOUT USERS?

- Ask
- Measure
- Listen
- Observe
- Compare
- Benchmark
- Experiment
- Involve
- Prototype
- Portfolio
- Evaluate
- Experience (Aha)

RESPOND TO USER EXPECTATIONS

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

ENHANCE THE USER EXPERIENCE

- Technology Ubiquity
- Point-of-Need Information
- Web-based Services
- Technology Sandbox
- Privacy Space
- Social Success
- Support Services
- Information Fluency
- Post-graduate Access
- Career Assistance

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)

AREAS OF SUCCESSFUL COLLABORATION

- Licensing of Electronic Resources
- Cooperative Cataloging
- Interlibrary Loan/Document Delivery
- Information Policy Advocacy
- Offsite Shelving Facilities
- Digital Archiving

ARENAS FOR COLLABORATION

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

Quality/Productivity/Innovation

RETHINK LIBRARY SPACE PLANNING AND IDENTITY

- Trompe L'oeil Library
- Library Use Trends
- Technology As Catalyst
- Learning Space
- Social Space
- Collaborative Space
- Flexibility And Adaptability

SOME QUESTIONS ABOUT CONCEPTION AND APPLICATION OF SPACE

1. Why do individuals enter a space?

   MOTIVATION/OBJECTIVE

2. How do individuals navigate a space?

   TRANSPORTATION/CIRCULATION

3. How do individuals use a space?

   EXPERIENCE/PRODUCTIVITY

4. What is balance among FUNCTION, USABILITY and AESTHETICS?

SOME QUESTIONS ABOUT CONCEPTION AND APPLICATION OF SPACE

5. How do individuals relate to each other?

   PRIVATE/COLLABORATIVE/PUBLIC

6. What is the symbolic role of space?

   EMOTIONAL/SPIRITUAL

7. How does a space reflect/advance larger organization?

   MISSION/SUCCESS/FEEL

8. How does a space enable FLEXIBILITY

   and ADAPTABILITY?

SOME NEW GUIDELINES
FOR FUTURE PLANNING AND DESIGN OF LIBRARY SPACE

1. Focus less on statistical and operational formulas.
2. Focus more on diversity of need and personal adaptability/customization.
3. Design for the agile rather than the static.
4. Start with the user and not the collection.
5. Start with the technology and not with the staff.

SOME NEW GUIDELINES
FOR FUTURE PLANNING AND DESIGN OF LIBRARY SPACE

6. Bring the classroom into the library.
7. Bring the academy into the library.
8. Conceive the library five years ahead.
9. Think more about playground and less about sanctuary.
10. Prepare for anxiety, disruption and chaos.

ACADEMIC LIBRARIES MUST DEVELOP THE WORKFORCE

- Recruitment Strategies/Competition
- Role Of Professional Education
- Employment Strategies/Compensation
- Development Strategies/Certification
- Retention Strategies
- Leadership Development/Succession Planning
- Feral Professionals/Socialization Issues
- Mutualism/Inter-professional Relationships

CAPABILITIES OF THE 21ST CENTURY ACADEMIC 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
- Leadership/Inspirational Capacity

WHAT ARE THE IMPLICATIONS FOR LIBRARY 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

LIBRARIES MUST 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

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 RESEARCH 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

MARKET THE LIBRARY

- Match Capabilities of an Organization with Needs and Wants of Communities Served
  - Existing Products to Existing Markets
    MARKET PENETRATION
  - Existing Products to New Markets
    MARKET EXTENSION
  - New Products for Existing Markets
    PRODUCT DEVELOPMENT
  - New Products for New Markets
    DIVERSIFICATION

FROM POLYGAMY TO PARTICULARISM SOME INSTITUTIONAL ACTIONS

- Build the Campus Technology Infrastructure
- Bring Information Services and Academic Computing Together
- Massively Redeploy Library Space For Academic Collaborations
- Organize Systematic Usability/Assessment Capability
- Align Resources To A New Uniqueness/Stewardship Model
- Advance Policy Education and Advocacy Role

FROM POLYGAMY TO PARTICULARISM FURTHER INSTITUTIONAL ACTIONS

- Market Resources and Services For Penetration and Diversification
- Create Web Harvesting Capacity As Part of Collections Program
- Partner With Faculty On Research Data Capture, Curation and Archiving
- Rethink Literary Education Role of Library
- Creatively Invest Collection Funds For Discovery, Access and Archiving
- Leadership for Research Information Management

HOW DO WE FEEL?

- Anxious - an abnormal and overwhelming sense of apprehension and fear

  "Our age of anxiety is, in great part, the result of trying to do today's jobs with yesterday's tools."

  Marshall McLuhan

- Disrupted - interruption of normal course or unity, thrown into disorder

  "One of the litmus tests is that a disruptive technology enables a larger population of less skilled people to do things that historically only an expert could."

  Clayton Christensen
  The Innovator's Dilemma

- Chaotic - state of utter confusion, unpredictability in the behavior of complex systems

  "Chaos often breeds life, when order breeds habit."

  Education of Henry Adams

WHERE ARE WE GOING?

RELEVANCE

IMPACT

VALUE

SURVIVAL

EXTINCTION

PHYLETIC – one species evolves into another

TERMINAL – termination of species/no descendants