towards designing an ecosystem of change for the future of the american research library

ann pendleton-jullian

ARL and THE 162\textsuperscript{ND} MEMBERSHIP MEETING
CHAPEL HILL, NC
MAY 1, 2013
WE ARE IN UNPRECEDENTED TIMES BECAUSE OF THE SPEED AND SPREAD OF EVERYTHING

We have unprecedented challenges in front of us in the next 15 years (starting now!).

BUT the corollary is:
We have unprecedented opportunities in front of us in the next 15 years (starting now!)
A Belief

The challenges we face are both fundamental and substantial.

We have moved from an era of equilibrium to a new normal—an era of constant dis-equilibrium.

Our ways of working, ways of creating value & ways of innovating must be reframed.
TWO MAJOR SHIFTS IN THINKING

From information as curated and catalogued with incremental knowledge construction to information as ubiquitous, pervasive, and knowledge construction is a fast and moving target.
TWO MAJOR SHIFTS IN THINKING

From 20\textsuperscript{th} century learning as push based along discipline lines w/ requisite authority and canons to 21\textsuperscript{st} century learning as pull based, inquiry driven, individually motivated, collaboratively constructed, and with lifelong potential.
THREE MAJOR NEW FORCES

WE ARE ENGAGED IN A NEW SET OF CHALLENGES AND CONFLICTS WITHOUT A CLEAR SET OF SOLUTIONS OR END STATES . . .

This requires crossing traditional boundaries of what we do and who we do it with . . .
Typology of Global Risks 2012

50 Global Risks

Economic
Environmental
Geopolitical
Societal
Technological

5 Categories

Centre of Gravity in each Risk Category

Critical Connectors

Weak Signals

Source: World Economic Forum
THREE MAJOR NEW FORCES

WWW CREATES AN UNPRECEDENTED VOLUME OF INFORMATION – BIG DATA – and UNPRECEDENTED CONNECTIVITY – ACCESS TO BIG DATA AND TO EACH OTHER . . .

How to make sense of this . . .
THREE MAJOR NEW FORCES

DIGITAL TECHNOLOGIES LET US OPERATE DIFFERENTLY (from the digital humanities to digital 3d fabrication) . . . and

EMERGING VISUALIZATION METHODOLOGIES LET US SEE DIFFERENTLY . . .

A new (21st century) ontology is emerging . . .
THE FUTURE OF THE UNIVERSITY AS A DESIGN PROBLEM – THE BRIEF

HOW THE PROBLEM HAS BEEN FRAMED TO DATE:

AS A TAXONOMY OF PROBLEMS, CHALLENGES, THREATS and MOOC ‘MADNESS’ - THE RESHAPING OF LEARNING AND RESEARCH BY RAPIDLY EVOLVING TECHNOLOGIES
THE FUTURE OF THE UNIVERSITY AS A DESIGN PROBLEM – AT GEORGETOWN UNIVERSITY
A HUMANITIES DESIGN STUDIO: 14 UNDERGRADUATE STUDENTS FROM ACROSS 8 DISCIPLINES

The University as a Design Problem

Spring 2013
“ARE AMERICAN RESEARCH UNIVERSITIES RIDING ON THIN ICE?” A CONGRESSIONAL REQUEST:

NATIONAL ACADEMY STUDY ON RESEARCH UNIVERSITIES (2010-12) - NATIONAL ACADEMY OF SCIENCES, NATIONAL ACADEMY OF ENGINEERING, AND INSTITUTE OF MEDICINE: “what are the top 10 actions that congress, state governments, research universities, industry and business partners can take to maintain excellence in research /doctoral education?”
STRENGTHS:
National Priorities require Research Universities:
Security (defense, terrorism); Economic Prosperity; Public Health;
Preservation/Transmission of Culture; Enlightened Criticism.
Unique Contributions:
New knowledge (basic + applied);
Scholars, scientists researchers working together;
Prepare knowledge intensive professionals (engineers, doctors);
Preparation for knowledge intensive services (clinical care, innovation,
entrepreneurialism);
Are knowledge/culture repositories (libraries, museums, theaters);
Provide social criticism and leadership.

WEAKNESSES:
Obsolete financial models.
Obsolete public policies (federal and state).
Inadequate alignment w/ US priorities.
Mission creep.
Institutional competition (winner take all cost driver).
Obsolete governance, management, leadership.
Inadequate capacity for change.
Changing professoriate.
Obsolete doctoral/postdoc training (feudal system).

OPPORTUNITIES:
Use crisis to stimulate change.
Develop new financial models for 21st century.
Restructure graduate education.
Rebalance competition and cooperation.
Redefine core mission (“core-in-cloud”).
Explore new paradigms (e.g. global, open-source ecology)

THREATS:
Globalization.
Human capital (changing demographics).
Financial sustainability (particularly of flagship public universities).
Technological change.
Public/political awareness.
Challenges to academic freedom and integrity.
Lack of a national strategy.

DANGER SIGNS:
FEDERAL policies no longer place a priority on university research and
grad education.
STATES are no longer either capable or willing to support public
research universities at world class level, in the face of economic
challenges and the priorities of aging populations.
BUSINESS AND INDUSTRY have largely ceded their basic research to
research universities but w/ only minimal corporate support.
RESEARCH UNIVERSITIES have failed to achieve the cost efficiency
and productivity enhancement in teaching and research required of an
increasingly competitive world.
AT THE SAME TIME, THE RESHAPING OF LEARNING AND RESEARCH BY RAPIDLY EVOLVING TECHNOLOGIES GAME CHANGERS AND PARADIGM Shifts
WE HAVE NEW TOOLS and MECHANISMS and WE CAN INVENT MORE
A CAMBRIAN MOMENT
(EDUCATION AND LONG-TAIL INNOVATION DOING CARTWHEELS)

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<td>AND MORE!!!!</td>
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THE LONG TAIL PHENOMENON

- Few
- Number of Items Offered at Each Popularity Level
- Many
BUT WHAT ARE WE AIMING AT?
LOOKING AT THE ISSUE ANOTHER WAY.
REFRAMING THE BRIEF THE HISTORICAL LEGACY AND THE UNIVERSITY OF THE 21ST CENTURY.
A BETTER QUESTION.
TO REALLY MAKE A PARADIGM SHIFT YOU HAVE TO UNDERSTAND HOW THE WORLD YOU LIVE IN WAS CONSTRUCTED AND HOW IT IS LIKE AND UNLIKE THE WORLD YOU LIVE IN NOW.
GEORGETOWN STUDIO:
THE FUTURE OF THE UNIVERSITY IN 2033 (WHY 2033?)

The University as a Design Problem

Spring 2013

Precendent Studies

Precendent assignment sequence (this cycle involves the sequence and essential moves and skills of each of the next two cycles).

Step 1: in pairs, annotate a precedent (in text) according to the starting questions (see handout). Post the annotations to the blog. (By 9pm, 1.21)

Step 2: diagram the precedent in an exploratory way, start to develop a language of diagramming, representing your precedent as an ecosystem, attending to a) key component

Community
- Jack Appelbaum (1)
- Keaton Beedel (1)
- Hilary Cohen (1)
- Thea Fowles (2)
- Nella Freeman (1)
- Capri LaRocca (2)
- Evan Markley (1)
- Andrew Morrison (1)
- Timothy Rafts (1)
- Tyler Sax (1)
- Leigh Sevin (1)
- Daniel Stikman (1)
The University as a Design Problem

Spring 2013

Precedent Studies

Precedent assignment sequence (by cycle) includes sequence of nested cycles. The sequence of cycles and skills of each of the next two cycles.

Step 1: in pairs, annotate precedents (6.30-7.30) using starting instructions (see handout). Post the annotations to the blog (by 9pm, 1.2.)

Step 2: diagram the precedent in an exploratory way, start to develop a language of diagramming, representing your precedent as an ecosystem, attending to a) key components of

Community
- Karl O. J. Selbaum (1)
- Charles Bedel (1)
- Hilary Cohen (1)
- Thea Fowles (2)
- Tyler Sax (1)
- Andrew Morrison (1)
- Timothy Raftis (1)

Society
- Leonora Krey (2)
- Elise Sevin (1)
- Daniel Slikman (1)
but there are overwhelming similarities

core concepts

thought experiments

drivers

desires

fears
THE FUTURE OF THE UNIVERSITY LIBRARY AS A DESIGN PROBLEM –
THE BRIEF?? ARL’S ROLE?? COMMUNITY OF PARTNERS
TWO INTERESTING FRAMING QUESTIONS

WHAT IS THE ROLE OF THE RESEARCH LIBRARY IN THIS SHIFTING LANDSCAPE?

WHO IS RESPONSIBLE FOR SENSE MAKING?
THREE* OBSERVATIONS TO START (ELLIOTT’S OBSERVATIONS AND CONVERSATIONS)

THE RESEARCH LIBRARY AS WHERE CULTURAL MEANING RESIDES, WHERE KNOWLEDGE IS HELD IN REPOSITORY . . .

and

AS AN OPEN DOOR AND CONDUIT FOR SCAFFOLDING SOCIAL JUSTICE AND ADVOCACY . . .
THREE OBSERVATIONS

DESIRE FOR DIVERSITY AND NEW PARTNERSHIPS ACROSS THE UNIVERSITY, INTO POLICY MAKING . . . FOR EFFICACY

crossing traditional boundaries of what we do and who we do it with . . . the role of ARL? who is ARL?
THREE OBSERVATIONS

DEFINING AND OPERATIONALIZING 21ST CENTURY LEADERSHIP AT SEVERAL SCALES . . .

Leadership for purpose . . .
HOW TO GET THERE . . .

WORLD BUILDING

IMAGINING BEYOND INCREMENTAL

MOVEMENT FORWARD TO ECOSYSTEMS

OF CHANGE

WORLD BUILDING and CLOSING THE GAP
A Belief

The challenges we face are both fundamental and substantial.

We have moved from an era of equilibrium to a new normal—an era of constant dis-equilibrium.

Our ways of working, ways of creating value & ways of innovating must be reframed.

The Competency Trap works against change!

- to produce a product family
- to see new patterns

but what blocks one from seeing new patterns?
A Story of a Competency Trap
(and a conceptual lock-in)

Glenalvon - 1880s

Clipper Ships
France II
Preussen
Thomas W. Lawson

path dependency reigns supreme
LESSON LEARNED . . .
incremental change lands you on the rocks.
FROM RE-FRAMING TO ECOSYSTEMS OF CHANGE

WORLD BUILDING and CLOSING THE GAP THE CHANGE TRIANGLE 2.0

A SCAFFOLD THAT AGGREGATES
“I held in my hands a vast methodical fragment of an unknown planet's entire history, with its architecture and its playing cards, with the dread of its mythologies and the murmur of its languages, with its emperors and its seas, with its minerals and its birds and its fish, with its algebra and its fire, with its theological and metaphysical controversy. And all of it articulated, coherent, with no visible doctrinal intent or tone of parody.”

Jorge Luis Borges

*Tlön, Uqbar, and Orbis Tertius*
WORLD BUILDING IS ABOUT IMAGINING COHERENT NEW CONTEXTS THAT ARE ECOSYSTEMS FOR THINGS TO HAPPEN IN
VISION
VISION IS ABOUT SIGHT, PERCEPTION AND THE IMAGINATION
VISION AND THE ROLE OF META-NARRATIVE

COMPPELLING
STRATEGICALLY AMBIGUOUS
POSITIVE IN FOCUS
ASPIRATIONAL

WHAT UNIQUE ROLES DOES THE RESEARCH LIBRARY OF THE FUTURE PLAY . . . one that no one else can do.
VISION

META-NARRATIVE
world building

social networks

MECHANISMS

MICRO-NARRATIVES
META-NARRATIVE
world building

MICRO-NARRATIVES
micro-experiments, micro-strategies
META-NARRATIVE
world building

MECHANISMS

MICRO-NARRATIVES
micro-experiments, micro-strategies
META-NARRATIVE
world building

MECHANISMS
information vis.
things that do work on all parts

MICRO-NARRATIVES
micro-experiments, micro-strategies
META-NARRATIVE
world building

social networks
people

MECHANISMS
information vis.
things that do work
on all parts

MICRO-NARRATIVES
micro-experiments, micro-strategies
THE SHAPE OF THE TRIANGLE . . .
FROM SINGLE TOP DOWN NARRATIVES TO INTIMATE NETWORKED MICROSTORIES
FROM CONTROL TO COMMUNITIES TO COHORTS

leadership recognizes rewards through attention they give to stories coming up.
one last thought . . .

THINKING
NOT LIKE A WATCH BUT LIKE AN ECOSYSTEM
"A mechanical system—a watch for instance—is divisible, while an ecosystem is indivisible because of well developed interdependences."

Sven E. Jorgensen, *Handbook of Ecosystem Theories and Management*

Because ecosystems are indivisible, they are environments where all work feeds back into the system, affecting the entire system.
The red dot represents the beater’s center of gravity. When the center of gravity is not aligned with the center of gravity of boat, the beater flips.

Pushing your torso out of water before the head.