

Reorganizing Libraries to Meet Tomorrow's Needs

David W. Lewis

Oklahoma Library Association Pre-Conference
Tulsa, Oklahoma
April 17, 2002

Prelude: David's Two Observations

Observation 1:

25 years ago the most important thing libraries did was keep millions and millions of small pieces of paper in the correct order.

The organizational structures and the culture that made it possible not to lose very many of those millions of piece of paper was required then.

Today these structures and culture are counterproductive.

Observation 2:

The purpose of libraries is to provide the members of the communities or organizations they serve with an information subsidy.

Without this subsidy information is not used to the extent that will provide the most benefit to the organization or community.

It is the subsidy, not the organization that currently provides it (the library) that is important.

Today's Outline

- Evolution of Library Practice — Michael Buckland
- Environmental Context — Evans & Wurster and Clayton M. Christensen
- Disruptive Change and Libraries
- Issues of Organizational Structure and Organizational Culture
- Thoughts on What is Required for Success

Michael Buckland: Stages of Library Development

- *Paper Library* - Both documents and bibliographic access are paper
- *Automated Library* - Documents remain in paper, but bibliographic access is electronic
- *Electronic Library* - Both documents and bibliographic access are electronic (and networked)

Paper Library

- Based on technologies developed in the 19th century
 - Mass produced paper books
 - Card catalogs
 - Professional standards of practice
- Developed throughout the first 70 years of the 20th century
 - Moved to open service model including reference service and open stacks
 - Interlibrary cooperation developed
 - Microforms and photocopying extend print

Paper Library

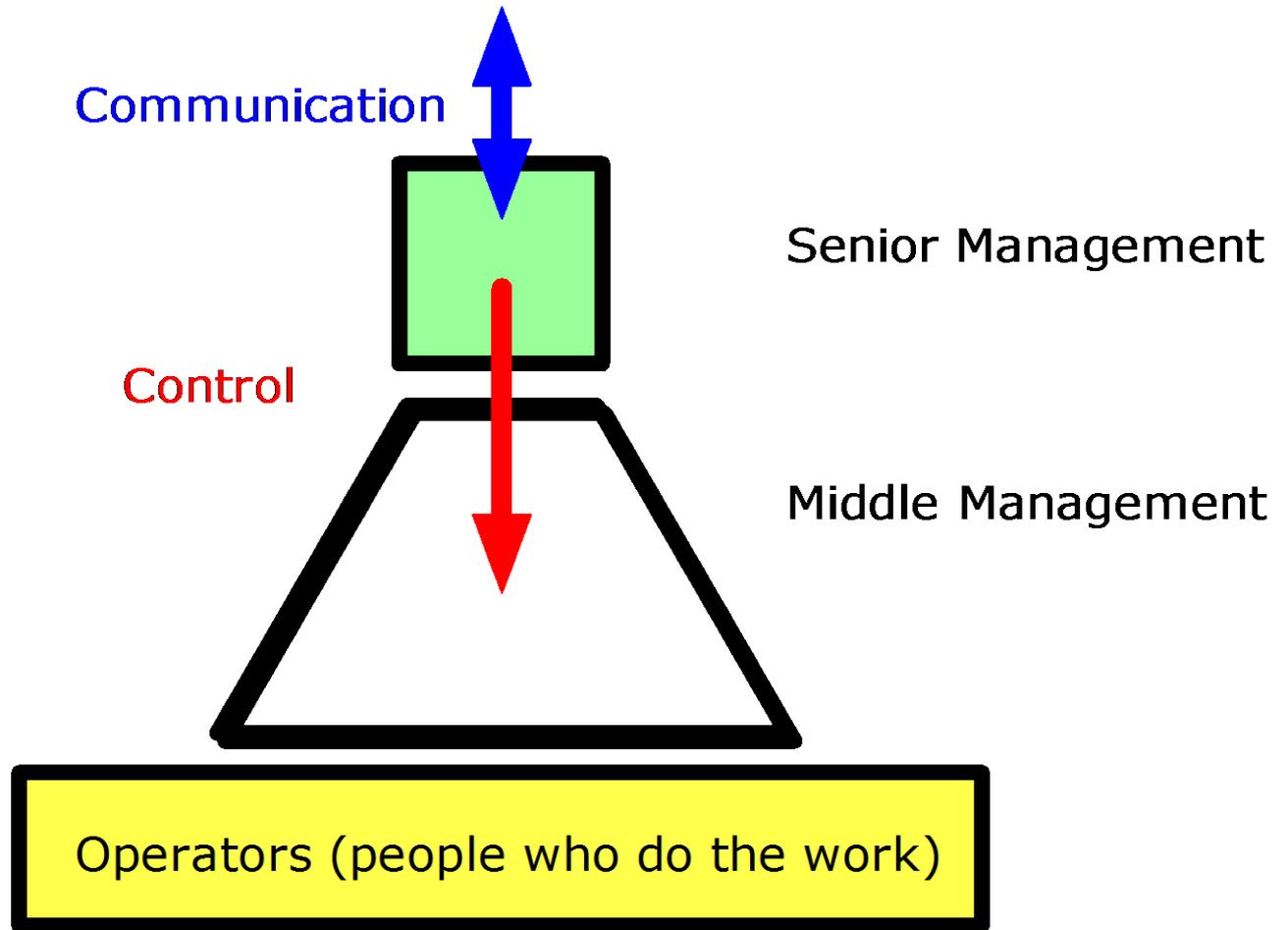
- Organizational structures and culture based on the need to control complex processes (not to lose the little pieces of paper)
- Strong bureaucratic hierarchies
- Little lateral communication
- External communication mostly at the top of the organization
- Technical Services/Public Services split in the organization
- Distinctions between librarians and other staff

Paper Library

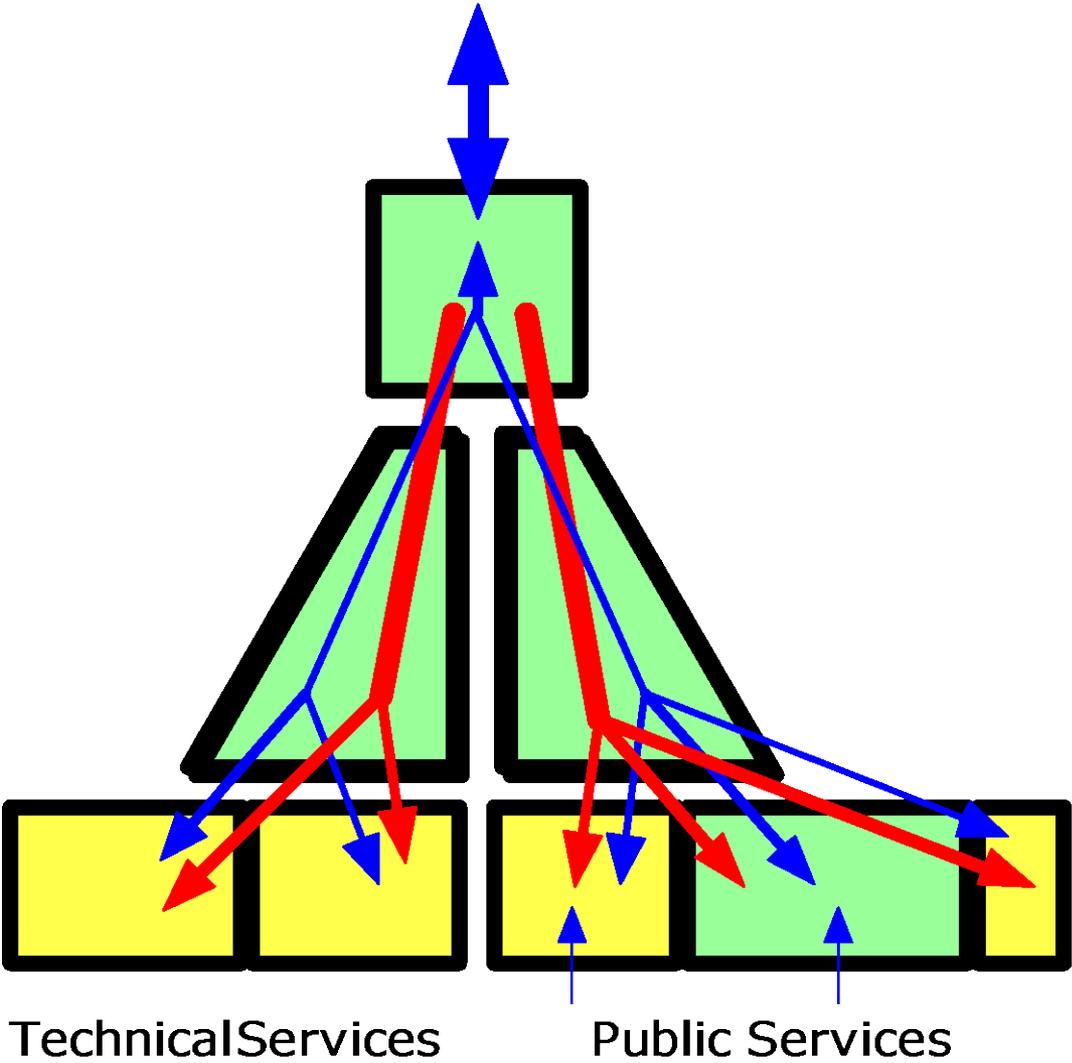
- Because the long existence of the paper library, roles became fixed... and as a result, they were often unexamined

Organizational Model

Based on Henry Mintzberg, *The Structuring of Organizations*



Paper Library



Automated Library

- Developed from 1965 to 1985
- Application of computers to internal processing functions
 - Made possible by MARC (open standard)
 - National bibliographic databases
 - Improved ILL
 - Reference tools computerized on CD-ROM
- Service model did **not** fundamentally change

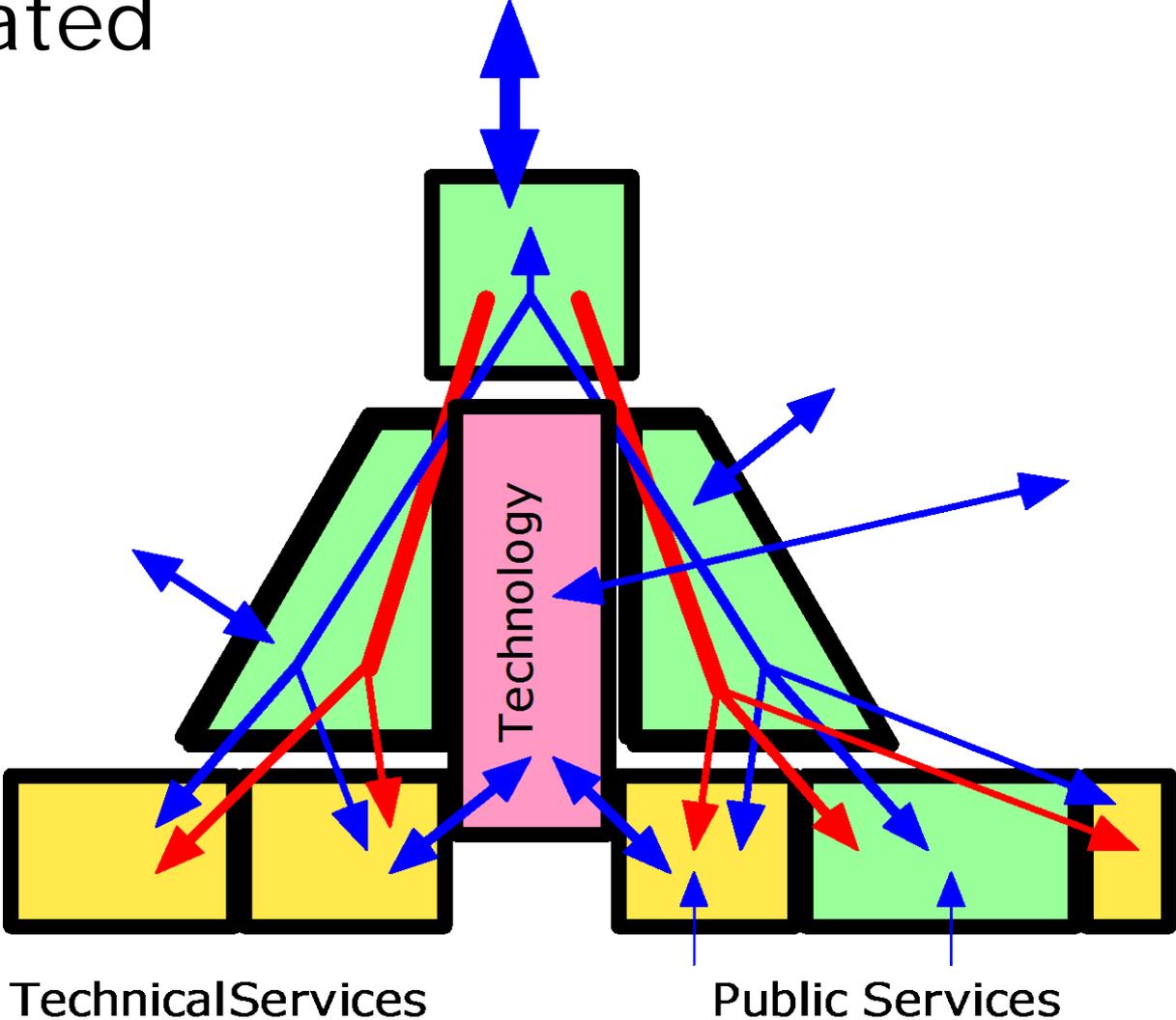
Automated Library

- Organizational structures and culture still based on the need to control complex processes (both automated and paper based)
- Still strong bureaucratic hierarchies
- More lateral communication to coordinate technology (often a cause of conflict)
- External communication still mostly at the top of the organization, but increases at middle management level

Automated Library

- Technical Services/Public Services split remains, technology adds a third camp
- Distinctions between librarians and other staff remain, computer professionals add a third camp
- New technology requires reconstructing established practices
- Organizational complexity
- Roles often remain unexamined

Automated Library



Electronic Library

- Begun in mid 1990s
- Internet and Web as drivers (open standards)
- Extensive full-text resources become available
- Alternative sources of information become real (and often easier and faster to use)
- Having stuff becomes less important than providing services
- Anywhere, anytime library become possible

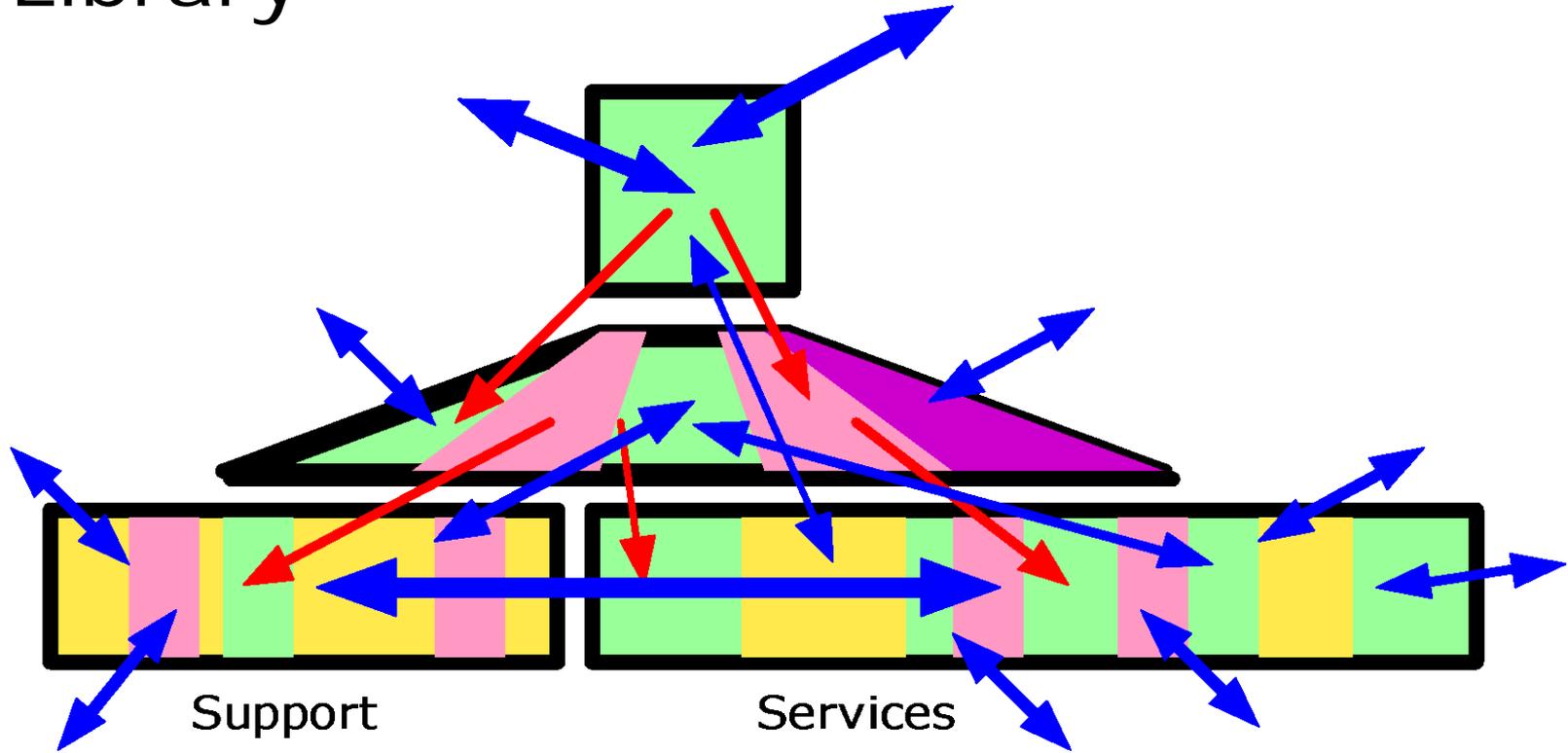
Electronic Library

- Requires quick adoption of new technologies and new services
- Roles and functions mixed and often confused
- Everybody has to be involved in everything
 - Makes Technical Services/Public Services/Technology distinctions counterproductive
- Distinctions between classes of staff harder to make and less useful
 - Many clerical positions are para-professionals doing work librarians did 15 years ago, including cataloging and reference
 - New kinds of professionals in the organization

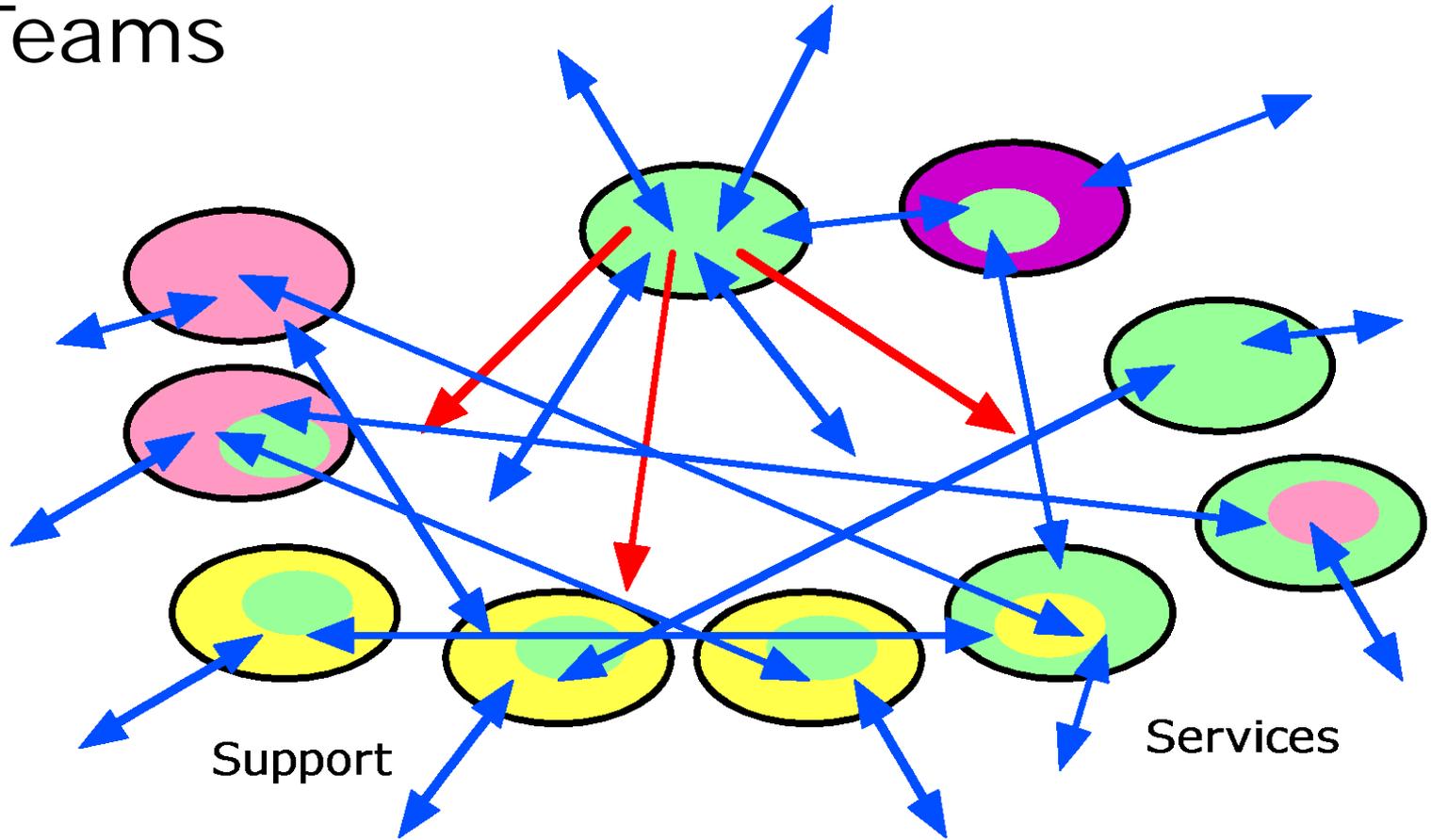
Electronic Library

- Organizational models not yet clear, but...
- Flatter hierarchy
- Broader spans of control
- Coordination more important than control
- Lateral communication critical
- Boundary spanning critical — both internally and externally
- External communication important for all parts of the organization

Electronic Library



Electronic Library Teams



Context

- Evans & Wurster: Deconstructing Value Chains
- Clayton M. Christensen: Sustaining versus Disruptive Technologies

Evans & Wurster: Deconstructing Value Chains

- Value Chain of a Product — The activities to:
 - Design
 - Produce
 - Market
 - Deliver
 - Support
- And the information that supports (glues these activities together)
- Can be for an organization or an industry

Library's Traditional Value Chain

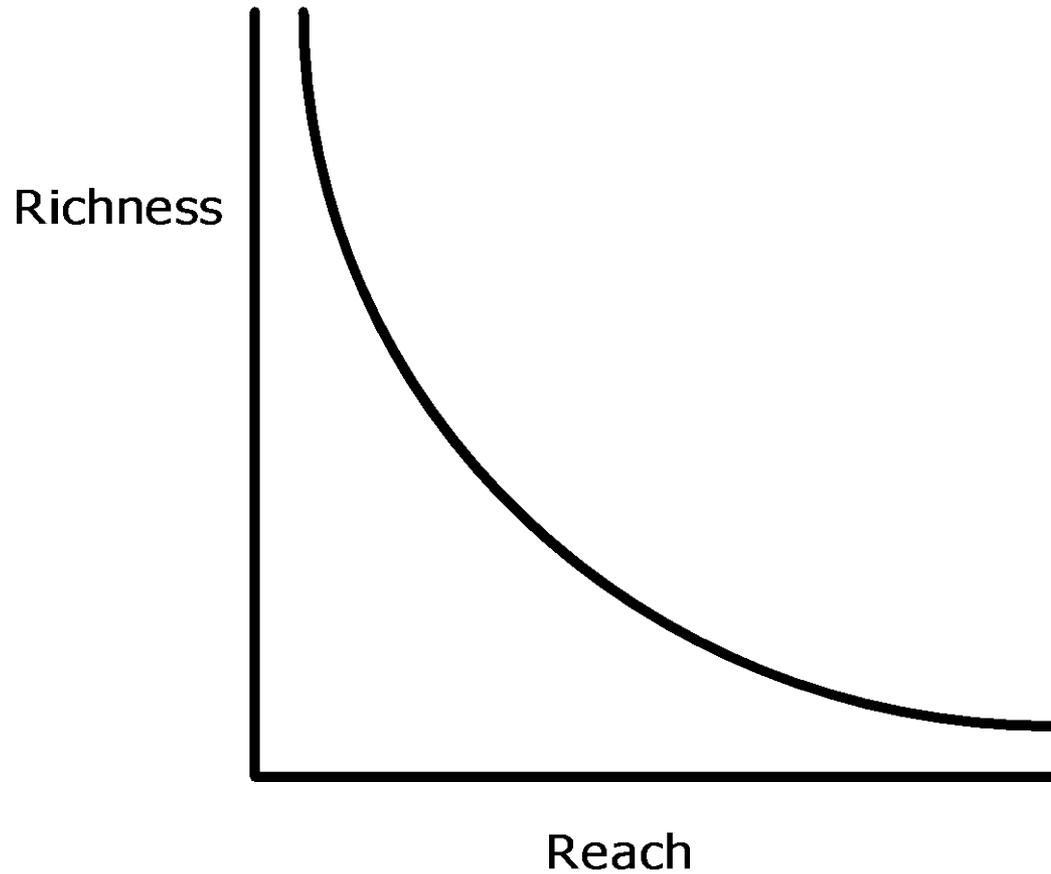
- Select materials
- Acquire Materials
- Catalog Materials
- Maintain and Preserve Collection
- Circulate Materials
- Help Users Find Materials

- Strategic Asset: Collection

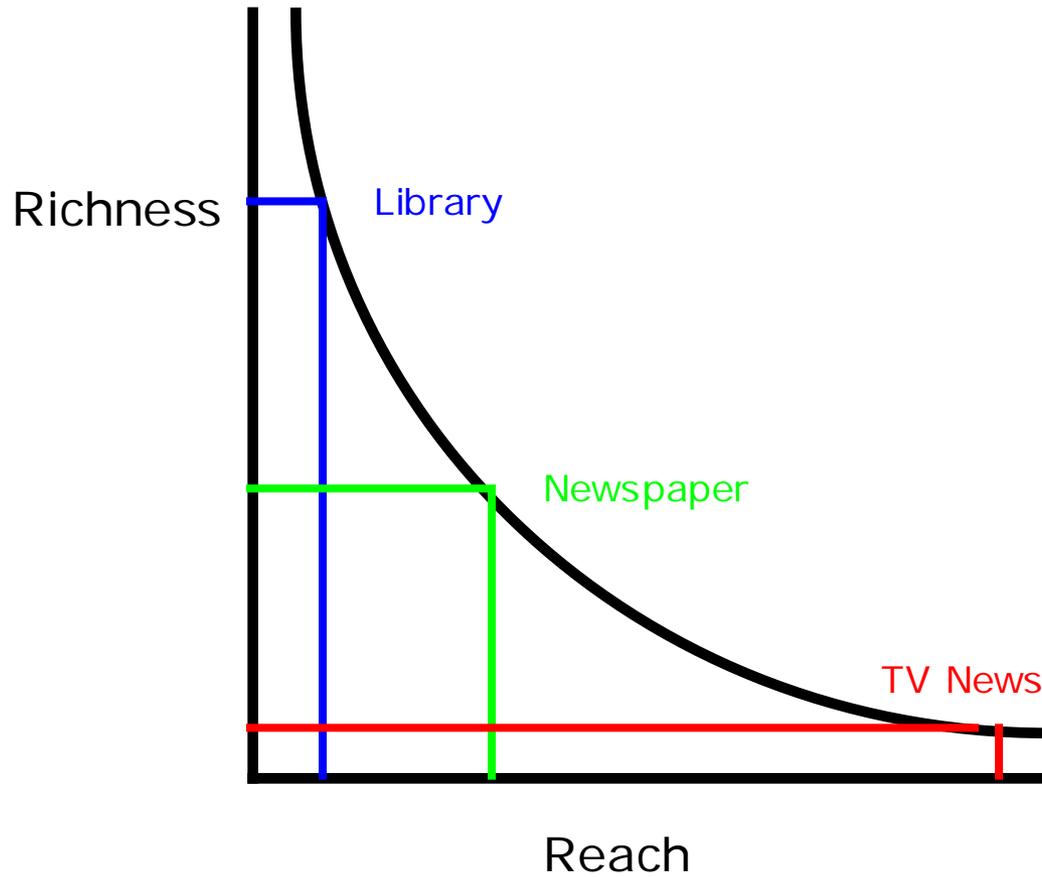
Evans & Wurster: Richness and Reach

- Reach — Number of people who can receive message or product
- Richness
 - Bandwidth — amount of information exchanged
 - Customization — degree the information can be personalized
 - Interactivity — dialog versus monologue
- As long as information is embedded in a physical container there is a trade-off between richness and reach

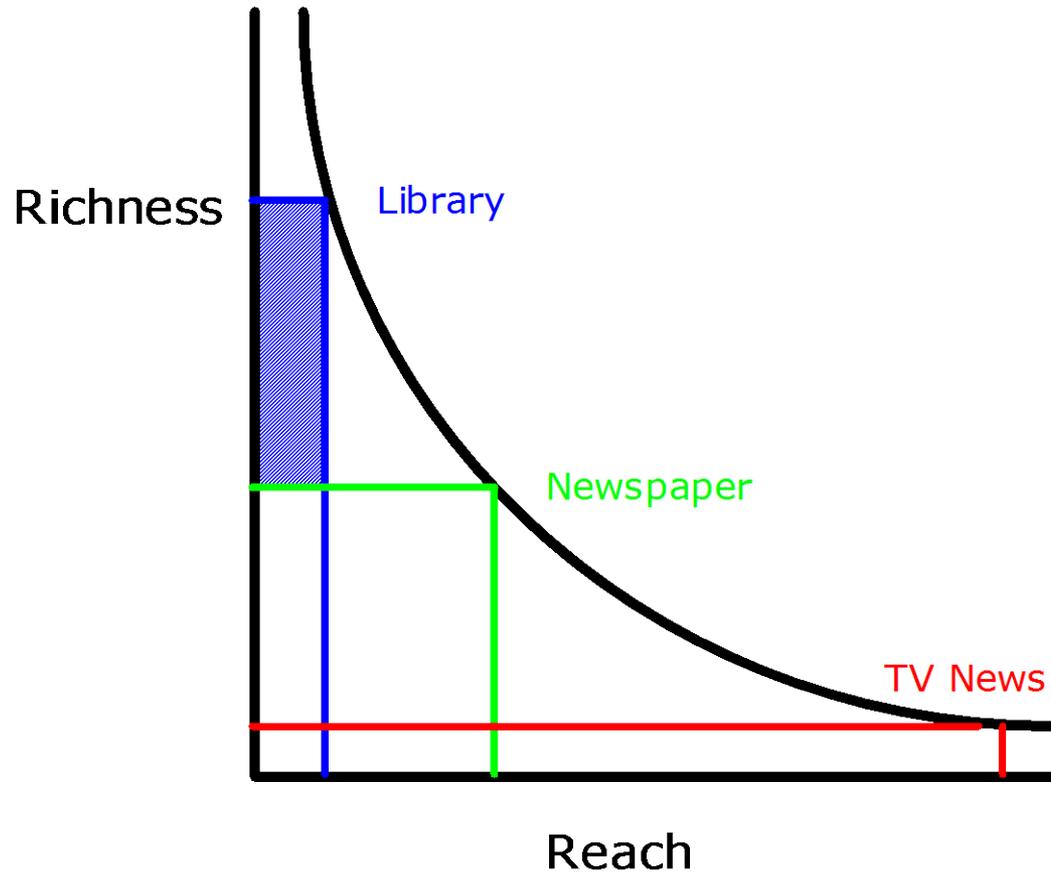
Richness versus Reach



Richness versus Reach



Richness versus Reach



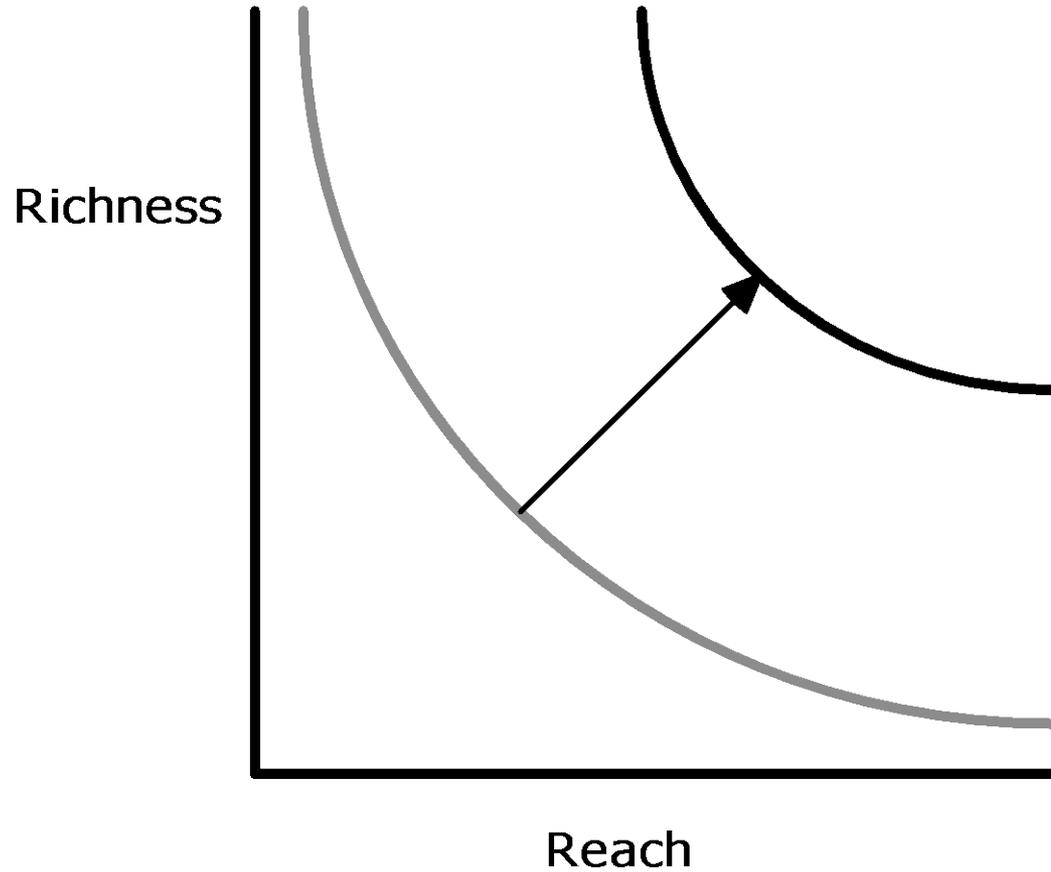
Evans & Wurster: Deconstructing Value Chains

“What is truly revolutionary about the explosion in connectivity is the possibility it offers to unbundle information from its physical carrier.”

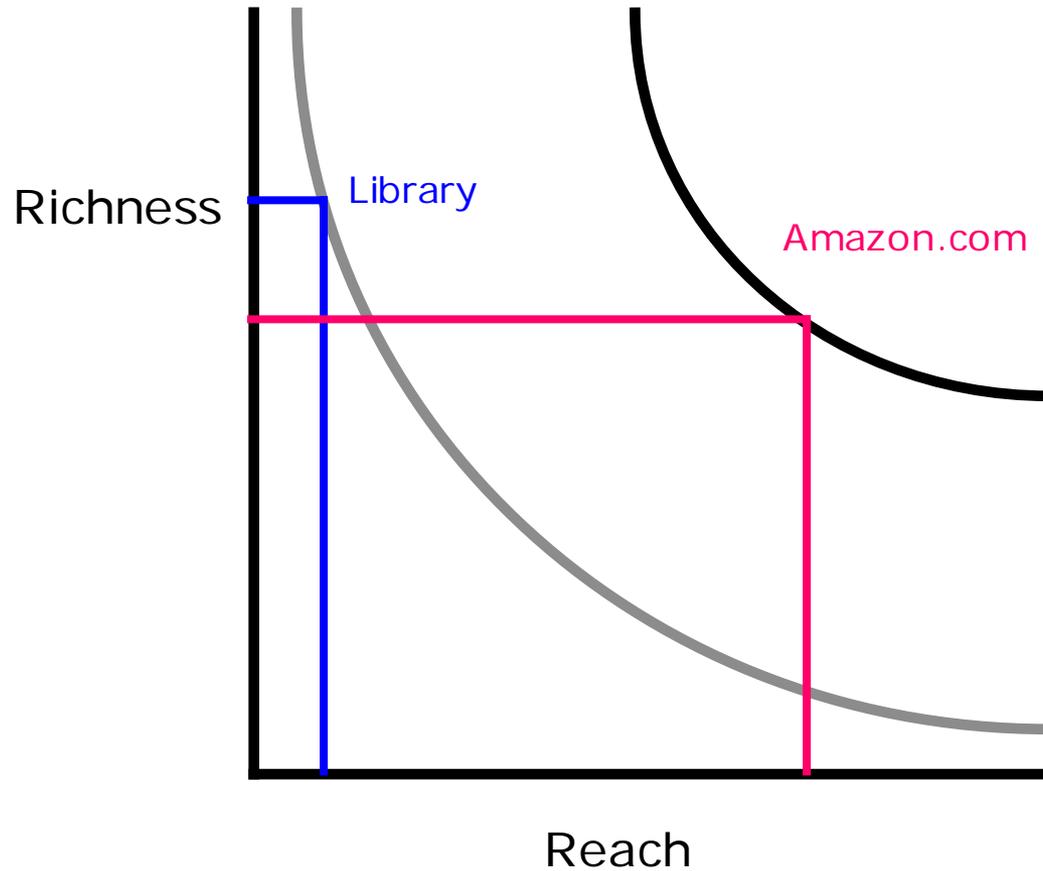
“The rapid emergence of universal technical standards for communication, allowing everybody to communicate with everybody else at essentially zero cost, is a sea change.”

“Over time, organizations and individuals will be able to extend their reach by many orders of magnitude, often with a negligible sacrifice of richness.”

Richness versus Reach



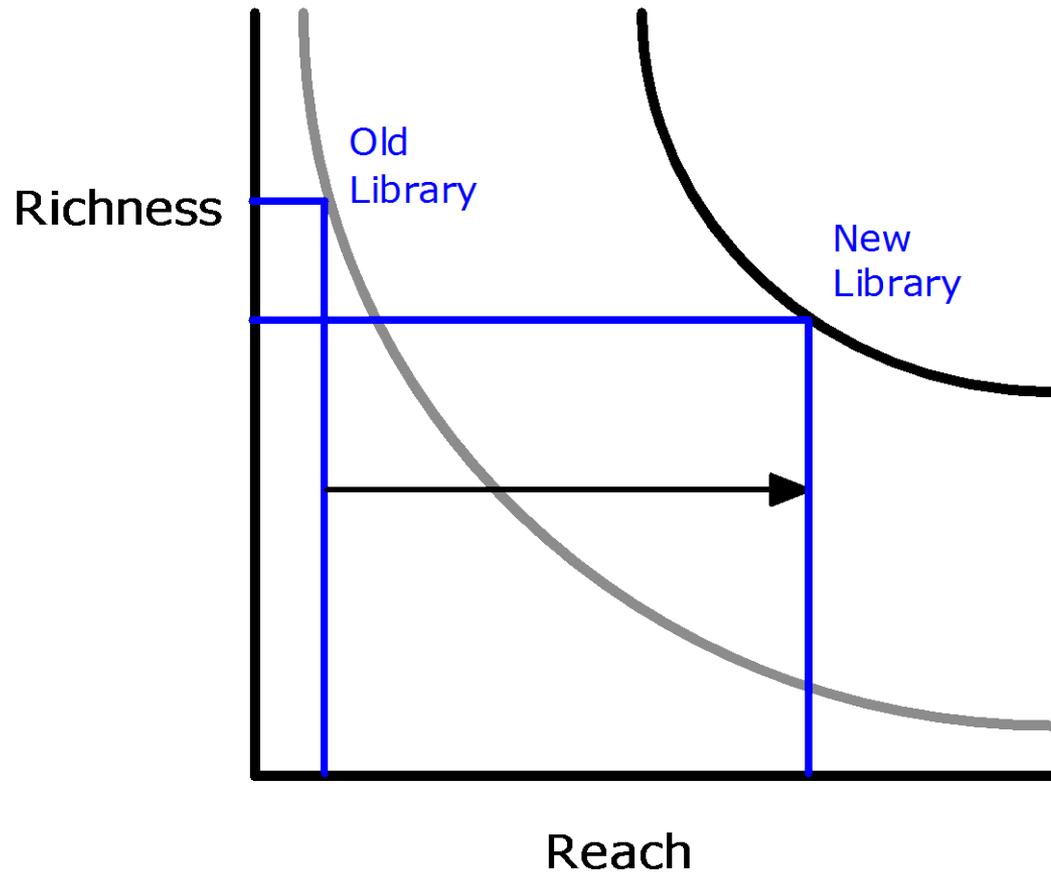
Richness versus Reach



Richness versus Reach



Richness versus Reach



Evans & Wurster: Deconstructing Value Chains

- When the richness/reach trade-off is “blown to bits”, value chains can be deconstructed
- The functions still remain, but they don’t have to be tied together in the same way
- New players (competitors) can claim the parts of the value chain
- Everybody can get into everyone else’s business

Everybody can get into everyone else's business... and does

- OPAC vendors want to be the library portal
- Book deals provide cataloging
- Scholarly societies market library collections to membership
- Elsevier includes indexing and wants to be the library portal
- State-wide systems provide online libraries and want to be the library portal
- Questia wants to be an undergraduate library
- OCLC wants to do everything

Clayton M. Christensen: Sustaining versus Disruptive Technologies

Clayton M. Christensen: Sustaining versus Disruptive Technologies

- *Sustaining technologies* improve the performance of established products along dimensions of performance that mainstream customers in major markets have historically valued.
- *Disruptive technologies* bring a very different value proposition to the market than has been previously available. Generally, disruptive technologies initially under perform established products in mainstream markets. But they have other features that are valued by a few fringe (and generally new users) users.

Clayton M. Christensen: Sustaining versus Disruptive Technologies

- *Sustaining technologies* - Established organizations are generally good at change involving sustaining technologies.
 - Follow the best customers
 - Service models are not fundamentally changed
 - Quality improves
 - Added cost justified by improved service

Clayton M. Christensen: Sustaining versus Disruptive Technologies

- *Disruptive technologies* - Established organizations generally fail when change involves disruptive technologies. Organizations at the periphery succeed.
 - Design product or service for new, rather than established, users
 - Cheaper, faster, easier — even if quality is not high at the outset
 - Service models disrupted
 - Faster rate of development

Change in Libraries

- Change from Paper Library to Automated Library was a *Sustaining Change*
 - OCLC cataloging
 - Automated Library Systems (OPACs, circulation systems, etc.)
 - Indexes on CD-ROM
- Change from Automated Library to Electronic Library is a *Disruptive Change*

Disruptive Change in Libraries Today

- Collections
- Bibliographic Control
- Reference

- **What else is there?**

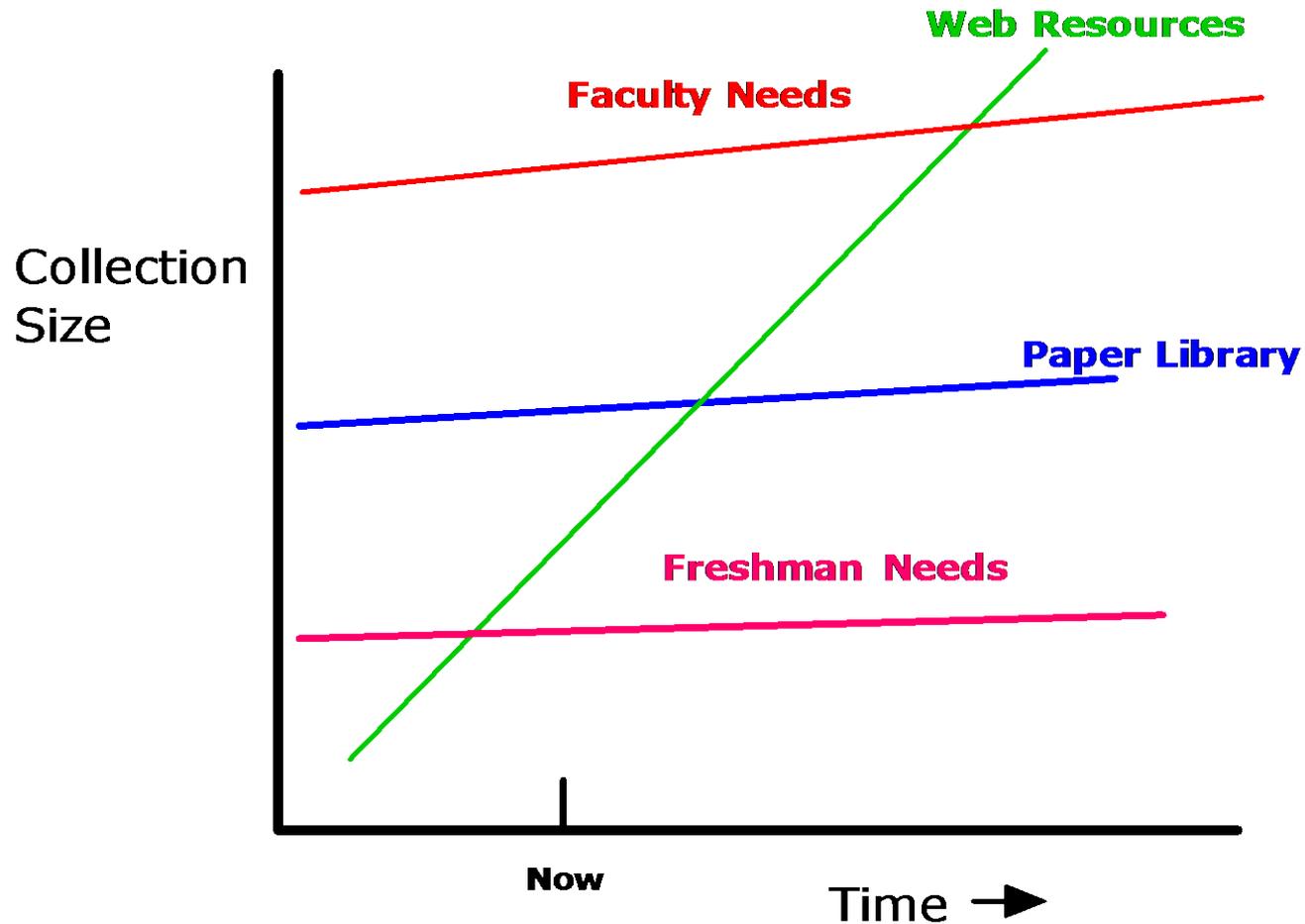
Disruptive Change - Collections

- Old World — collection hand crafted one item at a time based on needs of local users
- New World
 - Web (open standards) creates easily accessible collections
 - Open Archives (ePrint servers) will challenge journals as means of scholarly communication
 - Web archives (like American Memory) make large collections available without institutional affiliation
 - eBooks will happen soon (libraries might not be players)

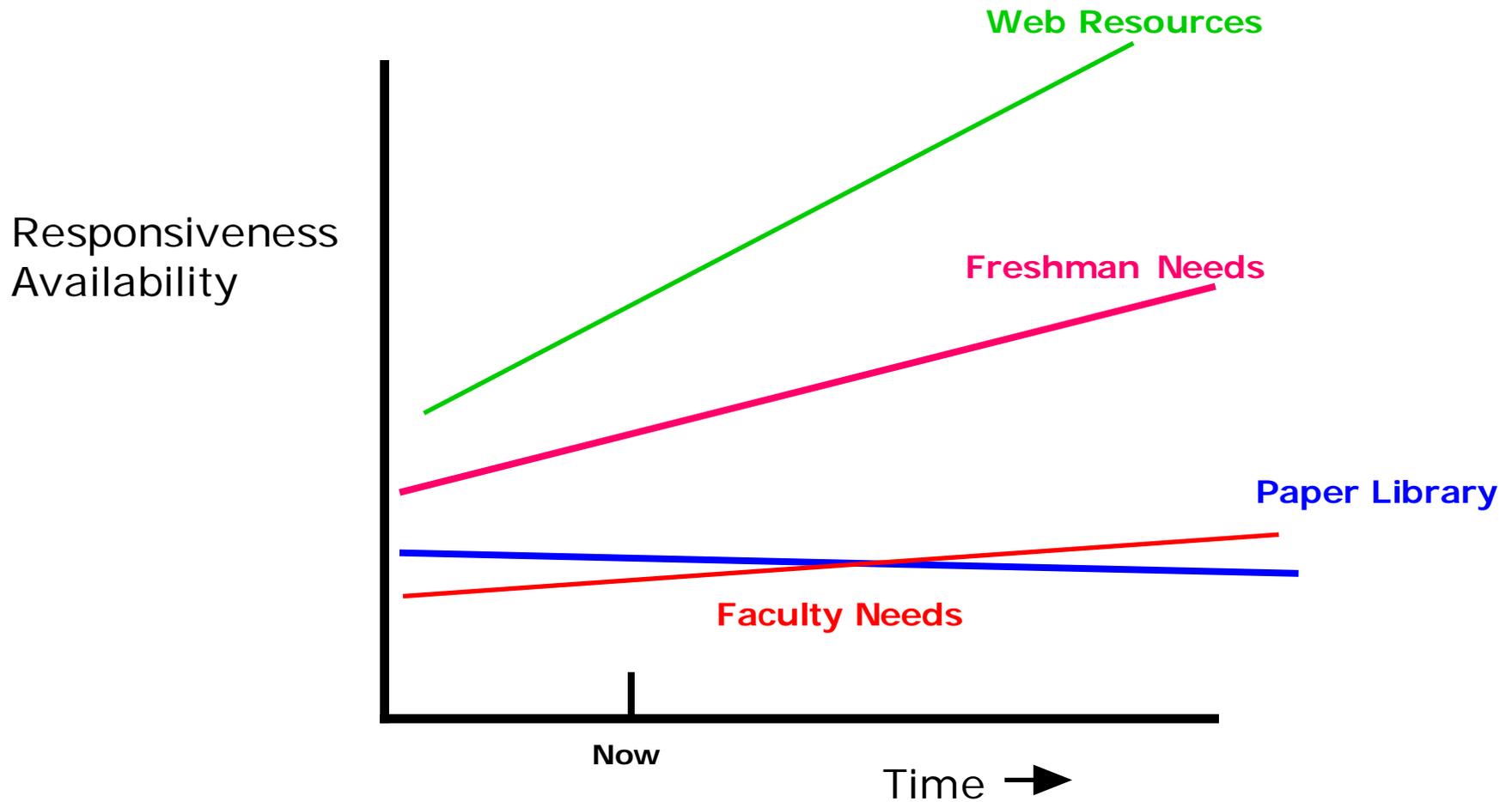
Disruptive Change - Collections

- New World (con.)
 - Collections **not** hand crafted one item at a time
 - Collections purchased in large blocks
 - Collections purchased with partners
 - Collections purchased by large entities (states)
 - Individual librarians and libraries roles very different

Disruptive Change - Collections



Disruptive Change - Collections



Disruptive Change - Bibliographic Control

- Old World
 - Like the collection bibliographic control, even when automated, was hand crafted one item at a time
 - Bibliographic control leads users to the local collection, which was the only thing immediately available
- New World
 - Bibliographic control purchased rather than made (Marchive, PromptCat, Serials Solutions)
 - Access to items not owned as or more important than access owned items

Disruptive Change - Bibliographic Control

- New World (con.)
 - Catalogs are for machines, not people (SFX and other linking systems)
 - Portal battle — library catalog versus Goggle, library interface versus Science Direct (Elsevier), or library interface versus state interface (OhioLink, etc.)
 - Trade-off between collections and bibliographic control

Disruptive Change - Reference

- Old World
 - When the library was a building people came to the library librarians waited behind desks and answered questions when they were asked
 - The tools used to assist users (the catalog and the reference collection) were close at hand
- New World
 - Users are everywhere
 - Tools they need assistance with are everywhere
 - Questions are both easier and harder

Disruptive Change - Reference

- New World
 - Alternative reference providers
 - OCLC Remote Reference Collaboration
 - LSSI Chat Reference Service
 - Mass customization of services is expected by users
 - Alternative expert advice is available on the web

“In the summer of 2000, in a desert town called Perris, halfway between Los Angeles and Palm Springs, 15-year-old Marcus Arnold offered his reply to those questions, and a thousand or so more besides [on AskMe.com’s legal board]. Marcus's parents had immigrated to Perris from Belize by way of South Central Los Angeles... Despite this and other handicaps, Marcus's ranking rebounded. Two weeks after he disclosed his age [lots of lawyers were really upset], he was on the rise; two weeks later he hit No. 1.”



“He was the kind of person high school is designed to suppress, and like Jonathan Lebed, he had refused to accept his assigned status. When the real world failed to diagnose his talents, he went looking for a second opinion. The Internet offered him as many opinions as he needed to find one he liked. It created the opportunity for new sorts of self-perceptions, which then took on a reality all their own.”

“The legal advice he gave to a thousand or so people along the way might not have withstood the scrutiny of the finest legal minds. Some of it was the sort of stuff you could glean directly from Judge Judy; more of it was a simple restating of the obvious in a friendly tone. Marcus didn't have much truck with the details; he didn't handle complexity terribly well. But that was the whole point of him -- he didn't need to. A lot of what a real lawyer did was hand out simple information in a way that made the client feel served, and this Marcus did well. He may have had only the vaguest idea of what he was talking about and a bizarre way of putting what he did know. But out there in the void, they loved him.”

Michael Lewis, “Faking It: The Internet Revolution Has Nothing to Do With the Nasdaq,”
New York Times Magazine July 15, 2001

What happens when an organization
confronts disruptive change?

“It is simply impossible to predict with any useful degree of prediction how disruptive products will be used or how large their market will be. An important corollary is that, because markets for disruptive technologies are unpredictable, companies’ initial strategies for entering these markets will generally be wrong.”

— Clayton M. Christensen

Librarians love to plan. In the old world this was a critical skill. It may now be a waste of time.

“The dominant difference between successful ventures and failed ones, generally, is not the astuteness of their original strategy. Guessing the right strategy at the outset isn’t nearly as important to success as conserving enough resources... so that new business initiatives get a second or third stab at getting it right.”

— Clayton M. Christensen

Libraries rarely have, or can acquire, flexible resources.

“Managers confronting disruptive technologies need to get out of their laboratories and focus groups and directly create knowledge about new customers and new applications through discovery-driven expeditions into the marketplace.”

— Clayton M. Christensen

Need to be close to users so you can watch what they do (rather than listen to what they say).

Librarians hate to leave their buildings or roam too far from home.

“Blindly following the maxim that good managers should keep close to their customers can sometimes be a fatal mistake.”

— Clayton M. Christensen

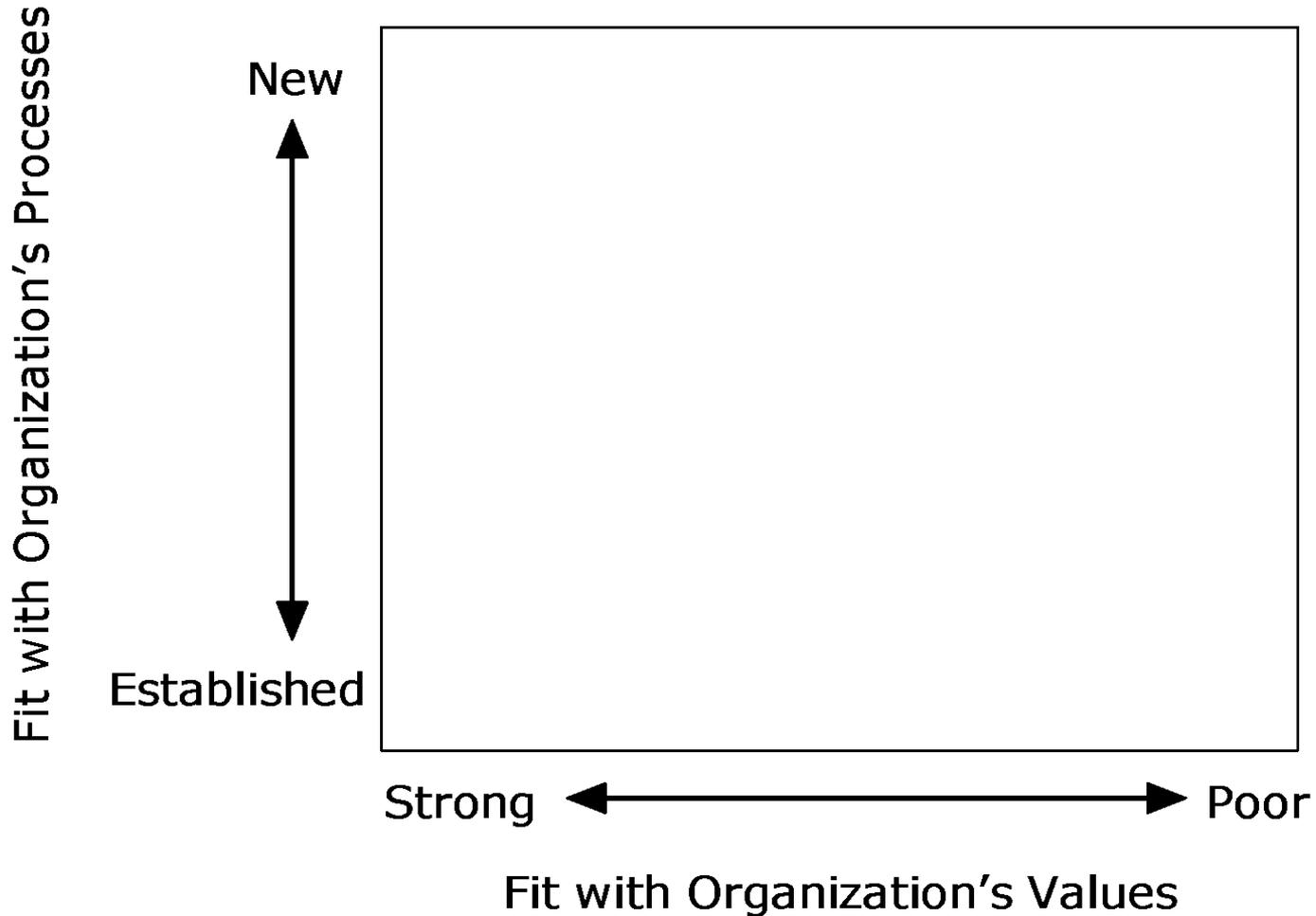
All organizations are depended on customers and investors — their value network. Companies make decisions in the context of this value network.

Since disruptive products bring a different kind of value old customers don't see the need for them.

- Can we consider that buying books may not be the best use of our resources?
- Can we act on what we learn from freshman when it runs counter to what the faculty say they want?

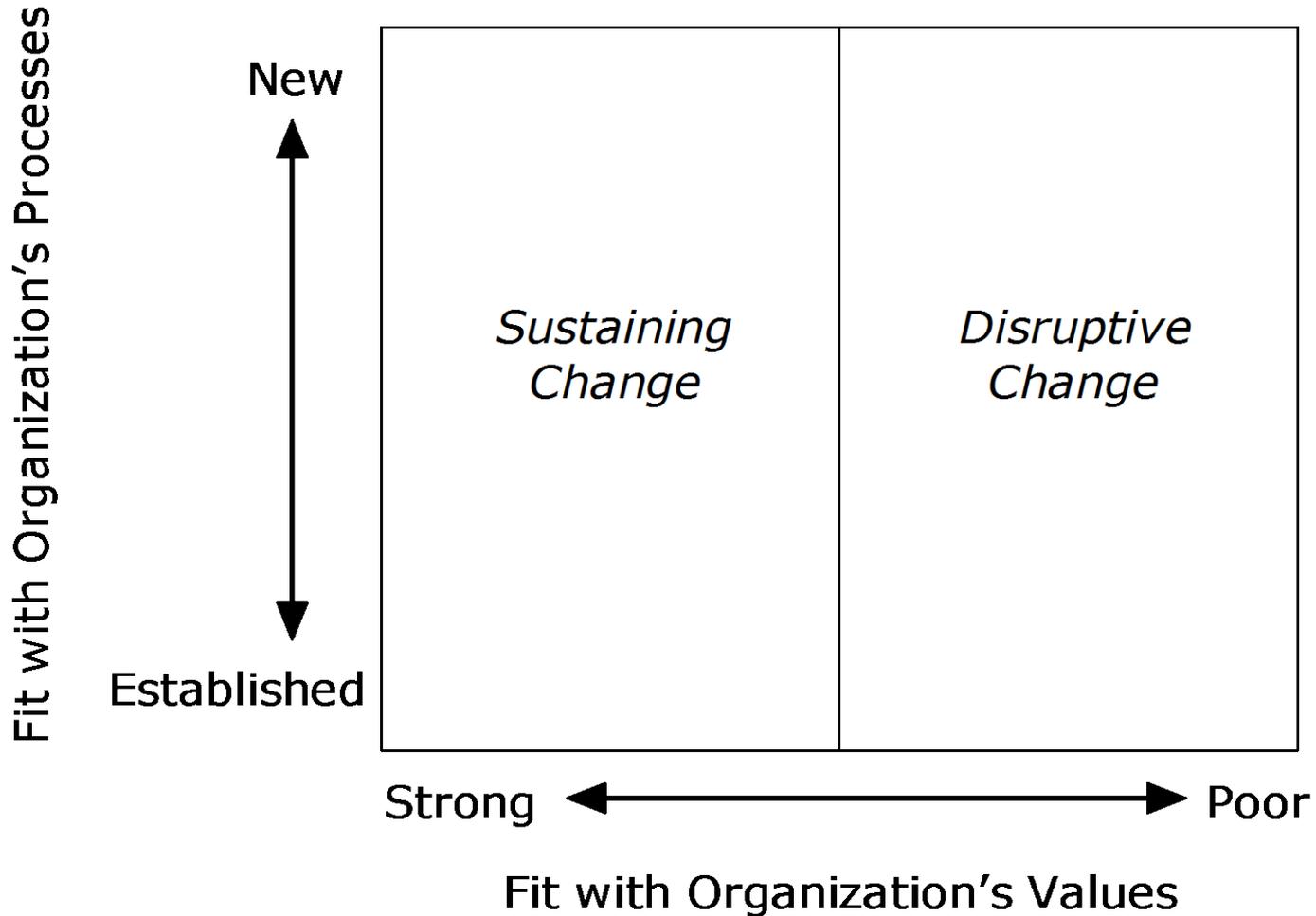
Structures for Confronting Change

from Clayton M. Christensen



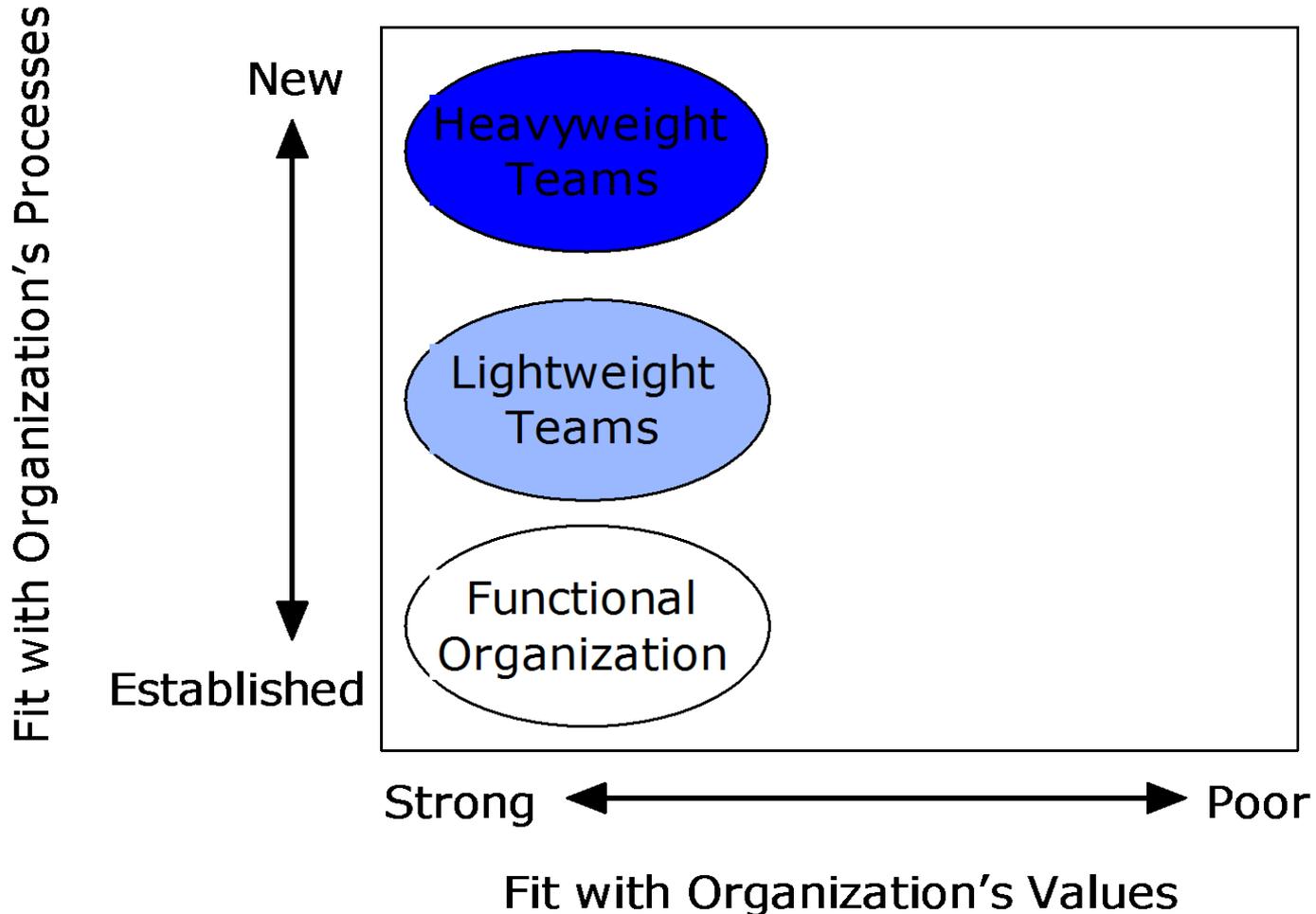
Structures for Confronting Change

from Clayton M. Christensen



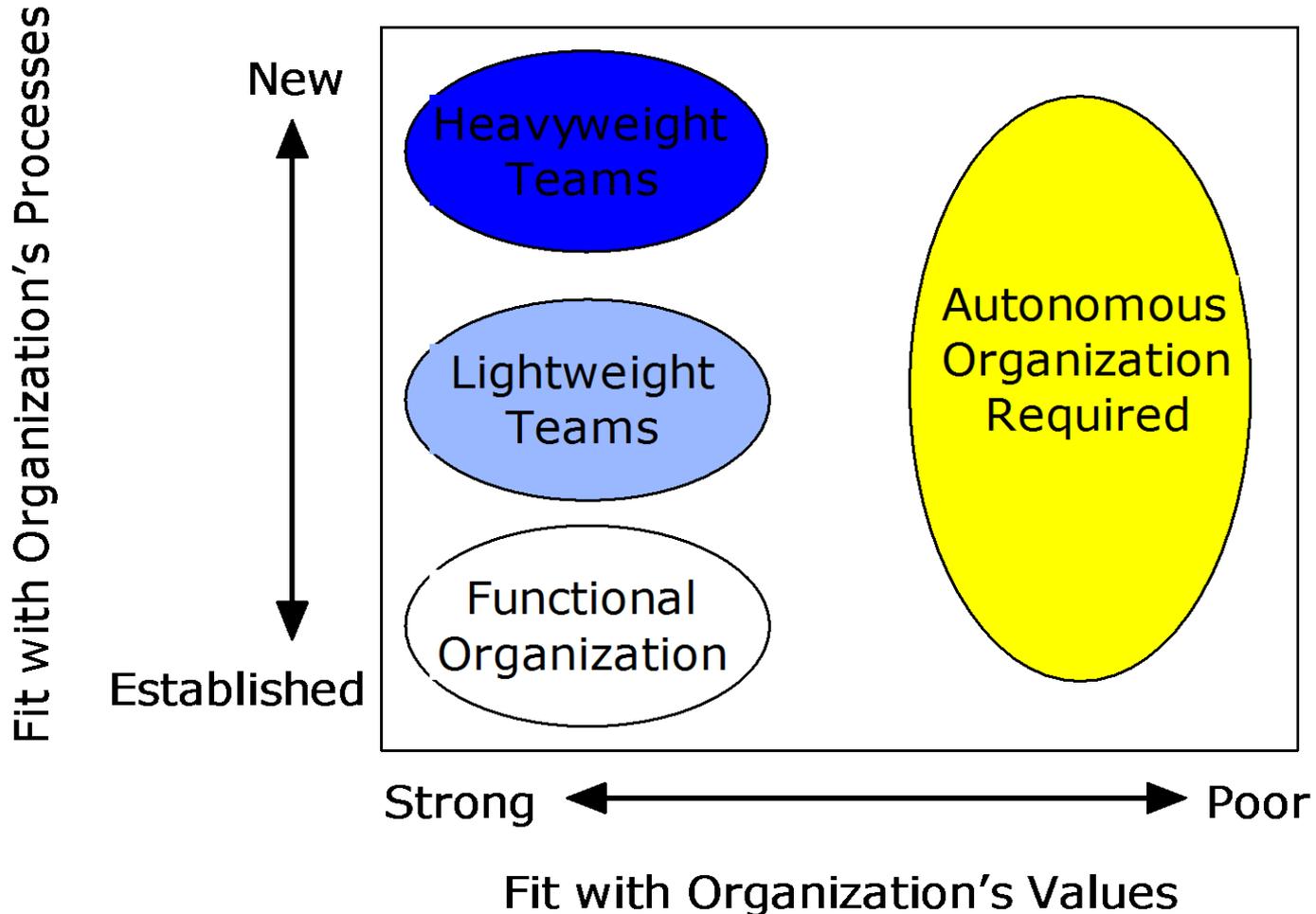
Structures for Confronting Change

from Clayton M. Christensen



Structures for Confronting Change

from Clayton M. Christensen



Structures for Confronting Change - Lesson for Libraries

- **Since libraries can rarely create autonomous organizations**
- **Changing culture is required!! Need to match the library's values to the new environment**
- **Changing culture is hard!!!**

Structure versus Culture

Structure

- Tangible
- Reporting Lines
- Formal Responsibilities
- Control of Resources
- Personnel Policies

Culture

- Intangible
- How do people treat each other
- How do people use their time
- How do people think about themselves
- Our myths
- The stories we tell about ourselves
- What we celebrate

Organizational Structure in Libraries

- Most libraries are very small organizations
- “Structure” is often less about Org Charts than personnel policies and resource allocation
- Needs to be constructed with intention

Structure and Culture

- Structure and culture should be reinforcing
- Trying to change the culture without changing the structure, or trying to change the structure without changing the culture will create frustration and probably fail
- Changing the physical environment can help change culture

Organizational Structure

“For most companies, organizational design is neither a science nor an art; it’s an oxymoron. Organizational structures rarely result from systematic, methodical planning. Rather they evolve over time, in fits and starts, shaped more by politics [and individuals] than policies.”

— Goold and Campbell

Organizational Structure

“The haphazard nature of the resulting structures is a source constant frustration to senior executives [and the rest of the organization]. Strategic initiatives stall or go astray because responsibilities are fragmented or unclear. Turf wars torpedo collaboration and knowledge sharing. Promising opportunities die for lack of management attention. Overly complex structures, such as matrix organizations, collapse because of lack of clarity about responsibilities.”

— Goold and Campbell

Goold and Campbell: Tests of an Organizational Design

- Does the design reinforce your competitive advantage?
 - You need to know what your competitive advantage is
 - You can't do everything

Goold and Campbell: Tests of an Organizational Design

- Does the design reflect the strengths, weakness, and motivations of your people?
 - Match structure to the people
 - Don't build a structure you can't staff
 - Consider the demographics of library profession
 - Have a considered staff development strategy

Goold and Campbell: Tests of an Organizational Design

- Does the design provide solutions to difficult unit-to-unit links?
 - Self managing links better than top down control
- Is the design too hierarchical?
 - Each layer should make the layers below it 10% more effective

Goold and Campbell: Tests of an Organizational Design

- Does the design support accountability?
- Does the design promote the development of new strategies and the flexibility to change?

What is Required of New World Library Organizations?

- 1. Change the culture**
- 2. Create structures that encourage and reinforce the cultural change**

What is Required of New World Library Organizations?

- Common Organizational Purpose
- Porous Boundaries - Ideas and knowledge go in and out
- Collaboration - Ability and willingness to easily share knowledge and expertise
- Impatience - Desire to explore, innovate, and change
- Accountability - Ability and willingness to measure results and make consequences visible

Common Organizational Purpose

- Develop a **Mission** which is aligned with parent organization or community mission
 - Write it down
 - Repeat it
 - Use it to make decisions
 - Expect others to use it to make decisions
-
- When individuals in an organization are expected to make independent decisions, **shared mission** replaces **direct control**

Porous Boundaries

- Client focused teams
- Encourage professional development and interaction - especially in non-traditional venues
- Look for external partners
 - Other libraries
 - Museums, etc.
 - Vendors
- Resist the urge to be protective of resources (you can buy collaboration)

Collaboration

- Trust
- Respect
 - “I’ll do this, you do that” not “let’s all talk until we can reach consensus on how to do everything”
- Shared responsibilities
- Shared accountability
- Teams, especially when well managed

Impatience

- Flat hierarchy (broad span of control) can protect innovation in early stages
- Franciscan Management — “It is better to beg forgiveness than to ask permission”
- Reward both success and failure - Punish only inaction (from Robert I. Sutton)
- Restrain (silence) the sideline critic - in academic environments, this is very hard

Ability and Willingness to Measure

- Raise Visibility of Consequences
- Need to be able to show that resource allocations make a difference — this is a trend across all non-profits
- Devote time and money to assessment
- Focus on long run protects innovation

Questions?

David W. Lewis
IUPUI University Library
dlewis@iupui.edu
317-274-0493