Aligning the Principles of Permaculture Design with Sustainable Open Access Practice

Open Access Un/Conference: Promote, Impact, Assess
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INDIANA UNIVERSITY
Before I dive deep into this, I'd like to take some time for each of you to think about issues, problems, areas of concern/interest that relate to open access in your work – whether you’re a scholarly communication designated library staff member or not.

To get you thinking about this I want to offer a brief explanation of how permaculture is relevant to scholarly communication by extrapolating the following from the Holgren book we reference throughout: Holmgren, D. (2002). Permaculture: principles & pathways beyond sustainability.

Here’s the big idea, or why I’m here today giving this presentation:

*We want to consciously design scholarly communication systems which mimic the patterns and relationships found among researchers and creators of scholarly information while yielding an abundance of scholarship available for the provision of local needs.*
Stacy Konkiel

https://twitter.com/skonkiel

Research interests include data information literacy for graduate and undergraduate populations, as well as the application of altmetrics in academic library settings.
Overview

• Why this topic now?
• What is Permaculture?
• The Scholarly Communication landscape
• The 12 principles of Permaculture design
• Creating sustainable Open Access practice
• Discussion
Stacy and I have been working in Scholarly Communication and Open Access efforts directly for 6/4 years (Jen contends its been her whole 20 year career!)

Apply these principles at home – Jen and family harvest wood for heating home, solar energy use, board horses, raise chicken, ‘put up’ bountiful produce, etc; Stacy’s partner is a certified permaculture practitioner

STACY:
As for what drew me to the topic, I’m currently working at the cusp between OA-advocates & researchers in the sciences (who think OA is a common sense move and get very frustrated by what they see as library’s unwillingness to “take a stand”) and librarians (who feel “damned if they do, damned if they don’t” when it comes to subscribing to “Big Pub” journals and enforcing publishers’ copyright restrictions). Also, my move from the private sector back to working in academia has allowed me to see some of the more glaring inefficiencies and nonsensical practices that academia-not just libraries-perpetuates. I’m a staunch believer in higher ed for the public good, not as an incubator or money maker for private interests; that’s why I think we need to rethink some of our practices and take on some of these issues head-on, using a more sustainable means.
What is Permaculture?

An ecological design system for sustainability.

build

grow & restore

create community

Created in the 1970’s
Co-creators now Bill Mollison and Dave Holmgren, Australians

“Permaculture is an ecological design system for sustainability in all aspects of human endeavor. It teaches us how build natural homes, grow our own food, restore diminished landscapes and ecosystems, catch rainwater, build communities and much more.” From The Permaculture Institute, http://www.permaculture.org/nm/index.php/site/classroom/

Image credits:
Permie home: http://howtosavetheworld.ca/images/woodlandhome.jpg
Garden drawing: http://2.bp.blogspot.com/-fyPOHXWfv0g/ULdagqHPF4I/AAAAAAA9c/c5aVgAxyNBI/s1600/permaculture+2.jpg
Building community: https://s3.amazonaws.com/ksr/assets/000/160/314/e0a45000b366ad7a8ef6ff06e12414b7_large.jpg?1347639706
Bill Mollison

Permaculture is a ‘Positivistic’ response to environmental crisis. It is about what we want to do and can do rather than what we oppose and want others to change. This response is both ethical and pragmatic, philosophical and technical.

The Scholarly Communication Landscape

Reality #1: We live in a capitalist society.

Big Ag

Big Pub

BIG AG: efficiencies found in using factory farms, monoculture; has a focus on the bottom line
BIG PUB: monolithic publishing houses that serve stockholders over researchers, and focus on the bottom line

Image credits:
Factory farm: http://urbanveganchic.files.wordpress.com/2012/10/factory-farm-chickens.jpg
Monoculture: http://www.flickr.com/photos/nicholas_t/4719020153/
Bottom line: http://earthandindustry.com/2012/05/newsflash-being-a-good-corporate-citizen-is-good-business/
BIG AG: environmental resources, perpetual economic growth (and therefore consumer demand)
BIG PUB: library budgets, faculty time and interest

Photo credits
Environmental resources http://www.ag.ndsu.edu/lem
Perpetual growth http://www.davidyerle.com/is-perpetual-economic-growth-possible/
Faculty time http://www.upenn.edu/pennnews/current/2012-02-02/latest-news/win-war-stress-hr-workshops
BIG AG: locavores, Back to the Land 2.0, organic consumers / compassionate capitalism
BIG PUB: cheap digital publishing systems, Open Access philosophies, article-level metrics over impact factors

Image credits:
Back to the land http://lygsbtd.wordpress.com/2012/08/08/poem-summertime-in-sohum/
Locavores: http://ilcsm.org/
Compassionate capitalism http://www.flickr.com/photos/wayfinder/230644192/lightbox/
Digital publishing/wordpress http://www.bluedesk.nl/files/billeder/Wordpress.png
Open access http://lshtmlib.blogspot.com/2011/05/survey-on-open-access.html
Article level metrics http://scholarlyoa.files.wordpress.com/2013/07/altmetrics.jpg
Permaculture practice is intended to serve 7 generations in the future. You plant a tree not according to today’s climate and your needs, but the expected future climate and needs of the land’s inhabitants. For example, in Indiana, it’s expected that with climate change, our own climate will become much dryer and hotter. As such, we should plant trees that can survive and thrive in such conditions.

Image credit: [http://plantingmilkwood.files.wordpress.com/2011/06/principles.jpg](http://plantingmilkwood.files.wordpress.com/2011/06/principles.jpg)
Preface this to say that all the principles are taken from: Holmgren, D. (2002). Permaculture: principles & pathways beyond sustainability. The icons and corresponding proverbs from the book are fascinating, but in practicing this presentation we learned we don’t have time to focus on them.

Icon: person as a tree (emphasizing ourselves in nature)

Proverb: Beauty is in the eye of the beholder

Principles:
- By taking time to engage with nature we can design creative solutions that suit our particular situation
- Continuous observation is at least as important as sifting through the sheer quantity of mediated observation

Image credits:
Observation point: http://www.aaroads.com/west/wyoming014/us-014a_observation_point_072599.jpg
Flower: http://hdwallpapercorner.com/gallery/1954-beautiful-flowers-800x600.jpg
Children playing: http://jenabroad.files.wordpress.com/2012/01/african-children-playing.jpg?w=560&h=421
Ideas:
• Many of our library successes come from 1:1 relationships with researchers; we design solutions to fit them and our local situation. Results typically win:win.

Image credits:
Conversation: http://media.biola.edu/talbot/static/images/faculty_feature_intro.jpg
Icon: Sunshine captured in a bottle (preserving seasonal surplus)

Proverb: Make hay while the sun shines

Principles:
- By developing systems that collect resources at peak abundance, we can use them in times of need.
- Long-term asset building is essential to future generations. Present day ethical behavior / choices leads to this practice.

Image credits:
Rain barrel: http://images.hayneedle.com/mgen/master:GID036.jpg?is=380,380,0xffffffff
Canning: http://cdn.naturallyella.com/files/2012/08/canning.jpg
Old man: http://www.danheller.com/images/Asia/Vietnam/Hue/People/Men/old-man-2.jpg
Ideas:
- Libraries have vision for and practice with developing systems that collect resources at peak abundance.
- Storing resources in an open manner widely distributes them for future use/re-use.
- How can we cooperate to do this en masse; we do it very well locally.

Image credits:
Library: http://images.teamsugar.com/files/upl0/10/104165/10_2008/dv740057.preview.jpg
Tape storage: http://datastoragebuffalo.com/wp-content/uploads/2012/02/Tape-Storage-buffalo-ny-300x240.jpg
Icon: Vegetable with a bite out of it (both an immediate yield received and reminds us that others are also attempting to receive a yield from our efforts)

Proverb: You can’t work on an empty stomach

Principles:
• Ensure that you are getting truly useful rewards, enough to sustain you, as part of the work that you are doing.
• If we judge our design honestly – looking at successes and failures – we can resist both subsidized delusions of efficiency and rampant disregard for what we are consuming. We become more responsible consumer and producers.
• Meta-model: moving from dependent and demanding consumer to interdependent and responsible producers.

Image credits:
Grapes: http://aceoflifewellbeingblog.com/wp-content/uploads/2012/05/grapes-300x225.jpg
Ideas:
• Nudging researchers from consumer to producer: many understand the complexities of
  the economic, IP, and access/preservation issues to help where they can; Libraries are in
  a good position to nudge as we have large stakes in this realm

Image credits:
Puzzle globe: http://upload.wikimedia.org/wikipedia/en/0/04/WP_Researcher.png
Copyright: http://www.copyrightauthority.com/copyright-symbol/Copyright-Symbol-images/Copyright_symbol_6.gif
$100: http://www.hdwpapers.com/walls/100_dollar_bills_wallpaper-normal.jpg
Icon: The whole earth (earth is an archetypical self-regulating whole system – Cool, eh?)

Proverb: The sins of the father are visited on the children until the seventh generation

Principles:
• We may be forced to self-regulate given reduction in fossil fuel availability.
• Can’t have it all; we have enormous dependency on large-scale, often remote, systems, for provisioning our needs.

Image credits:
Ideas:

• Are our IR platform a place to apply corrective and perhaps simple measures now to avoid heavy complications in the future? Think metadata and retrospective conversion projects.

Image credits:
Icon: Horse (best example in human history of human prosperity derived from non-consuming use of nature’s services than the domestication and use of the horse for transport, soil cultivation and general power for a myriad of uses)

Proverb: Let nature take its course (human intervention and complication of processes can make things worse and that we should respect and value the wisdom in biological systems and processes)

Principles:
• Make the best use of nature’s abundance to reduce our consumptive behavior and dependence on non-renewal resources.
• Derive multiple projects from every resource.

Image credits:
Water cycle:
Ideas:
• Building in costs in budgets to innovate and fund new initiatives rather than relying on dwindling grant support.
• Better to accept the human behavior of our researchers and find solutions for their problems than building systems they wind up not finding valuable/useful.
• Respect the natural tendencies; can’t fit a square in a circle.

Action Loop:
State problem or issue → consider realistic options for actions → action → reflect on the result → restate the problem or issues → consider realistic options for action → action → etc

Image credit:
http://www.whataboutus.org.uk/make_a_difference/action_research_cycle/Action_research_cycle.jpg
Icon: Earthworm (part of the web where the outputs of one are the inputs of another)

Proverb: A stitch in time same nine; Waste not, want not

Image credit:
Ideas:

• There was a time when the data outputs of a research endeavor were considered waste, but not so today. Encourage researchers to store white papers and presentations for possible future use.
• Use/re-use: Metadata and content format. Applying best practices and standards today should help minimize wasteful retrospective efforts later.

Image credits:
Metadata: http://databl.files.wordpress.com/2012/11/metadatalovenote.png
HathiTrust: http://bioscopic.files.wordpress.com/2012/05/hathitrust1.jpg?w=550
Icon: Spider in its web (concentric and radial design evokes zone and sector site planning)

Proverb: Can’t see the wood for the trees (details tend to distract us from the nature of the system; can’t comprehend the larger picture if we’re too close)
Ideas:

• Open Access services have benefited from being slow to develop. With resources we can be nimble to respond to the critical needs of users – make few assumptions about what they need up front and go from there (examples: embargoes, DOI, blanket license agreements)

• Don’t get too bogged down in details of your institution’s bureaucracy when planning services; based on the “patterns” you see in others’ practices, adapt to your own needs, then figure out the details later.

• For example, take the needs of this group. They’re all men. They’re all Elvis impersonators. Address their basic, shared needs first (ham sandwiches, pomade) then you can worry about the differences in what they need.

Image credits:
Elvises: [http://gocanada.about.com/od/eventsandfestivals/tp/10-Crazy-Canadian-Festivals.htm](http://gocanada.about.com/od/eventsandfestivals/tp/10-Crazy-Canadian-Festivals.htm)
Bees: [http://transformationsfhs.wikispaces.com/Part+Ten+++Tessellations](http://transformationsfhs.wikispaces.com/Part+Ten+++Tessellations)
Integrate Rather Than Segregate (Holmgren)

- By putting the right things in the right place, relationships develop between those things and they work together to support each other.

Icon: Top down view of a circle of people or elements forming an integrated system (the apparently empty hole represents the abstract whole system that both arises from the organization of the elements and gives them form and character)

Proverb: Many hands make light work
Ideas:

- Many cooperative relationships go into designing successful systems. The Hydra development project is a recent example, as is the Kuali OLE project. Libraries finally getting away from “we built it here” syndrome.

- In favor of partnerships across campus, and offering diverse services:
  - Research offices and Data Management Plan compliance
  - Embedding OA services with reference services
  - Subject librarians understanding enough to provide information and support for OA.
  - Designing data repositories that connect with Dropbox (Islandora folks are doing this)
Icon: Snail (the spiral house of the snail is small enough to be carried on its back and yet capable of incremental growth. With its lubricated foot, the snail easily and deliberately traverses and terrain.)

Proverb: The bigger they are, the harder they fall; Slow and steady wins the race (encourages patience and reflection... Tortoise/Hare – taking a long-term perspective is valuable)
Ideas:
• We are certainly making small changes through slow processes.
• To what extent are we letting the fast paced tech world drive our decisions? They’re intimately linked, but which gorilla should be on top?
• Changing scholarly communication practices is disruptive, why would we expect researchers to embrace it quickly? Credits:
• It took 14 years for us to move from SPARC to having a faculty-led charge such as the Cost of Knowledge.

Image credits:
SPARC: https://mx2.arl.org/Files/SPARC-IR-logo.gif
Cost of Knowledge: http://thecostofknowledge.com/
Icon: Hummingbird/flower (representing great diversity of form (long beaks/ability to hover to sip nectar)

Proverb: Don’t put all your eggs in one basket (diversity provides insurance against the vagaries of nature and everyday life)

Manifestation: 1 pest can destroy a monoculture crop of corn, but if you plant a diverse array of produce you are protecting your investment against losing it all in a fell swoop.
Ideas:
• Not every discipline or even every person needs the same solutions; their issues are inherently different.
• Valuing diversity in hiring, not only gender and race, but education and experience. Avoid groupthink and emotional baggage that something keeps organizations from changing for the better.
• As long as the local solution is built on standards of sharing data with other systems, the local solution can take on whatever facets it needs to serve its community.

Image credits:
Beaker: http://www.korematsupto.org/2011/05/03/korematsu-science-fair-wednesday-may-4th/
Diversity: http://recruitmentbuzz.co.uk/diversity-as-a-driver-of-your-employment-brand-2/
Use Edges & Value the Marginal (Holmgren)

- Design that sees an edge as opportunity rather than a problem is more likely to be successful and adaptable.

- The interface between things is where the most interesting events take place. These are often the most valuable, diverse and productive elements in the system.

Icon: Sun coming up over horizon with a river in the foreground (this image shows us a world composed of edges – where all these things meet)

Proverb: Don’t think you are on the right track just because it is a well beaten path (reminds us that the most common, obvious and popular is not necessary the most significant or influential)
Ideas:

• In-library (or close campus) partnerships (writing center, innovative center for teaching/learning, university press, etc.) are valuable and provide a greater opportunity for outreach and connection.

• Value your water cooler conversations. Serendipity plays a big role in revealing margins. Cultivating relationships beyond the reach of every day work helps identify the innovators and the margins.

• Building relationships across all of campus—not just traditional and strategically valuable partners—can help you identify the innovators and encourage evolution of your scholcomm program.

Image credits:
Edges: http://www.flickr.com/photos/naturewise/4071773181/sizes/m/in/photostream/
Handshake: http://www.thehrisworld.com/building-relationships-employees/
Creatively Use & Respond to Change (Holmgren)

- We can have a positive impact on inevitable change by carefully observing, and then intervening at the right time.
- While stability is important, evolutionary change is essential. Durability, depends, paradoxically, on flexibility and change.
- 4 phases of ecosystem change:
  - Conservation
  - Release
  - Reorganization
  - Exploitation

Icon: Butterfly (transformation of caterpillar conveys the idea of adaptive chance that is uplifting rather than threatening)

Proverb: Vision is not seeing things as they are but as they will be

Principles: Vision is not seeing things as they are but as they will be

4 phases of ecosystem change:
- Conservation: long lived steady state climax where there is a high degree of interconnection between system elements, a large amount of stored biological capital and little leakage of nutrients.
- Release: the pulse of disturbance, typically very short in duration. Breaks the connectivity and allows the risky and uncertain development of new connections during the reorg phase.
- Reorganization: the most unstable phase when open niches soluble nutrients and energy are available to be tapped or loss. During this phase there is the potential to flip to some system that is less or more production and organized.
- Exploitation: fast growing pioneer species colonize the opportunities catch and store energy quickly and cement the patterns for the more gradual build up of biomass and great connectedness leading toward a new conservation phase. The real power of the disturbances show up here before settling into a new long conservation phase. If the new conservation phase lasts a long time and survives several cycles of disturbance then we could accept it having achieved some sort of evolutionary success.
Ideas:

• Stay engaged; How can we help people become responsible producers of information, not only dependent consumers?

• Changes are happening in the scholarly communication “ecosystem”; how can we use them to our advantage? (OSTP Directive on public access; what if SHARE had been announced before CHORUS?)

• 4 phases in an ecosystem:
- Conservation: Traditional 20th century publishing
- Release: OA as a transformative change
- Reorganization: Flopping around trying to find stability; we’re taking advantage of many innovations and trying to find the ones that can stick.
- Exploitation: Not here yet

Image credits:
OSTP: http://openaccess.eprints.org/index.php?/categories/16-Publishing-Lobby
What has worked for us at IU?

- **Observe & interact**: Journal publishing, various flavors to fit needs; host completely, host back-end; host only backfile; use it to publish one-off’s. PKP/OJS.
- **Catch and store energy**: Adhering to metadata standards open archives initiative for object reuse and exchange.
- **Obtain a yield**: Working with emeriti faculty like Dr. Ruth Engs, IU School of Public Health, to secure access to and preservation of their important life works.
- **Use and value renewable resources and services**: HathiTrust, liberating folklore publications there instead of in IR.
- **Integrate rather than segregate**: Bringing in copyright experts and students from law school to serve in our OSP Copyright Management Center, in addition to limited library staff with expertise.
- **Use and value diversity**: IU Press staff; subject librarians, campus advocates.
- **Use the edge and value the marginal**: Inviting a PI in biology to join a “meet and greet” with Pete Binfield from PeerJ over beers cemented existing relationship with scholarly communication team and also opened an opportunity for her to work with Pete on mutually beneficial projects.
- **Design from patterns to details**: change in communication practices; more sophisticated options using FootPrints system.

Image credits:
Open Folklore: http://www.libraries.iub.edu/OpenFolkloreLogo.png
IU Press:
Ruth Engs: http://wfiu.org/profiles/files/2008/12/untitled15.jpg
PKP: https://pkp.sfu.ca/wp-content/uploads/2012/10/pkp_logo_vert3.png
Footprints: https://footprints.iu.edu/MRimg/powered_by.gif (FootPrints is a web-based service desk application from BMC used to record and track support and customer service requests in departments across Indiana University.)
We are all designers

Design maxims that everyone benefits from:

- All observations are relative
- Top down thinking, bottom up action
- The landscape is the textbook
- Failure is useful so long as we learn
- Elegant solutions are simple even invisible
- Make the smallest intervention necessary
- Avoid too much of a good thing
- The problem is the solution
- Recognize and break out of design cul-de-sacs

References


http://www.permaculture.org/
Questions - Discussion
Thank you!

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