Today's Historic Challenge for the Pattern Language Community

Patterns • Beauty • Reality / PUARL+BB

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What's in here...

• Goal — and *Challenge*
• What are Wicked Problems and how do we address them?
• How could a pattern approach be used to address wicked problems?
  1. Patterns: Potential, barriers, and recommendations
  2. Tech infrastructure: Potential, barriers, and recommendations
  3. Community Animators (us): Potential, barriers, and recommendations
• Project Status
• Commitments Sought
• Final Thoughts
• Appendixes: Pattern Management Metapatterns, Coordination Approaches, Enabling Metapatterns
Goal of paper: A challenge to all of us

My goals are:

• to show how an approach based on patterns and pattern languages could be particularly suitable for addressing wicked problems,

• to explain what should be done to increase the strength, coherence, and synergy of our efforts to make success more likely, and

• to enlist your help in making these ideas work.
Some Wicked Problems Facing Us

Wicked problems are “unstructured, cross-cutting, and relentless” ... while “the goals of addressing them are unclear, unknown, and conflicting”

— Weber, Lach, and Steel

- Climate change, environmental degradation, water scarcity
- Authoritarianism and everyday degradation of democracy
- Oppression, inequality, racism, xenophobia, sexism, etc. etc.
- Pandemics, war, and violence
- Dominating, entrenched, unstable, and unfair economic systems
- Professional and amateur purveyance of ignorance

Each of these storms encourages the others...

The storm next time is likely to be a perfect storm of perfect storms.
Who will build the ark?

The market?
Informed & thoughtful governmental leaders?
Academia?

The media?
Science?
Technology?
Artificial intelligence!?
Mass movements?

Luck?
Divine intervention?
Hope?
Bill Gates?!?
What do we know about addressing wicked problems?

- "More effectiveness, accountability, and democracy" will be required.*

- We need "new problem-solving methodologies, processes, institutions, and decision tools that can integrate science and other knowledges and values possessed by the diverse stakeholder groups."*

- We need to integrate different types of research activities, such as theoretical and empirical analysis, micro- and macro-analysis, and basic and applied research—and connections between different research fields.

- The people in power won’t solve these problems by themselves. The people we need to do this work come in many varieties and there are a million ways for people to make positive contributions.

- We need more people to support — and to lead — efforts to address our shared problems. Keeping “ordinary” people out of this process is not only unfair; it deprives us of a vast, largely untapped resource.

- Civil society is unorganized and spread out. We need to be better organized—but herding cats is hard! We need loose and tight coordination that comes in many shapes and sizes.

* Quotations from Weber, Lach, and Steel
Patterns and Pattern Languages could help address wicked problems.
In 1977 this book launched the pattern language concept. The focus was design and construction of human habitations. Its orientation is towards “bottom up” action.
A staircase is not just a way of getting from one floor to another. The stair is itself a space, a volume, a part of the building; and unless this space is made to live, it will be a dead spot, and work to disconnect the building and to tear its processes apart.

Therefore:

Place the main stair in a key position, central and visible. Treat the whole staircase as a room (or if it is outside, as a courtyard). Arrange it so that the stair and the room are one, with the stair coming down around one or two walls of the room. Flare out the bottom of the stair with open windows or balustrades and with wide-steps so that the people coming down the stair become part of the action in the room while they are on the stair, and so that people below will naturally use the stair for seats.

From *A Pattern Language*, Alexander et al, 1977

People need an identifiable spatial unit to belong to.

Therefore:

Help people to define the neighborhoods they live in, not more than 300 yards across, with no more than 400 or 500 inhabitants. In existing cities, encourage local groups to organize themselves to form such neighborhoods. Give the neighborhoods some degree
Now there are many more...*

* 500+ pattern languages: ≈50% computing, ≈50% amelioration
What is a *Pattern*?

Alexander uses “pattern” in a specific sense.

- A pattern is a form of seed. It contains a reflection of the current work situation, as well as the vision of a future that could be.
- Patterns already exist (as phenomena) but aren’t necessarily recognized as significant.
- They lead to other things; they are “generative”
- Promote action as well as thought; They are “actionable”
What is a *Pattern Language*?

Alexander uses “pattern language” in a specific sense

- A pattern language is an ordered collection of patterns.
- The patterns in a pattern language combine into a holistic set of patterns that are intended to be used together
- In the original book Alexander stated that a pattern language could be developed in any domain.
  - *A Pattern Language* is about architecture and human settlements
  - *Liberating Voices* is about engagement using information and communication
A pattern language is a holistic collection of patterns, each of which is devoted to addressing one or more issues.

Patterns can help capture key ideas — and thereby help focus or coordinate disparate efforts — without forcing people down specific paths.

Patterns can provide a *lingua franca* in which all parties can agree as to basic meaning — scientists, artists, non-professionals, citizens — and come together over them.

Patterns are designed for incremental / adaptable use.

Patterns are repeatable, but malleable for particular circumstances.

Patterns are useful for various types of coordination.

Patterns can be used for description, explanation, reflection, design, action.

Patterns can help people evolve answers together — *mutual adaptation* (Lindblom).

With patterns there is no implied central command or hierarchies — *polycentrism* (Ostrom).

Patterns provide focal points for information (annotation) and communication (discussion).

Patterns work well with other approaches; the metaphor and structure are flexible and not overly restrictive.
Patterns: Barriers

- Confusion over nomenclature
- Disputes over meaning and purpose
- Overblown claims of universality or ultimate truth (IMHO)
- Many needed patterns don't yet exist (or haven't been formalized)
- Some existing patterns aren't accessible or are hard-to-find
- Sometimes there is a lack of clarity or skills on how to use them
- The methodology is often unclear or unknown
- Patterns currently only address parts of the whole process
Patterns: Recommendations

• Loosen up on what-it-is disputes; a superset of definitions and features
• As with Alexander et al (1977) we believe that "each pattern may be looked upon as a hypothesis like one of the hypotheses of science." (but not necessarily provable or universally applicable...)
• Patterns should be seen contextual, not universal; guiding, not ruling.
• Consider metapatterns: (1) Domain Metapatterns (e.g. “Towns” = APL patterns 1-94), (2) Enabling Metapatterns, helps groups consider resources, skills, etc. to help them attain their mission; not tied to specific domains; (3) Pattern Management Metapatterns, deal specifically with patterns — identifying new ones, selecting relevant ones from existing pattern languages, etc.; their domain is patterns and pattern languages.

These issues are considered in next two sections

• More patterns, consolidated patterns, repositories, search engines
• Lack of clarity or skills on to how to use
• Unclear or unknown methodology
• Spotty to non-existent online support
Infrastructure: Potential

- Bringing people and resources together intelligently should increase synergy.
- Patterns could be easier to find
- Access to experts and coaches could be more readily available
- Online and digital support for working with patterns and sets of patterns could be available
- Online and digital support for group work with patterns could be available
- Exporting patterns and pattern sets into a variety of outputs
- Lots more relevant patterns could be available
- Services built for one pattern language would be available for all
- Patterns could support all life-cycle phases
- They could better support distributed group work
Infrastructure: Barriers

- Patterns are not easy to find.
- Patterns are not easy to share.
- If patterns are online, they’re often in different formats.
- If patterns are online, they’re still not easily adapted, integrated with others.
- Access to discussions, experts, and coaches not easy to find.
- Non-existent (or non-yet-formalized) patterns.
- Little support for group processes around patterns.
- Little support for project life-cycle.
- Spotty to non-existent online support.
Why did the Web Grow so Fast?

It took off astronomically once the key enablers were in place.
The web took off astronomically once the key enablers were in place

What about Pattern Facilities?

<table>
<thead>
<tr>
<th>The Web</th>
<th>Pattern Repository for Design, Collaboration, and Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>(formerly known as the world wide web)</td>
<td></td>
</tr>
<tr>
<td>Protocols for connection (http) and sharing (html)</td>
<td>APIs, search engines, ...</td>
</tr>
<tr>
<td>Technological infrastructure: the Internet</td>
<td>support for creation, selection, sharing, annotating, etc. etc. and general management (plus the Internet)</td>
</tr>
<tr>
<td>Critical mass of users</td>
<td>Critical mass of engaged, cooperative, creative, dedicated, and inquiring users</td>
</tr>
<tr>
<td>Core animating idea: notion of hypertext</td>
<td>Core animating idea: notion of patterns and pattern languages (and subsets)</td>
</tr>
<tr>
<td>Easy and inexpensive access</td>
<td>Easy and inexpensive access</td>
</tr>
<tr>
<td>Useful content and user motivation (purpose fulfilling)</td>
<td>Patterns that resonate with people who know how to use them (or are willing to learn)</td>
</tr>
</tbody>
</table>
Infrastructure: Recommendations

• Pattern search engines, pattern tags
• Pattern repository, sharing, API, heterogeneous pattern formats; annotations; additional resources (attachments)
• Collaborative repository (Leitner). request for patterns, RFC for pattern development, Project management of patterns, selection, use, in-use vs. archived vs. basic orientation; supports discussion around patterns
• Develop shared goals and distribute tasks accordingly
• Experiment, work from ground-up
• Identify common elements (such as patterns and pattern languages, sets of patterns, users, teams, tags, etc.) and build piecemeal.
• Support all life-cycle processes
• Integrate all of the above in a holistic, beautiful way
In-work pattern selection or tagging

Individual name, group name, project, role, prompt, pattern set, and selection criteria are all variables.

**Group Name:** Permaculture Design

Role: You are a student in the Permaculture Design program and you are planning to develop a project proposal for work that could begin as early as this summer.

Prompt: Go through the patterns below and select 10-20 patterns that seem interesting to you as you contemplate the task in front of you. Please note that you don't have to have a project in mind when you're contemplating the usefulness of the patterns. They're supposed to help you do that! Also the 10-20 patterns is recommended but not required. You can select more or fewer if you like, but having too many may make it impractical for you to work with all of them.
Presenting group selections (mockup)

How many people selected each pattern, weighted by preference
It takes all kinds of people to make a better world. What kind are you?

This short game suggests a role based on your responses.

It also suggests four “patterns” from our Liberating Voices pattern language.

You’ll be asked eight short multiple choice questions.

The game does not save any information that could be used to identify you.

Look for this soon in Arabic, Chinese, French, Japanese, Russian, Spanish, and Vietnamese!

Possiamo tutti contribuire a creare un mondo migliore. Vuoi capire come? Gioca con Specchio Attivista!

Questo breve gioco suggerisce un ruolo basato sulla tua risposta.

Sulla base delle tue risposte, Specchio Attivista ti suggerisce un ruolo per creare un mondo migliore e 4 indirizzi di azione su cui impegnarti.

Devi solo rispondere a 8 domande.

Il gioco non conserva informazioni personali.

Specchio Attivista sarà presto disponibile in arabo, cinese, francese, giapponese, russo, spagnolo, e vietnamita.
The Mirror reveals:

a Rebel

On December 1, 1955 Rosa Parks helped launch the civil rights movement in the US by refusing to surrender her seat on a public bus to a white passenger.

In order to thrust an issue onto the public agenda, Rebels are likely to act in dramatic and controversial ways that are outside of formal political processes. They may block a nuclear submarine with a kayak or demonstrate their resistance in a thousand different ways. Rebels should remember that social change generally takes time and that activists that assume other roles are often your allies.

Thanks to William Moyer for his important work characterizing the four activist types (The Practical Strategist, 1990). He is not responsible for the results shown here.

Note that activists don’t always fit the same role. They may work in one area for awhile and then change to another. It may be useful to think of a particular situation while you answer the questions and then try again using another situation.

Liberating Voices Pattern Language
- Liberating Voices (English)
- Arabic
- Chinese
- Libérer les voix (Français)
- German
- Greek
- Hebrew
- Voci liberatorie (Italiano)
- Korean
- Portuguese
- Russian
- Serbian
- Spanish
- Swahili
- Vietnamese

Other Links
- eliberate, Conduct online meetings using Roberts Rules of Order
- The Conversation: How civic intelligence can teach what it means to be a citizen
- Project website: Collective Intelligence for the Common Good
- Read more! Collective intelligence for the common good: cultivating the seeds for an intentional collaborative enterprise

Currently the Activist Mirror uses only 22 patterns. There are 136 patterns in the entire Liberating Voices pattern language. Use the back arrow on your browser to go back and change your responses and get new results.
Some examples of how the proposed new features could support Refugee Pattern Language (Pamanee Chaiwat’s presentation, Sept 18, 2020)

- Easily findable via search engine
- Support for pattern sets
- Domain metapatterns
- Pattern management metapatterns
- Support for collaborative pattern work
- Support for pattern importing, spawning, blending, annotating
- Support for integrating pattern sets, networked in different ways
- Maintains provenance
- Exporting sets in formatted ways
- Links to full pattern
Community: Potential

• Interdisciplinary community exists!
• Diverse informal and formal social networks
• Access to discussion, experts, and coaches should be easily obtained
• Knowledge and support for methodology development
• Lots of experience, skills, creativity, talent, and values
• We have our hands on many of the hidden resources
• Desire for our ideas to be used
• Historical opportunity
Community: Barriers

- We seem to be more like chunky stew than a melting pot...
- Focus on pattern building, less on pattern use.
- Lack of interest? Not our job?
- Competition among ourselves??
- We don’t see the potential power...? Or need?
Community: Recommendations

- This approach can succeed only if people breathe the necessary life into it.
- **Community Animators** (a Liberating Voices pattern!) are needed to help weave our community together and to bring in new people.
- **Open Research and Action Labs** (another Liberating Voices pattern) can be built.
- A strong cooperative spirit will be needed. What are our shared goals? What coordination approaches should we employ? (see appendix)
- A peering contract? A manifesto? A ...
- Work with groups to better understand and support use
- Build “wicked problem” scenarios, characteristics, and patterns
- Work with policy-makers and others
- Use generative design to develop our own systems??
What have I been doing?

- City Atlas article published, *The Green New Deal is the Real Deal*. suggesting LV and new patterns—and a pattern-oriented approach
- Defining an online PPL system for open use (repository, search engines, API, etc.) and protected group management system for sharing, selecting, annotating, and using patterns
- Starting to build the system, working incrementally with potential users
- Working with several groups working with LV patterns, exploring, understanding, and evaluating pattern use
- Outreach to environmental community — and our own nascent community
- Work continuing on our *Pattern Languages for Wicked Problems* and *Patterns for Pandemics* articles
- Flesh out some suggested Green New Deal patterns
Commitments sought

• Helping to make at least certain elements of your patterns and pattern work available to others—including us. For our project we’d like you to help populate our database with the data in relation to your patterns and pattern languages—and we’ll do the same.

• Help us by reviewing our [long] manuscript.

• Let’s think about the interoperability of our approaches in the short and long run

• Think big. History demands it.
Final Thoughts

• In this era of wicked problems we need to be thinking about how to leverage the best ideas from this work.

• The ideas here are certainly not the only ones, nor the best. Some of you may have already solved parts of this problem.

• Let us entertain each other’s ideas and support each other’s plans as well as our own.

• The world needs our patterns, our way of thinking about patterns, and the socio-technological resources to help address the wicked problems we face at this unprecedented, hazardous, and historic time.

FREE THE PATTERNS!
References & Links

A Bird’s Eye View on Pattern Research, Leitner
A Dynamic and Multifunctional Account of Middle-Range Theories, Kaidesoja
A Pattern Language, Alexander et al
Can Pattern Languages Help Us Address Wicked Problems? Schuler, de Moor, Bryant (in-work)
The Green New Deal is the real deal, Schuler, http://newyork.thecityatlas.org/lifestyle/the-green-new-deal-is-the-real-deal/
The Interdisciplinary Study of Coordination, Malone, Crowston
Liberating Voices, Schuler
New Community Research and Action Networks Addressing Wicked Problems Using Patterns and Pattern Languages, Schuler
New Strategies for Wicked Problems, Weber, Lach, Steel
Liberating Voices (patterns) https://www.publicsphereproject.org/patterns/lv
Activist Mirror, https://labs.publicsphereproject.org/am/
Pattern Selector, https://labs.publicsphereproject.org/ps/
... and many others, please review our opus, and add more.
Thank you

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Let’s do this!
Pattern Management Metapatterns

- Abridging
- Adapting
- Adopting, taking ownership, transplanting
- Annotating and tagging
- Arranging, organizing, and grouping
- Categorizing
- Certifying
- Combining
- Creating and destroying
- Critiquing and debugging
- Curating
- Diagramming
- Discussing and considering
- Evaluating
- Framing
- Gathering
- Generalizing and refining
- Hypothesizing and evidence gathering
- Identifying need or element sub-elements
- Illustrating
- Incentivizing
- Indexing
- Linking
- Locating
- Localizing
- Mapping problems
- Measuring
- Naming
- Pinning
- Ranking
- Recording
- Selecting
- Saving
- Sharing
- Shepherding
- Cloning, splitting and spawning
- Testing
- Transforming (into pattern cards, e.g.)
- Translating
- Using
- Validating
- Versioning
- Visualizing
Coordination Approaches

- Shared themes or challenge (or problem) focus (not necessarily determined via specific grant programs);
- Shared methodology, best practices, rubrics, patterns and pattern languages;
- Shared aspirations, commitments, goals, indicators, manifestos;
- Shared norms, values, codes of ethics;
- Shared taxonomy, models, ontology;
- Shared projects;
- Shared research agendas;
- Shared community or project members;
- Shared milestones (which can be external), schedules, and plans;
- Shared awareness;
- Shared informational and communicative venues (structured and unstructured; virtual, in-person, and hybrid);
- Shared tools, systems, APIs, online repositories, data, vocabulary, dictionaries, portals, test-beds;
- Shared services; and
- Shared knowledge of community needs, interests, skills, and roles.
Enabling Metapatterns

- Accessibility
- Attitude and Aspirations
- Backbone Functions
- Civic Intelligence and Social Learning
- Common Agenda (shared understanding of problem and join approach to solving it — more or less)
- Coordination Diversity
- Communication (continuous and otherwise)
- Constitution
- Decision Support
- Evaluation
- Evolvable Patterns

- Financial and Material Resources
- Knowledge
- Lifecycle Support
- Models
- Mutually reinforcing Activities
- Ontology
- Organizational Capital, group work
- Pattern Selection Tools
- Pattern Repository
- Pattern Ensemble
- Pattern Management System
- Pattern Working Set (organizational level)

- Planning
- Problem-mapping
- Problematization
- Project Generation
- Principles
- Products
- Relational / Social capital
- Resource Management (e.g. library or inventory)
- Self-Governance
- Tool (and?) Connections
- Workshops & Worksheets (Patterns et al)