

Organizing Around Pattern Languages

Cultivating New Seeds for Social Change

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I share the assumptions of the original pattern language work (Alexander et al 1977) that pattern languages can be useful in our efforts to make the world more livable and more beautiful. That was certainly the idea behind my work coordinating the Liberating Voices pattern language (Schuler 2008) work. The project took place over an eight year period in which 85 authors developed 136 patterns for social engagement and social change. Since that time I've been involved in numerous related projects including design workshops, online games, and *anti*-pattern work that I coordinated in an undergraduate educational setting (Wagaman et al 2013). This paper is basically a prolegomenon to what I believe are the major aspects of our focus on the pursuit of pattern languages for societal change. My intent in this article is to help support the general formulation of our enterprise and this approach seems most appropriate for the task.

For over a decade I've been exploring and developing the concept of civic intelligence (2001) which is basically the ability of people working together to address shared challenges effectively and equitably. I have also written (2010) on the particular suitability of pattern languages for advancing civic intelligence. This is basically for three reasons: today's problems are complex; today's problems affect people that are not only in one particular jurisdiction; and today's problems are more-or-less *fractal*, they exist at small scales as well as large ones. Pattern languages provide — potentially — ways for people to directly organize around complex issues as well as ways to *indirectly* coordinate with other people and groups.

Although ends and means are often overlapping and not as easily separable as one might hope, I see the many uses of pattern languages as offering a potentially powerful intellectual approach. As with any organization, medium, meme, perspective, document, or technology, that are seen to be extremely rich in *potential*, capacity which is latent, ready to be used, to be relied upon, to enable a next step, etc. it is only when that thing is used or animated that it has actually been put into service as a type of deflection from the paths that lead in undesirable directions that its value is achieved. As Mae West stated (presumably in another context) “an ounce of performance is worth pounds of promises.” Although, of course, promises sometimes *can* lead to performance.

Pattern languages have an inclination towards thought and action. They have specific features that help make sense of the problem domain while also pointing toward meaningful action. The embracing of disparate, interrelated elements rejects simple-minded, universalist “solutions” to social challenges. Pattern languages are systemic, agnostic as to discipline, open-ended, flexible, fractal, and generative. Their inclination towards holism helps promote completeness of the system. In other words, developers notice (and look for) gaps in their pattern languages and strive to plug them, i.e. with another pattern. Moreover, pattern languages have intrinsic appeal — at least to many of us! They appeal to the need for an orderly presentation of knowledge; they seem to represent “whole” systems; they are *illuminating* in that they often bring together disparate facts or observations and provide coherent *meaning* (which, ironically (?), was very clear with the anti-pattern work).

The body of this paper consists of several focus areas regarding patterns and pattern languages (which in this paper I'll generally treat as one thing and abbreviate as pattern languages). For me, the purpose of each focus area is to help us learn more about achieving the aim of making the pattern language approach more useful in our pursuit of positive societal change. I believe that collectively addressing these focus areas intellectually and through actions will be critical to any degree of success in our pursuit. As one might expect they are deeply interconnected. Addressing one of them will help address the others. For example, how we want to use pattern languages will help define audiences for the pattern languages or suggesting the forms that the pattern languages take.

Focus Areas

Use of Pattern Languages

We need to know who, what, and why people use — or might use — pattern languages. We make assumptions about their users but my students, more than once, have suggested that developing pattern languages for elementary school children would be a useful endeavor. We need to have a better understanding about how pattern languages are actually used in addition to thinking about ways they could potentially be used. For example, my students when using the Liberating Voices pattern cards in hypothetical design workshops, have on occasion changed the title of a pattern when they felt it better suited their needs, while others used the title but changed the narrative of the pattern while keeping the *essence* of

the pattern intact. And while I have involved students in design workshops using the patterns and having students develop patterns and pattern languages, one thing I have not tried is having student teams to design their own workshops using ideas from participatory design (Schuler and Namioka 1993). (Although they did use the patterns to design games.)

We know — or at least strongly suspect — that there are many more uses out there than we generally acknowledge. The University of Oregon, for example, has (or had?) a pattern language as the master plan for its campus. Miguel Angel Pérez Alvarez and his colleagues are using a pattern languages as a *lingua franca* for consolidating their shared knowledge on distance education in Mexican higher education (Alvarez et al 2014). Personally I'd like to explore pattern languages as they might apply to campaigns, products (such as public / civic alternatives to Facebook or Google) or policy development.

LIBERATING VOICES PATTERN LANGUAGE

Pattern #1
Civic Intelligence
Inteligencia Cívica
Douglas Schuler

Civic Intelligence describes how well groups of people address civic ends through civic means. It asks the critical question: Is society smart enough to meet the challenges it faces? Civic intelligence requires learning and teaching. It also requires meta-cognition — thinking about and actually improving how we think and work together

Inteligencia cívica describe que tan bien grupos de personas persiguen fines cívicos a través de medios cívicos. Inteligencia Cívica hace la pregunta crítica: Es la sociedad suficientemente inteligente para afrontar los desafíos que se le presentan? La inteligencia cívica requiere aprendizaje y enseñanza. También requiere meta-cognición – el pensar y realmente mejorar como pensamos y trabajamos juntos.

<http://www.publicsphereproject.org/patterns/LV>

Entérese! Get Involved!

Pattern languages as Social Objects

It's important to realize that pattern languages can in fact be considered *social objects*. This means that in addition to written forms like books, pattern languages can be manifested as physical cards (such as those in Liberating Voices and the Group Works pattern languages) which lend themselves to a wide variety of approaches. We've also used the Liberating Voices patterns in an online "Activist Mirror" game in which players find out what type of activist role they are likely to assume (Moyer 1987) and which Liberating Voices patterns might be interesting to them. Another use is a poster (see left, poster for Jaime Alarcon, including the original English text and Spanish translation (also done by Alarcon, 2013).

From Schuler (2011): "What can be done to make the patterns "good" social objects? Some proposed features include accessibility, transferability, annotatability, manipulability, promiscuity (the ability to interact with many others), clarity, interaction promoting, and learning promoting.

Pattern Language Methodology

While different groups are likely to take different approaches for dealing with pattern languages, including developing, using, evaluating, etc. it still would be worthwhile to somehow pool our wisdom (or at least pool it better) and share it with other people. Alexander's approach, the Group Works Pattern Language, Liberating Voices (and the anti-patterns), and the PLOP community all seem to take different approaches. Perhaps it's most useful to better codify what we do find useful and to see where we fall short. I should mention that the Oregon Experiment (Alexander 1975) may provide the best example.

And how much has changed in the advent of the computer and online environments? The development and user communities are now more likely to be distributed and online systems should help with that. But new distributed methodologies may come at a price: Can the virtual digital world support the same rich, social interplay that using patterns in synchronous in-person environments does?

Pattern Language Life-cycle

Paired to some degree with the methodology focus area above, looking at the life-cycle of patterns and pattern languages — development, test, use, evaluation, etc. — would be useful in understanding the strengths and weaknesses of the pattern language approach. For example, it may be true that people are inspired by pattern languages but then rely on some other approach to actually realize the intended outcome. If, for example, we had that information, we could try to help people with the integration of the two approaches and we could tweak the patterns in some way so they continued to inspire and inform throughout other phases of the life cycle as well.

Barriers to the Use of Pattern Languages

There are presumably a wide range of barriers to the development and use of pattern languages. Some may be absolutely intrinsic — e.g. I've heard criticisms that pattern languages are too general and that they are too specific. Maybe that's a function of its "middle-range" focus, but maybe there are workarounds even for that. For example, if there were good examples of how pattern languages were used and there was easy access to them, then the problem about a lack of specificity would be diminished. At any rate, we need to become cognizant of the barriers, be they personal or institutional, intrinsic or artificial, if we are to develop strategies for overcoming these barriers. Some barriers, such as lack of motivation, may not just be barriers to the use of pattern languages but to engaging in social change or, even, to any meaningful social dialogue at all.

Making Pattern Languages More Useful

We need to examine current usage patterns and the barriers we can identify to think about making pattern languages more useful. Letting the world know about pattern languages would obviously help, and pointing to successes would also be useful. I believe that making it easier to find (and integrate) appropriate patterns and pattern languages would also be important. And once people find them, examples, ideas for use, additional resources, and other useful commentary couldn't hurt.

Online systems allow substantial opportunities for using patterns as hubs, or a focus of discussion:

There is a need to create useful information spaces and, in general, build on new technological opportunities. These include support for annotations, workspaces, and community building, each of which is strongly related to the others. We are using the term "annotation" to describe any comment, question, or reference that a user associates with a given pattern on the website. A user, for example, might annotate the Activist Road Trip pattern (LV 134) with the URL of an organization that takes people to see the aftermath of open pit mining. Another user might have a question about using the Mirror Institution pattern (LV 94) or some advice on how to use Experimental Schools (LV 89). (Schuler, 2009)

Online systems could also provide workspaces:

We are also developing capabilities that will allow groups for groups to establish workspaces related to a specific goal or topic that they are interested in. This will allow them to build pattern languages from scratch or with existing patterns that they can optionally annotate. Users of a particular workspace will be able to establish the ownership approach that best suits their needs, from an individual orientation towards pattern ownership and modification rights to a more community-oriented Wiki-style approach. (Schuler, 2009)

We also must remember that the Wiki approach itself was developed as a platform for pattern language development and, also, that the creator of the Wiki, Ward Cunningham, is also still active in the development of workspaces for pattern language development.

What other workshops, games, and other structured social encounters can we devise to help further our work?

Meta Pattern Languages

Basically this is the idea of a pattern language whose domain is pattern languages. In theory this pattern language could be used to help design design workshops, construct sub-languages using existing and new patterns, and manage ongoing pattern-based projects. Aldo De Moor and I developed a short list of possible candidates for this language. Our tentative list is included below.

Generating	imagination, group skills, etc.)	Validating
Selecting	Annotating	Indexing
Configuring (arranging)	Discussing	Categorizing
Refining	Critiquing	Incentivizing
Linking	Combining	Problem mapping
Using (to generate ideas; for planning; for fostering	Splitting	Visualizing
	Evaluating	Stakeholder identifying

Pattern Language Remix

An individual or group might want to use a pattern language approach but doesn't really care which pattern language they are drawing from. (Do you blame them?) They might want to use one pattern from PL1 and three from PL2. They may even want to slice and dice patterns, using the problem statement of one and the solution statements of two others. They may want everything from one pattern except they'd like to use their own introductory image. They may also want to transduce, subclass, or make links across pattern language borders. Computers could make this easier — but it's far from where we are now. And reassembling may be more difficult than tearing apart!

I wrote a simple program to "shuffle" (randomize) patterns from three pattern languages (A Pattern Language, Group Works, and Liberating Voices) as a very simple remixing experiment (one set of results below). Using the concept of forced connection, a technique for encouraging creativity that appears to be validated quite often in the pattern design workshops that I convene, I see one evocative grouping consisting of Retreat and Reflection, Seasoned Timing, and

Connection to the Earth. I also note that the Group Works pattern language contains a Purpose pattern whereas the Liberating Voices pattern language contains a Shared Purpose pattern.

Voices of the Unheard (LV)
 Retreat and Reflection (LV)
 Seasoned Timing (GW)
 Connection to the Earth (APL)
 Online Deliberation

Floor Surface (APL)
 Purpose (GW)
 Spirit (GW)
 Big Tent for Social Change (LV)
 Power Research (LV)

Go Meta (GW)
 Seeing the Forest, Seeing the Trees (GW)

While people generally select the patterns they use, the set that they start with could include randomization. And games, of course, nearly always employ randomization.

Public Problem Domains

Perhaps it would be useful — I think it would — to identify certain problem domains that we think should be amenable to collaborative pattern language work. Some of these could include sustainability, anti-corruption, anti-poverty, climate change mediation and adaptation. Those fit the bill for important, distributed, complex problems. And a long-term community commitment to developing one or more pattern languages, promoting their use, and continuously evaluating and revising them, would be a significant step. One interesting approach would be to issue a Call for Patterns as we did for the 2002 Directions and Implications of Advanced Computing conference sponsored by Computer Professionals for Social Responsibility. We used "Patterns for Participation, Action, and Change" as the conference title and over one hundred pattern submissions were made on our online site. These are still online and formed the basis of the Liberating Voices book.

Pattern Language Process Mapping

This builds on the idea of the diagram used in A Pattern Language “which shows the solution in the form of a diagram, with labels to show its main components” (Alexander et al. 1977). If, for example, pattern language developers agreed on a graphic modeling approach and, probably, some agreed-upon vocabulary, it might be possible to see to a greater degree how the patterns *worked* but, also, how they could work *together*, in a somewhat more rigorous manner. Based on this approach it might also be quite a bit easier to locate other patterns from a collection of independently developed pattern languages, that would help a given person or group in their assembly of a pattern language that was tailor-made for their specific need. My students and I hoped to uncover deep connections among the anti-patterns we developed but have not yet tackled this project. It seems, for example, using the anti-patterns (right) that Violence, Environmental Degradation, and Consumerism all spring from Civic Ignorance but also Civic Ignorance can be exacerbated from applications of the other three.

<p>Civic Ignorance</p>  <p>Civic ignorance describes how well a group or person ignores the civic ideas, problems, or solutions of those surrounding them. The need to solve problems intelligently and taking account of all solutions is cast away in favor of the quick, the easy, and the brutal. Maybe the problem will just go away? Critics of this should be marginalized, ignored or otherwise disabled or destroyed.</p>	<p>Violence</p>  <p>Much can be achieved through dominance and submission by using violence. If the subject cannot be subdued psychologically through fear, then injury can be inflicted. If injury is not enough, then the subject can ultimately be eliminated by murder. This is ultimately the underlying threat of violence.</p>
<p>Environmental Degradation</p>  <p>The natural environment; including but not limited to soil, water, air, flora, and fauna, has a natural balance. Through pollution, over usage, and lack of stewardship, the balance is broken causing the natural networks that sustain life on this planet to suffer.</p>	<p>Consumerism</p>  <p>Quality of life is ultimately measured by on the acquisition and display of material goods. At the heart of consumerism is the thought that the "good life" can be purchased. Consumerism also contains a set of standards through which people can be judged based on material wealth.</p>

Characterizing Pattern Languages

While there are "family resemblances" between the myriad pattern languages that have been developed, they are far from identical in the forms they assume, let alone in the their objectives, user communities, etc. A reference model that was basically a superset of current pattern language characteristics would go a long way towards addressing the problem of incommensurable pattern languages. This would include standard metadata such as the title and author, but also metadata that was specific to pattern languages, number within the pattern language, name of the pattern language, status, license, which fields were used — such as introductory graphic, diagram, problem, context, solution and the like — and whether it was a translation or a card based on a pattern. It would also include information on how to access the pattern or pattern language thus forming a sort of digital card catalog of patterns. One of the primary uses of this would be to provide online

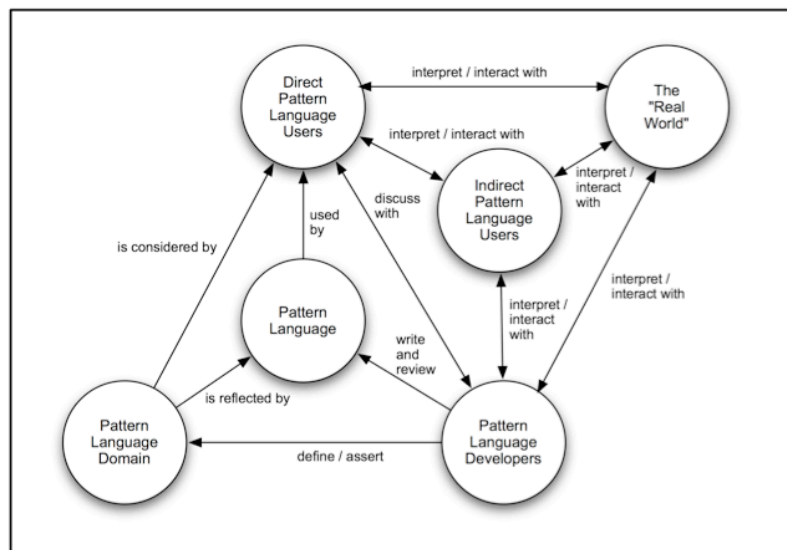
for support for pattern language work. Ideally there would be an application program interface (API) that would enable digital integration of patterns in new ways (e.g. see the Pattern Re-Mix section above) or online workshops.

Community Development

We need to build our community, share our ideas, and better coordinate our efforts. Clearly the recent steps to explicitly open up a pattern language community that is transdisciplinary are significant. We also need to extend our community to include the people who would like to empower their work, work better with allies, etc. but who may have never heard of pattern languages. This group can not only use the patterns languages that are developed but work on the development of new ones. They can also assist the development and theory community who desperately need ideas, data, and feedback from the real world.

I've included a figure from my book (Schuler 2008) below which depicts various relationships (represented as arrows) between pattern languages, relevant communities (various types of "users") and the "real world" which includes the physical, human (social), and knowledge- (or information-) based worlds. An inspection of the various areas (nodes) and the relationships between them should be useful in helping us to think about the goals and tasks associated with each in our efforts to make pattern language use more effective in bringing the results that we'd like to see.

Although the focus of the figure is broader, we can use it to describe aspects most relevant to pattern language developers for whom this article is primarily directed. According the figure, the main job of the developers could be seen as developing pattern languages based on some particular view of the "real" and potentially real world which is reflected in the pattern language domain.



Pattern Language Ecosystem

Looking at this particular ecosystem of pattern language relationships serves to remind us that the creation of pattern languages that meet the criteria for pattern language "goodness" would not be adequate if "goodness" did not include usefulness. Pattern languages, at least for our purposes here are not intended as purely aesthetic objects to be admired. Part of our job will be to make the pattern languages as useful as possible. This means that they should, first, be able to be readily discovered by potential users — probably on the Internet. Whenever possible we should license our patterns (or cards based on the patterns) as creative commons, which would allow people to duplicate and remix them. We've done this with the Liberating Voices cards but, presumably, without outreach people won't know how to use them — or whether they exist at all. Secondly, it must be clear how to use them. This means that the patterns themselves must have suggestions for using them within the text. It probably also means that there are useful resources available that describe uses for them. This would include suggestions as to appropriate methodology, "kits" for conducting design workshops, case studies, and a community that is standing by in order to assist them with all phases of pattern language development and use.

We believe that dedicated communities — online, offline, and hybrid — will be necessary for the development of the civic intelligence that we need for the future. While the technology to support groups and discussion related to pattern language development, evaluation, and use is required, the desire to push on and the ability to collaborate will depend on the people and the character of the communities we create. This can take several forms; Helmut Leitner (email correspondence), for

example, has suggested a "pattern card working group" with three roles: "(1) collect best practices how to use pattern cards in workshops and similar events; (2) find ways to produce pattern card decks at low costs to ease their use and circulation. And maybe, in the end, (3) find a publisher that specializes on pattern language books and materials."

Pattern Language Theory

This concept is listed last, but not because it is not important. The theory of pattern languages (and, probably, the superset that Christopher Alexander calls the Nature of Order (Alexander 2003)) is a critical aspect of this and many authors including Mehaffy and Salingaros (Mehaffy & Salingaros 2012; Salingaros 2000), and many others. I've focused more on other elements in this prolegomenon because I believe that there is an urgency now and pattern languages could play a vital role in addressing these urgent problems. Theory development and theory deployment (via the patterns) are vitally intertwined; both will gain if they are they conscientiously learn from each other. To my mind I envision three important areas that are open to theory development. The first is the theory of patterns and pattern languages themselves, as distinct forms. This explores aspects of pattern languages such as generativity: *How might we evaluate these features? Why might pattern languages be more suited than other approaches?* The second is that of pattern languages in use. This focuses on the wide range of how people use pattern languages: *Can pattern languages help integrate disparate communities? How do we evaluate the effectiveness of pattern language use? What forms (e.g. pattern cards or pattern work best for what groups? Why does using multiple patterns seem to be successful at suggesting new possibilities? What can we as pattern language advocates do to accelerate and inform the use of pattern languages. What elements of the pattern language are most important (e.g. the diagram?)* The third aspect focuses on pattern language domains: *What type of domain is most suitable? Are there ways of portraying or representing the domain that will make it more suitable for pattern language treatment.* These questions are only a beginning. There are undoubtedly lots more that we can and will ask ourselves.

Next Steps

Pattern languages instill fierce devotion in many people — including myself. We are impressed with their range, relevance, beauty, and elegance. Although the idea has gained some purchase in the fields of architecture and digital technology pattern languages are far from the compelling, important, and ubiquitous roles that many of us believe they are well-suited for.

We are now seeing a transdisciplinary movement to establish pattern languages as a useful addition to humankind's problem-solving toolbox. For this to happen we will need the various parties to understand the focus areas discussed in this article more thoroughly and to understand the dynamics of use by actively fielding different projects and collaborating with diverse communities. We are advocates for the pattern language approach. How we do this moving forward will help determine who else might share our passion in the years ahead.

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