Pattern Languages as Critical Enablers of Civic Intelligence

by Douglas Schuler

Abstract

This paper poses the question "Will we be smart enough, soon enough?" It suggests that pattern languages could provide critical support for the conceptual course corrections that we need to forestall the potentially catastrophic problems that humankind now faces. To build this case I discuss why pattern languages have strong potential for advancing our civic intelligence, the steps that we are taking with the Liberating Voices project to help realize that potential, and some general thoughts and suggestions for moving significantly forward.

Introduction

The subtitle of Jared Diamond's recent book Collapse: How Societies Choose to Fail or Succeed (2005) raises the stark issue that our own society must face: Will we choose to succeed — or will we be spectators at our own final act?

Researchers, journalists, activists, and others, have assembled substantial data on the potentially catastrophic problems that humankind now faces. The existence of this knowledge, from massive climate change and environmental destruction to war and economic collapse, should give us pause when considering Diamond's observation that the "commonest and most surprising" of the four ways in which societies fail to address their problems is their "failure even to try to solve a problem that it has perceived" — even one that ultimately results in that society's collapse. These societies were aware of the problems that caused their collapse but were unable to change their trajectories to save themselves.

In this paper I suggest that pattern languages could provide critical support for conceptual course correction. To build this case I discuss why pattern languages have strong potential for advancing our civic intelligence, the steps that we are taking with the Liberating Voices project to help realize that potential, and some general thoughts and suggestions for moving significantly forward. This includes how pattern languages can be used as "social objects" and how they can be used to complement each other.

This paper also explores a number of possibilities that the Internet opens up that were not available when the original pattern language book was first published in 1977 (Alexander et al). This includes, at the onset, the potential for broad participation in the initial design and development of a pattern language. It can also include the facilitation of discussion on the patterns in use, assist with local adaptation of patterns, and help with evaluation of pattern languages, among other things. Finally, I develop the case that pattern languages are particularly appropriate vehicles for the type of knowledge that current circumstances require.

Public Problems and Civic Intelligence

Although this venue is not the place for an exhaustive consideration of the problems, both global and local, that currently threaten our existence, a brief consideration of these problems and the particular social environment within which they are perceived is in order. On a global level, the problems we face are the result of a combination of forces that have been building for centuries. Although there arguably has been some progress in some areas (almost universal disdain for torture, for example), people (and the institutions that acculturate them) continue to oppress each other: warfare has not been abolished, intolerance is high, and economic injustice has been globalized. In addition to this social and institutional environment that is not conducive to civic intelligence — collaborative and informed problem-solving — one must consider the large and voracious population worldwide that is (and has been) seriously degrading the natural environment, an economic system that is worldwide, largely unknowable, and prone to hair-trigger and severe perturbations. Unfortunately this situation contains all the ingredients for the perfect storm to end all perfect storms: a steadily growing and potentially explosive situation and the economic and political elite that is charged with the responsibility of addressing these issues

but is incapable of dealing with them. (Indeed they are often unwilling to attempt to solve them, and, in many cases, are actively perpetuating them.) And nuclear and other state-of-the-art weapons of mass destruction which may be called in to address "local" problems — those, say, of one country or one ruling junta somewhere — they are not likely to be useful in addressing shared "global" issues productively. A system failure today is more likely to be orders of magnitude more catastrophic than anything in humankind's historical record.

These problems can be characterized by their interconnectedness and indivisibility. Some of the limitations associated with the current institutional / cultural infrastructure include political turfs, academic silos, and the universalization of profit-taking and the "free market" as the sole motivating and legitimizing orientation. On the other hand, there seems to be increasing awareness and attentiveness to these problems worldwide on the part of many governments, non-governmental organizations, the scientific community, and others. The unfolding rollout of information and communication technology including mobile telephones and the Internet raise intriguing opportunities for collaborative problem solving.

Civic intelligence is a form of collective intelligence that is directed towards the ameliorization of shared social and environmental challenges (Schuler, 2001, 2008). It exists to a greater or lesser degree in all societies. The image at the beginning of this essay illustrates civic intelligence at the community level: a public mural illustrating the causes and effects of asthma. Because governments, economically advantaged, professional, and other powerful groups are not capable of addressing the problems we're faced with by themselves, a deeper form of civic intelligence built upon rich interactions and collaborations between citizens distributed throughout the world will be required. The presence or absence of civic intelligence and how thoroughly and deeply it is distributed will determine how effectively these challenges are met. Unfortunately we cannot expect this intelligence to emerge solely and unconsciously from voting, data mining, or other algorithmic techniques no matter how clever they are. Nor will it emerge to a sufficient level accidentally or via the side-effects of other phenomena.

Thinking in terms of civic intelligence allows us to pose an interesting thought experiment: As the challenges facing us become more complex, numerous, fierce, and unpredictable, will we have the necessary civic intelligence to meet them? In contemplating this thought experiment it necessarily becomes transformed into a research and action program. Once we better understand ramifications of the question, the idea of reordering priorities and transforming existing projects, institutions, and trajectories into more future-oriented and life-affirming ones becomes paramount.

Pattern Languages

The first pattern language to reach a wide audience was presented by Christopher Alexander and his colleagues in A Pattern Language (Alexander et al, 1977). Each of the 253 patterns in the book "describes a problem that occurs over and over again in our environment, and then describes the core of the solution to the problem, in such a way that you can use this solution a million times over, without ever doing it the same way twice." Hence the actual employment of the pattern is left to the user or users — it is not imposed from above. The patterns in A Pattern Language (APL) range from the very broad like Magic of the City (APL 10) and Mosaic of Subcultures (APL 8) to the more specific like Staircase as a Stage (APL 133), Dormer Windows (APL 231), and Things from Your Life (APL 253).

Alexander writing in The Timeless Way of Building (1979) defines a pattern language as "a system which allows its users to create an infinite variety of those three dimensional combinations of patterns which we call buildings, gardens, towns." In addition to the rich content related to buildings and settlements, the book provided a framework for characterizing and consolidating relevant knowledge. This framework has been adopted for this purpose in a variety of fields including domains that scarcely existed when APL was first published such as human-computer interaction (Gamma, Helm, Johnson and Vlissides,1995), object-oriented programming (Tidwell, 1999), conservation economy (ConservationEconomy.net -- The Pattern Map) and communication for liberation (Schuler, 2008). Thus, pattern languages are ordered, holistic, collections of patterns that focus on a single domain — not just architecture. Fundamentally, pattern languages through the use of their patterns are intended to perturb or divert the flow of actions that would have likely occurred if they hadn't been used.

Liberating Voices

The Liberating Voices (LV) pattern language was — and is — intended to serve many of the same basic goals as A Pattern

Language. The major difference is that the domain of LV is information and communication rather than architecture and urban design as in APL. Both pattern languages encourage stronger and more effective participation on the part of ordinary people in the design of the environments in which they live. They both encourage creative involvement of all people to help create a better world. The LV project was initiated in 2001 and a book, Liberating Voices: A Pattern Language for Communication Revolution, was published in 2008 (Schuler). The pattern language in the book contains 136 patterns and was developed by 85 authors working primarily through email and an online pattern language development environment (http://www.publicsphereproject.org/patterns/). The online system currently contains over 400 patterns at various stages of development. The system was developed incrementally over the years to accommodate new requirements as they were identified. The publisher, MIT Press, has allowed the patterns to remain online and the copyright to the individual patterns remains with the author. Coincidentally each book took about eight years to complete.

From the first pattern (Civic Intelligence, LV 1) to the last one (Retreat and Reflection, LV 136) the LV scope was intentionally broad. The intent was to create a holistic, integrative, and action-oriented perspective of information and communication for collaborative problem-solving and positive social change. Liberating Voices contains patterns about economics (Community Currencies (LV 63) and Follow the Money (LV 135)), media (Tactical Media (LV 131) and Indigenous Media (LV 55)), the arts (Arts of Resistance (LV 111) and Public Domain Characters (LV 115)), technology studies (Appropriating Technology (LV 108) and Techno-Critique (LV 39)), policy (Mirror Institutions (LV 94) and Grassroots Public Policy Development (LV 78)), health (Health as a Universal Right (LV 5) and Big-Picture Health Information (LV 27)), social movements (Peaceful Public Demonstrations (LV 133) and Strategic Capacity (LV 34), and many others (Everyday Heroism (LV 116), The Power of Story (LV 114), and Labor Visions (LV 112) for example).

We have recently developed physical cards that are based on the patterns for use in face-to-face workshops with students and community groups. Three of these patterns are shown below. The Activist Road Trip pattern (LV 134) suggests that activism can be associated with travel as a quest of sorts, for example. In Seattle where I live, this could mean visiting the Duwamish River observing the environmental degradation and speaking with various people — native Americans, Southeast Asian immigrants, and workers — who depend on the river for their livelihood and who are interested in addressing the general health of the river. The Meaningful Map pattern (LV 47) could be used to show the sources of pollution as well as the location of remediation efforts. Everyday Heroism (LV 116) describes the work of various stewards of the river who are removing debris from the river and banks and rescuing wildlife that have become sickened by the heavy metals and other toxins.

As mentioned above, pattern languages are intended to be applicable within a specific domain or design context. The built environment is the domain or design context of APL

Figure 1: Three Liberating Voices Pattern Cards

while the more abstract communications environment is the domain of LV. Because APL is primarily devoted to tangible things and because the patterns are illustrated with photographs that were painstakingly sought (Ingrid Fiksdahl-King, PUARL conference, Portland, October 30, 2009) for their particular aptness, it is reasonable to believe that the APL patterns are more easily comprehended than their LV counterparts. At any rate we have limited experience (or data!) with patterns in use. Recently we were contacted by the recently elected Mayor of Seattle's (Mike McGinn's) Government 2.0 Task Force to help develop a pattern language to describe new, holistic potential relationship of people to their city government. The intriguing idea that similar pattern languages could be developed for other large cities in the Cascadia region, including Vancouver, B.C., Portland, OR., and San Francisco, CA. has also been suggested. Although pattern languages are intended for a (generally broadly defined) domain, they typically cross disciplinary, institutional, geographic, demographic, and other boundaries. This transdisciplinarity makes pattern languages particularly relevant today.

Supporting Effective Pattern Language Use

That pattern languages have the ability to capture people's imagination is indisputable. The popularity of APL and the profusion of pattern languages in other domains clearly demonstrates this. What is less clear is how well the patterns and the pattern language work in the real world. Is there reasonable chance of reaching the goals that the pattern languages are intended to help reach? It should be noted that a pattern language, like any other text, will be of variable quality; any given pattern language might be judged good or bad or (probably) somewhere in between according to what criteria is employed. The implication of this is straightforward: Using a pattern language approach can't guarantee (unfortunately!) a positive result. Its underlying philosophy, general methodological approach to its construction, and the form it takes, all offer affordances that other approaches may not have or, if they do, will be of lesser significance.

The working hypothesis that animates our current work is that the patterns have considerable value but there are actions and processes that should be developed to help people achieve this potential more effectively. For one thing, since a given pattern language is not likely to be perfect it may be necessary to change patterns (or delete some entirely) to make any given pattern language more effective. We believe that we can move beyond the idea of capturing people's imaginations. The challenge now is building and improving processes and systems that support intelligent uses of pattern languages.

Now that a reasonable foundation set of LV patterns exists (150 or so others in acceptable shape in the online system and another 136 patterns that appear in the LV book as well as online) we believe we are in a good position to focus on using the patterns to develop ideas and plans that are actionable. Note that we haven't abandoned the idea of creating new pattern languages — indeed the desire and the need to do so may grow considerably in the future. But we do believe that it is now the time in the LV project lifecycle where the shift in focus from pattern development to pattern use is not only possible but crucial. After all, the raison d'ẽtre of a pattern language is its use.

To help secure success with pattern languages after they have been "released" (either as completed products or as "versions" that have been judged to be sufficiently usable) we have identified several fundamental requirements for future development of online and in-person capabilities.

- Provide ways for groups to use the patterns more effectively
- Allow groups to develop their own patterns and pattern languages (from scratch or by building on existing patterns)
- Allow people to share information and communicate with each other
- Support the organic growth of communities around the use of pattern languages
- Foster research related to pattern language work
- Support the development of organizations, projects, and applications based on pattern languages
- Support the ongoing evolution and adaptation of the patterns and pattern languages

Patterns and Pattern Languages as Social Objects

In a general way, this paper explores the rich social roles that pattern languages could assume. In the new vernacular of the web, pattern languages as a whole, as well as individual patterns, can serve as "social objects." These social objects can assume many forms: in addition to identifying and naming the patterns (of course the act of naming anything turns it

into a cognitive or conceptual object) we can create both physical and online social objects and, more significantly, develop processes and technologies to actively realize the social / collaborative / cognitive potential of the objects. We have started work developing approaches that carry this work forward. We've been thinking in terms of in-person or online approaches although in actuality, people increasingly don't segregate their work this way but, rather, use and choose the medium or venue opportunistically in ways that best suit their needs and preferences for advancing the work.

With a few exceptions, the LV pattern language captures and portrays phenomena or perspectives that have been employed for decades if not centuries. The patterns are, however, for the most part generic; they are not intended to provide comprehensive guidance for any and all problems in any and all contexts. In other words, identifying a LV pattern as potentially suitable is only the first step: the pattern concept must be developed further into something that is operational; i.e. something that is capable of promoting, enabling, and orienting, action.

Although the LV patterns can be said to be "released" it is acknowledged that the patterns are still in work. It is probably true that a pattern language is never complete: the circumstances, surrounding their use are infinitely diverse and dynamic and patterns must be applied in a given environment with its own specific problems and resources, that takes into account the interests, experience, expectations, relationships, and hopes of the people involved. The authors of A Pattern Language acknowledged the incompleteness of their work and the necessity of modification: "You see then that the patterns are very much alive and evolving" (Alexander et al, 1977). In fact, at one point, they discussed publishing the pattern language as a collection of pages in a loose leaf notebook (in stark contrast to the magisterial tome that was ultimately published) that would encourage experimentation and customization (Panel Discussion, PUARL Symposium, October 30, 2009). Now, with the advent of networked digital computers and the web, this sort of customization and other forms of exploration, bricolage, hybridization, and collaboration (both face-to-face and at a distance) became immensely more viable.

Although the patterns in APL could be used as a focus for discussion in face-to-face groups or in institutional settings where it had been adopted as a broad organizing document, there were otherwise few opportunities for organic development of groups and general community building in relation to the APL pattern language. Because many (if not most) of the APL aficionados and advocates had no access to a shared information space, innovations and adaptations of patterns were not likely to be shared and were destined to remain local.

We have now identified several basic ways to create useful information spaces and, in general, how to move forward in many ways, including building 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).

We are also developing capabilities that will allow 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. Over time we plan to further the organic group approach to access additional social objects and processes. We have been approached by people interested in developing pattern languages based on Art for Development, Art Activism, Root Journalism, and Government 2.0. The group-forming capability will also ultimately enable groups to use e-Liberate, the online version of Roberts Rules of Order that allows groups to convene online, distributed meetings that also exists on the Public Sphere Project site. We also are beginning to think about how e-Liberate could be used to convene online workshops similar to the in-person workshops described in the next section.

Finally, 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 they create.

Liberating Voices Workshops

We are currently developing a set of physical cards (see figure 1 above) — one for each pattern in the book — and we have begun using them in in-person workshops. The cards lend themselves to a variety of creative "design games" that we have been exploring. Thus far we have conducted workshops at the London Knowledge Lab and with students at the University of Brighton and The Evergreen State College (see figure 2 below). We plan to conduct workshops with activists, community, and civil sector groups in the near future. And although the cards are currently being used in face-to-face situations, the prospect of using the cards "virtually" in online, distributed workshops is an intriguing idea that we plan to pursue.

Our findings from the workshops are preliminary but encouraging. Although we have rarely used the cards with actual community development or social groups working with their actual need scenarios we are pleased with the cards as an accessible "front door" to the patterns and with the idea of using the cards in social settings. Both of these findings have received strong endorsements from participants. We also believe that familiarity with the patterns is important for success in the workshops although the cards seemed to have diminished the absolute necessity of deep familiarity with the patterns — and of the more inexplicable notion of patterns and of pattern languages. So, although it would sometimes be necessary to introduce the ideas of patterns and pattern languages immediately before a workshop this might not be as effective as introducing the ideas earlier. We were gratified to note that workshop participants strongly endorsed the idea of using two or even more cards in combination to address a given design need. We had anticipated this result but it had not been verified to this degree before the workshops.

Our work in the online world is intended to carry on with the necessary work that a static or exclusively print-oriented pattern language rarely engenders. Beyond that, we are trying to conceptualize and develop a system or complex

Figure 2: Liberating Voices Pattern Language Workshop, The Evergreen State College, November 2009

of people, information and communication, and technology that is living and learning, and that actively promotes civic intelligence in society over the long-haul.

Pattern Language Complementarity

In today's complex world, it's often necessary to consider approaches that cross sectoral, institutional, administrative, geographical, or other boundaries of natural or man-made construction to address real-world challenges systematically. In situations like these no single pattern language is likely to be sufficient. In two not-so-hypothetical scenarios, the specter of symbiosis is raised as an immediate practical concern. For example, in the Seattle Government 2.0 proposal, we would expect that (1) the diverse players in a single municipality and (2) the various municipalities along, for example, the West Coast of the U.S. would develop somewhat different pattern languages (although developing a single language is still, of course, a worthwhile goal). Similarly, projects that address worldwide challenges such as climate change — even if they adopt a pattern language approach — are unlikely to all gravitate towards the exact approach.

Two (or more) pattern languages can be said to be complementary (or integrable) if they meet two main criteria. The first is that their values are consonant with each other. Exploitation and oppression, for example, are patterns of human behavior, and, regrettably, can probably be seen as being timeless — thus meeting, at least to some degree, one criterion that Alexander et al (1977) established for pattern languages. But a pattern (or, even an entire pattern language) titled Exploitation or Oppression would not be complementary with LV or APL patterns because of a clash in values.

The second criterion is whether the domains of two pattern languages intersect or can be seen as supporting each other in some way. The domains could intersect in several ways. For one thing, one domain could be contained within another one in a subset / superset relationship. For example, any pattern language related to small group processes could be contained within a pattern language of information and communication for social change. In that case all of the patterns in the small group process pattern language are likely to be potentially applicable to users of the social change domain. The converse is not likely to be true however since the social change pattern language will address areas (the mass media, for example) that are not related directly to small group processes. Domains could also intersect in ways when neither domain is contained within the other. A pattern language devoted to pedagogy could intersect with the LV pattern language with patterns related to, say, Citizen Science (LV 37) or Service Learning (LV 90), although each language would contain patterns not found in the other.

I have begun to explore ways that Liberating Voices and the original A Pattern Language (Alexander et al, 1977), two projects in fairly independent domains, could be used to promote the objectives of each other in a circuit of support (see figure 3 on next page). This mutual support can be best demonstrated by examples. I have identified two basic (and somewhat related) relationships that can link one or more pattern languages. The first relationship, *informs*, exists when using one or more patterns in one pattern language can then be used to support the use of one or more patterns in another pattern language. The second relationship, *provides requirements for*, exists when the realization of one pattern establishes opportunities for one or more patterns in the another pattern language. The new set of patterns drawn from two or more pattern languages is similar to the "small sequence of patterns" which "is itself a language for a smaller part of the environment" that is discussed in the "Choosing a Language for Your Project" section of A Pattern Language.

Pattern Languages Play Social Roles

This paper focuses on the potential for pattern languages to play significant social roles and explores approaches for best leveraging these roles. As we have seen in relation to patterns, the exact nature of the social roles that people assign (perhaps subconsciously) to the pattern languages they employ will be idiosyncratic to the people and groups who use them and the context they find themselves immersed within. For that reason, this topic will be discussed in general terms.

Pattern languages and the patterns specifically can exist as generators for diverse output such as ideas and plans that, although different from each other, bear a family resemblance. The multi-service center publication (Alexander, Ishikawa, and Silverstein, 1968) that contained the first published "pattern language" was intended as precisely this type of meta-design document. In addition to using the language to assist with the design process in many ways, specific patterns languages and/or pattern language oriented procedures can be formally established as an official or governing document. Pattern languages, for example, can serve as a master plan (as exemplified by the University of Oregon's plan).

Patterns from *Liberating Voices* that could inform *A Pattern Langauge* work	
LIBERATING VOICES PATTERN	*How the LV pattern could inform APL work:*
Meaningful Maps (LV 47)	*Meaningful Maps could provide valuable information about human needs and habitat to inform APL work.*
Service Learning (LV 90)	*Students engaged in Service Learning could contribute to APL design work.*
Sustainable Design (LV 22)	*Applying Sustainable Design is likely to create a favorable environment for APL.*
Patterns from *Liberating Voices* that could provide requirements for *A Pattern Language* pattern use	
LIBERATING VOICES PATTERN	*How it could provide requirements for APL work:*
Retreat and Reflection (LV 136)	*The APL patterns, Access to Water (APL 25), Sacred Sites (APL 24), and Half-Hidden Garden (APL 111) are needed to promote the development of Retreat and Reflection.*
Experimental Schools (LV 89)	*APL patterns such as Necklace of Community Projects (APL 45) could be used explicitly to support Experimental Schools.*

Figure 3: Liberating Voices patterns & A Pattern Language work.

Patterns, as we've mentioned aren't comprehensive or precisely prescriptive; they depict a certain genericity that needs to be "instantiated" in some way, basically with the particularities of the new product or process called out in some detail. It is this genericity that suggests the latent power of pattern languages: the patterns are not precise descriptions to fight over, but (ideally) occasions for collaboration — especially when the patterns have been identified by all parties as being relevant. This lack of specificity, its inherent "wiggle room," suggests the role of pattern languages as various types of intermediary objects between people. The related idea of negotiation came up several times during the 2009 PUARL symposium. Pattern languages could be useful in negotiation in a diverse number of settings including multi-sector stakeholders, labor and employer, coalitions, professionals and laypeople, etc.

Pattern Languages as Conceptual Tools for the Future

The variety of social roles to which a pattern language can be assigned make it an attractive candidate for helping to reconceptualize the future. The patterns are intended to build on what exists but to promote intelligent changes in trajectory. As a consequence they generally advance an incremental and meliorist agenda — albeit with ultimately radical intent and, possibly, consequences.

Many of the grave problems that we are currently facing are being perpetuated to this day through established patterns of behavior. While they may or may not be rewarding to the people and to the institutions that are perpetuating them, they are certainly penalizing other people (alive and not yet born) and the environment in the short and long term. Pattern languages are being put forward here as conceptual tools for helping to nudge us out of these self-destructive patterns of behavior. Any collectivity — existing, conceptual, or potential — can develop a new — or embrace an existing — pattern language to suit their needs. While that process can be enriching, the use of the pattern language and the communication, refinement, and experimentation, that effective use demands is the ultimate objective and it requires a different mindset and dialog than one required in the selection of the patterns.

While collections of information that are called pattern languages are likely to differ vastly in quality and pattern languages carry no guarantee as to the results that are brought about in their name, I argue that pattern languages offer a framework that is uniquely suited for the types of problems that humankind must increasingly face. Pattern languages, of course, can't solve problems by themselves but they can assist in human efforts to bring about change.

Pattern languages are built on relationships; individual patterns describe relationships between social forces and pattern languages contain patterns which are related to each other. Moreover, these relationships are reflected also in the world in which they are to be applied. "This [That no pattern is an isolated entity] is a fundamental view of the world. It says that when you build a thing you cannot merely build that thing in isolation, but must also repair the world around it, and within it, so that the larger world at that one place becomes more coherent, and more whole; and that the thing which you make takes its place in the web of nature as you make it." (Alexander et al, 1977). But rather than replacing the (still crucial) role of the specialist, pattern languages complement this work, knitting together elements that can be understood to some degree in isolation but must be considered in a seamless reality as well.

Pattern languages exist at a somewhat abstract level meaning that encourages (1) broad interpretation and instantiation; and (2) promotion of social imagination. This also means that they are promiscuous, i.e. capable, at least in theory, of addressing the problems and building on the opportunities and resources that were discussed at the beginning of this paper. The fact that they are collections increases the chance that there is "something for everybody" and that they can be used in combination with each other to generate innumerable creative solutions.

In a thoughtful and engaging exegesis of the enemies of use of pattern languages, Kimberly Dovey (1990) discusses several "isms," including "pessimism":

> *"Anyone with a reasonable understanding of the range of forces aligned against the implementation of the pattern language may well conclude that the task is futile and defect to the enemy in the form of pessimism. Many would not argue with the desirability of the pattern language approach but with its possibility, with its utopianism in the negative sense of "not of this world." Pessimists are perhaps the most numerous of all enemies and they contribute the added danger of becoming a self-fulfilling prophecy. One could argue that I have done little more in this paper than to add to the ranks of pessimists. However, I am not pessimistic and my aims are otherwise.*
>
> *One reason for optimism is that the aspects of Alexander's work that make it seem irrelevant to main-stream discourse and difficult to implement are precisely those that make it applicable to global environmental design problems. For instance one of the arguments used against Alexander is that he proposes an owner-built environment that is impractical in the current context. Alexander does not propose the necessity of such a process, only its possibility, in a global context of over a billion poorly housed people and massive unemployment. The pattern language is one of the few current architectural theories that offers a potential theoretical ground for a world faced with severe problems of physical and social ecology."*

I believe that this statement applies to Liberating Voices and other post-APL languages like the Conservation Economy pattern language developed by Stuart Cowan and his colleagues (ConservationEconomy.net -- The Pattern Map). Substitute "information and communication environment" for "environment" in a general way throughout Dovey's statements and a defense for the LV language is formed. I further marshal Dovey's sentiments in support of our contention that pattern languages at the very least represent a plausible attempt to (1) provide the type of information that the world needs now; and (2) provide the information in a format that makes sense to ordinary people as well as professionals and other funded individuals. Pattern languages can be adopted as an orientation by people and groups at a variety of scales, from the powerful to the people at the grassroots, with few resources. Arguably, given the enormous challenges that humankind now faces, the limits to strict knowledge segmentation and the artificial distinction between thought and action have been reached. And because today's challenges are vast and distributed, it will be necessary for millions of actions that are not directly coordinated to take place simultaneously.

The problems now facing humankind won't be satisfactorily addressed by "business as usual." The state of our civic intelligence needs our immediate attention. Just as experts in a given area of expertise engage in metacognition — thinking about their thinking — we must focus on how we perform our collective thinking and act to improve on it. If we do choose to succeed pattern languages can play a substantial role in this effort. They can play a vital role integrating critique and action (or diagnosis and prescription) and integrating elements that were artificially segregated. Pattern languages may be best thought of as a coherent collection of ideas that will encourage detours from the trajectories that work against our collective well-being. While constructing pattern languages is a significant step, the challenge we are faced with today is realizing the objectives that the patterns suggest. We must animate the patterns, and make them evolve and adapt as necessary through human engagement and collaboration.

End Notes

Many of the ideas in this chapter were introduced or furthered in discussions and presentations at the 2009 PUARL Symposium in Portland. Other productive venues included Evergreen classes, the Liberating Voices email distribution list, etc. Unfortunately neither my memory nor my notes is adequate to accurately give credit in every case. My apologies to anybody whose name has been omitted. It was not intentional! I also thank Stewart Dutfield for his photograph at the beginning of this article and the editorial board and the many people who have contributed to this evolving project.

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