

**Another Kind of Science;
Christopher Alexander on Democratic Theory
and the Built Environment***

Brian Walker, *University of California, Los Angeles*

This article spells out the relevance, for political theorists and for political scientists more generally, of the works of the architectural and urban theorist Christopher Alexander.

Christopher Alexander is a professor of architecture at the University of California, Berkeley, the author of twelve books published (or forthcoming) on Oxford University Press, and the designer/builder of a number of college campuses, housing projects and residences worldwide.

Christopher Alexander's work is of interest to modern democratic theory not only because of its strong emphasis on the participation of the modern citizenry in the construction and cultivation of its built environment – the self-shaping of the democratic citizenry -- but also because of the connection Alexander traces between the structure of the city-region and the development of social capital – an issue which has come to be of intense concern to modern political scientists.[\[1\]](#)

Nor is it just Alexander's contributions as a thinker about the influence of the built environment on the development of social capital which makes his work important. Alexander also develops a constellation of theoretical concepts to talk about the quality of our cities, and the work we might do to give them a more humane character.

Modern Canadian political theory, like most recent political theory, tends to concentrate overwhelmingly on issues of justice and stability, and to sideline the third criterion classically used to judge whether a society is well-ordered or not; namely the question of *ethos*, the character established in a community and on a territory.[\[2\]](#) But if we look at the classics of political thinking such as Aristotle's *Politics* or Hegel's *Philosophy of Right* – and these are representative of a much broader trend in the history of political thinking -- we see a great concern with questions of character. Justice, of course, is of primary concern, for that is what allows people to order themselves through reason rather than force. Stability is an

equally strong concern, the establishment of equilibria that satisfy people and prevent the descent into war. But both Aristotle and Hegel – and many other writers in our tradition – pay just as much attention to the *ethos* or *Sittlichkeit* of political society – the character given to the *polis* and its population.

Aristotle's reasons for being concerned with *ethos* are particularly lucid. The character encouraged within the population determines whether the constitution will be preserved and whether people will treat each other justly or descend into naked self-interest.^[3] But *ethos* is also important for its own sake. We want our society to give us the means to lead a fine and noble life, and we thus need to develop a substantive language to talk about the dispositions and tendencies we intensify in the world around us.^[4] One of the central purposes of Aristotle's ethics and political science is to develop a set of criteria by means of which one can judge questions about this character we give things – our selves above all, but also the character of the *polis* as a whole.

Christopher Alexander's work, similarly, is an ongoing attempt to provide a set of criteria, and a conceptual system, for talking about the character of the modern *polis* and in particular of the built environments which structure and to some degree determine the relations among people.

One might distinguish two different projects within this overarching inquiry into the terms of character-giving. On the one hand there is a concern with the ethical *telos*, the quality that we are trying to intensify in our field of concern. In Aristotle's work the ethical *telos* is of course, *eudaimonia*, a form of life in which all the virtues are activated and people end up spending large amounts of their time in fine and noble actions. In Alexander's work, by contrast, the ethical *telos* is the maximization of wholeness and coherence, the promotion of dense forms of functional resonance between the needs of the population and the environments in which they live. By pushing towards intellectual clarity about the qualities that we find in the world's best environments – central Amsterdam, for example, or Manhattan, (or Montreal, the Canadian might add) or other areas which critics, tourists, and residents see as deeply attractive -- one clarifies criteria of “wholeness,” “multifunctionality” and “humane liveliness” which stand at the heart of a conceptual framework designed to monitor the work we do building our cities.

The other project, entwined with this one, is the attempt to work out generative processes that would actually produce these qualities. For Aristotle this is a theory of habituation, linked to a particular plan for education, legislation and the shaping of the household.^[5] What intensification strategies would allow us to give a humane and lively character to our cities? For Alexander this is in part a technical question and in

part a question of politics, and Alexander develops theoretical resources to address both these areas of concern. He develops a theory of character-giving by means of democratic participation and deliberation.

The central agent in Alexander's theory is the activated citizenry; a population which begins to take an interest in its own self-shaping. He envisions a society-wide megalogue on environmental shaping by means of which the population develops a common "pattern language" representing an idealized development of its own competency and responsibility. This vision of a self-directing citizenry was a very powerful one in the late nineteenth and early twentieth century, for example in the works of Lester Ward, Herbert Croly, Walter Lippmann and John Dewey. Like these writers, Alexander stresses the need for the modern population to elaborate projects for itself so that its social evolution is not left to chance and the vagaries of the market.^[6] For these many reasons, Alexander's work is of the greatest interest to modern political scientists.

Alexander's Project

Christopher Alexander is both a theorist and an active architect/builder. His publications range very widely, from books advocating the use of computer regressions in urban planning to work on the geometrical structures at work in early Turkish carpets.^[7] Despite this diversity there is great thematic unity in Alexander's work and a constant concern with method. Before turning to architecture Alexander trained in physics and mathematics and all of his work shows a concern with evidence, with the replication of research results, with clarifying first principles and with developing generative models for complex systems. Even though he is fundamentally concerned with ethics and with establishing a more humane character in the world he pursues this goal by means that are disciplined by serious scientific training.

Christopher Alexander also works as a contractor and a builder and has constructed houses, apartment buildings, a café, a homeless shelter, a clinic, a museum, a university and many other institutions and structures. Alexander treats his work as an architect and builder as a set of experiments through which he refines his answers to a basic set of theoretical questions he has been exploring since the mid-1960's. What are the optimum environmental patterns that we might strive for if we want to promote humaneness and liveliness in our urban and biological habitat? What forms of sensitivity, skill and principle should we be trying to promote in the modern citizenry if we want them to become active participants in shaping their own cities rather than the passive recipients of patterns created by others? What do people need to know in order to take care of the world they will pass down to future generations? Alexander's work as an architect and builder is made up of a series of experiments aimed at clarifying answers to these

questions. The knowledge that he is seeking is *maker's* knowledge; his goal is to spell out his suggestions about optimum environmental structure at a level of specificity that would allow people to follow his theories in order to create environments which have the qualities of wholeness, coherence and functionality that he finds attractive. His goal is to create a body of knowledge geared to a population rendered active and participatory in its work of collective self-shaping.

Alexander's central topic is the relationship between human beings and the environments that surround them. One of Alexander's root intuitions is that built environments have a strong influence on the population, so that in shaping the physical environment one is shaping the dispositions, habits and social ethos of the citizenry. Although Alexander is not an architectural determinist, portraying us as puppets of our environments (the cultural frameworks through which we approach our environments are also very important for him, for one thing) he nonetheless believes that the structure of streets, paths and green spaces, the availability or non-availability of a space for citizens to meet each other and other such issues are all tremendously important as influences on the character and well-being of the population.

This theme is particularly clear in one of Alexander's early articles, "The City as Mechanism for Sustaining Human Contact."[\[8\]](#) Alexander argues there that the modern allegiance to autonomy that we find so widely accepted in modern societies can be taken in many different directions, some of which are inherently self-destructive. The shape of the city plays a large role in determining whether our autonomy becomes a matter of avoiding other people and walling ourselves off, or whether our autonomy plays itself out in some balance of solitude and sociability. For example, if we live in a suburb without an automobile (perhaps because we are poor, or young, or handicapped) and if the streets are long and public spaces lacking, then we are likely to have few alternatives to nights alone with the television set. It is a very different situation in cities with a variety of squares, plazas, parks and streets where people can find company with their fellow citizens. A good city, according to Alexander, has a balance of busy-ness and calm and thus offers its citizens a wider set of options than a place which offers only one or the other.

The foregoing balance between busyness and calm, between shelter and excitement, is the focus of Alexander's best-known work, *A Pattern Language*. *A Pattern Language* is a summary of seven years of research into humanist urban design that Alexander pursued with his colleagues Sara Ishikawa, Murray Silverstein and others at the Center for Environmental Structure in Berkeley California between 1967 and 1975.[\[9\]](#)

The "patterns" referred to in the title are ways of defining land-use so as to establish an equilibrium among the many different forces and requirements one might want to respond to in a modern urban environment. Pattern #36, for example, "Degrees of Publicness," encourages the creation of an urban environment with both quiet backwaters and bustling streets, and with a number of intermediate places in between. This is meant to balance; 1) the need for some sort of access to public life in order for people to develop their capacities in an adequate way and; 2) the existence of different tastes for "publicness;" the fact that people distribute themselves along a continuum between introversion and extraversion and thus have different needs.[\[10\]](#)

Another example of a pattern is #39 "Housing Hill." Alexander and his colleagues suggest that every town has places that are so desirable that 30-50 houses per acre will be living there, but that the high rise housing usually adopted to respond to such densities is far too impersonal.[\[11\]](#) They thus recommend the creation of "Housing Hills" made up of buildings three or four stories high and sloped to the south so that people can have gardens in the sun. They note that Moshe Safdie tried a version of the Housing Hill pattern in Habitat 67, but that his version did not have the full functionality they seek. Alexander and his colleagues believe that people need 1) connection to the ground (difficult in Habitat 67) and to neighbors. People also need 2) an ability to personalize their spaces (difficult in Safdie's mass-produced concrete pre-fabs) and; 3) have access to a space for a household garden. The need for household gardens, in turn, requires 4) southern orientation for the housing project, since it is only then that the gardens will get sufficient light.[\[12\]](#) The pattern "Housing Hill" is also motivated by 5) a recognition that some parts of a city or town are intrinsically more delightful than others and 6) that high-level housing densities are thus appropriate.

Patterns are attempts to respond to a broad range of recurring needs and natural phenomena. Good patterns allow an intensification of functionality, teaching us how to get more use out of particular quadrants of land and their natural advantages. When the equilibria with the patterns have been established more things can go on within a space – both the extrovert and introvert can find a place for themselves for example.

Patterns are also attempts to respond well to the natural tendencies of the environment. To take a mundane example (one, however, with particular relevance to the Canadian case,) Alexander suggests that outdoor public spaces should face south wherever possible, but that the only way to insure that tall buildings do not cast huge shadows on the south-facing spaces behind them is to create cascading roofs which soften the shadow-effect.^[13] Pattern #105, “South Facing Outdoors” is an attempt to align a recurring human need (warmth from the sun) which a natural force operant on most Northern landscapes – a certain pattern of sun, shadow and wind. A well-constructed city takes careful advantage of all the natural potentials of its territory, and a well-developed pattern language would illuminate the best practices involved in the stewardship of natural resources, wildlife systems and so on.^[14]

The pattern language set out by Alexander, Ishikawa and Silverstein is to some extent a description of idealized civic competency. It is meant to spell out what would be contained in the practical wisdom of a citizen body fully aware of, and responsible for, the forces at work in its environment and in its own recurring needs. A well formulated pattern language could keep alive a vision of full functionality and serve as a standard against which one might measure particular suggestions for building projects. A pattern language sets out a functionality-based specification of the public good. In the give and take of interest group politics it is easy for one or two needs to be exaggerated. But if a society works up a functionality-based pattern language it creates a standard against which such exaggerations can be measured, a reminder of needs and interests that can easily be lost from view. *A Pattern Language* is a compendium of patterns which Alexander and his colleagues believe to be the likely convergence points for a population deliberating on its self-shaping while trying to respond to a full range of human recurring human needs and environmental requirements.^[15] Alexander’s work is thus focused on a vision of an ideally competent citizenry refining its collective self-direction through communal deliberation.

Alexander and his colleagues believe in the likelihood of convergence within such a dialogue because of their sense that good patterning is an objective affair. They do not necessarily believe that the 253 patterns that they list in *A Pattern Language* are *themselves* objectively correct – they see their book as an attempt to get a social dialogue going and as a first stab at what they hope might be the correct patterns that people will choose within deliberation. But they do believe that human needs for shelter, excitement, physiological comfort and emotional support produce very tight constraints on what will work and what won’t in balancing the various forces that one might want to see offered free play in the modern city, and that there is thus some subset of possible patterns which will be correct for a society given the forces at work within it. Mistaken patterns will leave important functions unresponded to and will thus not be stable convergence points for a social dialogue in which all needs are represented.

Take, as an example, Alexander’s discussion of the modernization of housing in Peru. On a trip to Peru Alexander and his colleagues examined some of the new apartment buildings which were being constructed. They found these to be in some ways functionally inferior to the more traditional built forms they were meant to improve upon.^[16] Instead of entering into a porch, and then into a room meant to host outsiders, and only then into the family’s inner domain, modern Peruvian apartments forced visitors to enter directly into the family’s living space. A door opened from the corridor and you were right inside the family room. This made people much less comfortable about hosting people in their homes, throwing off long-established cultural patterns of visiting and sociability.^[17]

The comparison of modern and traditional neighborhoods is not just a contrast of different styles or preferences, as far as Alexander is concerned, but a contrast between different building processes which one can adjudicate from the point of view of functions fulfilled. The elimination of intimacy gradients between public and private worlds is not simply a replacement of one building style for another, a simple matter of taste or “preference.” It is an actual mistake, a loss of function. Thus a full social discourse on built patterns where all needs can be spoken is unlikely to converge on the modernist form, but rather to move closer to the more traditional pattern. The concern with substantive values such as functional complexity and completeness, wholeness and liveliness is meant to develop as an objective standard by means of which the

citizenry can monitor the development of its own built habitat, and the competency of its modes of organization in giving itself an acceptable and sustainable environment.

A theory of modernization stands in the background here. Alexander suggests that many of the vernacular architectures of the world were created on the basis of pattern languages honed through experience and experiments. If a farmer experiments with a new type of barn that then fails, his neighbors are unlikely to follow him, and so people tend to stick to a few basic patterns that work fairly well for them. [18] But in the nineteenth, and especially in the twentieth, centuries many more buildings are constructed by people who will not be living in them – either by speculative building associations or by architects or development firms. [19] In such situations, Alexander suggests, issues such as the aesthetic beauty of architectural models, fashionableness, or the general “look” of buildings can become just as important as functional balance and coherence, and the organic pattern language available within traditional societies becomes fragmented.

In such a situation it becomes necessary to become much more self-conscious about what is needed for good building and city design. We are forced to replicate with our rational capacities the tight feedback loop between designer and occupant typical of more traditional societies. Modernization puts new technological powers in our hands, but with that comes a need to become much more self-conscious about what we need out of our urban environments. We either develop clear ideals about what we are trying to promote with our cities, and thus govern our own social evolution, or we let ourselves be shaped by the forces of the market and allow us to take us wherever chance leads.

Let me look more closely at the actual patterns which Christopher Alexander and his colleagues recommend. The connection between patterning and the cultivation of a democratic public sphere will become clearer if we examine some of the projects at work among the 253 patterns of *A Pattern Language*.

One set of patterns aims at increasing the amount, and the quality, of spaces which promote sociability. Social capital needs a physical anchor in space, and is created by promoting the development of promenades and shopping streets, local town halls where the community can meet, plazas, squares beer halls, cafés and public rooms. [20] These give the public a space to come into being and meet itself. It is this kind of built infrastructure that makes the difference between the way one experiences sociability on the “Plateau” in Montreal as compared to the average Canadian suburb.

Another set of patterns specifies ways to give neighborhoods and communities their own sense of identity. At least since Edmund Burke there has been a recognition that one learns to care for one’s country through developing an attachment to a particular patch of land or a certain neighborhood. [21] By caring for what is close at hand one learns what engagement is, and at the same time gains the sense of something to protect. If all neighborhoods and cities come to look exactly the same, as tends to occur in an era when housing and building are prefabricated from central offices with little sense of local specificity, then this grounding sense of attachment can be easily eroded, potentially diminishing the fervor of citizenship.

Many of Alexander’s patterns are oriented towards intensifying spatial differentiation as the basis for the intensification of identity and care. He recommends making neighborhoods into distinctive physical entities by giving them well-articulated boundaries, by routing roadways in such a way that they protect neighborhoods from heavy traffic and by creating gateways that set the neighbourhood space off from the surrounding city. [22] One also increases a sense of spatial identification by encouraging individually-owned shops so that the businesses in the neighborhood are different from those in other places, and by encouraging street cafés and corner groceries. [23] These are the patterns that give a distinctive character to a neighborhood and make it stand out from others around.

The creation of a built environment favorable to political discussion and participation is another of the major projects running through *A Pattern Language*. Pattern #12, “Community of 7000” cites Jefferson’s ward system and Paul Goodman’s *Communitas* in advocating a decentralization of power into the hands of communities of about 7000 people. [24] This community should have a local town hall that might serve as a visible heart for the political community, and also a community council to which people might direct their participation. This accompanies a project to decentralize political power which I shall touch on in my next section.

Intensification of community also entails a new spatial dynamic in relation to work and workplaces. Rigid zoning distinctions between work areas and living areas strikes Alexander as being outmoded and as creating intolerable rifts in people's lives; "Children grow up in areas where there are no men, except on weekends; women are trapped in an atmosphere where they are expected to be pretty, unintelligent housekeepers; men are forced to accept a schism in which they spend the greater part of their waking lives at work and away from their families." [25] Alexander and his colleagues thus recommend the scattering of workplaces throughout the urban region so that each home is within walking distance of many hundreds of workplaces so that workers can go home for lunch. Workplaces that are noisy or noxious can be placed at the edges of communities, to form a sort of border, and non-toxic workplaces can be situated directly within neighborhoods or even within homes. Workplaces might well be arranged around courtyards with cafés and public spaces where people from various enterprises can work together.

These suggestions are of interest not only because they touch on the way in which the built infrastructure shapes our ethical and political dispositions, but also as an interpretation of what communitarianism might entail in practice. From Alexander's perspective the creation of community has as much to do with mundane issues such as the placement of streets as it does with broader questions of the values which people hold in common. A sense of community depends to a very large degree on the existence of certain types of urban experience. That, in turn, entails the creation of a particular type of urban infrastructure.

Democratic Participation in City-Planning

Along with this emphasis on the city as vessel and crucible for political society Alexander also evinces a strong concern with the participation of the population in building its own environment. One of the central goals of all of Alexander's work – and no doubt one of the reasons that he has been less than popular among professional architects and urban designers – is to take the power of environmental shaping out of the hands of architects, design professionals and real estate firms and put it into the hands of the population at large.

Like many theorists who came of age in the 1960's and 70's Alexander worries about the anti-democratic tendencies of modern bureaucracies; in his case the modern building system wherein small groups of people in government or corporate bureaucracy may set out all the basic patterns of society with little input from the population at large. Technological developments make it possible for development companies and realtor's associations to redesign uninhabited land in a manner of a few weeks and to fill them with new houses in a manner of months. One day men and women in a backroom are tracing out streets and parking lots on a piece of paper. A few months later other men and women are walking these streets and living out their lives in the structures that the bankers, realtors and developers drew up.

Alexander sees several problems with this. For one thing, it removes the power of planning from the hands of the population and Alexander clearly believes that the power and experience of shaping one's environment is a fundamental part of a well-lived life. But Alexander also has many functionalist arguments as to why cities are best when constructed out of the piecemeal building of their citizens rather than according to some master plan. If people are involved in constructing their own houses they are likely to be very attentive to functionality since they have to live with their mistakes, unlike a real estate development company which is primarily interested in making a sale rather than providing enduring functionality. There is also an argument from complexity. Given the fantastic number of forces that need to be balanced within the modern city, only the population as a whole, operating at a level of serious competency and civic concern, can manage to build an environment which has the complexity, wholeness and liveliness which we associate with the best cities and buildings of the past.

Alexander attempts to work out a design and building process that would establish the democratization of the powers of environmental shaping. Alexander and his colleagues envision a building process where control over land is devolved to communities, small towns, neighborhoods, "house clusters" and work communities. These political entities are each assigned complete control over the parts of the territory that concern them: "Ideally, each group actually owns the common land at its "level." And higher groups do not own or control the land belonging to lower groups – they only own and control the common land that lies between them, and which serves the higher group." [26]

The political entities in the foregoing vision each engage with a particular set of the patterns set out in *A Pattern Language*. For example authorities in the city region (the federal government gets little attention in APL) will be concerned with the set of patterns governing the best distribution of towns and cities within a region; attempting to promote an optimum diversity of settlement types through regional zoning policies and land grants.^[27] Communities of 7000, operating several levels lower, would be more concerned with patterns such as those establishing zones for different subcultures, with patterns governing the maintenance of common space, with establishing connections between neighborhoods and so on. The individual householder, in turn, would be concerned with patterns governing transition zones between public and private space, patterns showing the optimum kitchen styles for those wanting a sociable and egalitarian household and so on. *A Pattern Language* pictures a political structure which would devolve powers of environmental shaping so that all people would have some say in how their environment is constructed, and it gives sets of suggested patterns designed for each level of that political system.

This allegiance to an ideal of participatory democracy – to the democratization of the powers of spatial shaping – exists in great tension with Alexander’s substantive concern with intensifying a more humane character in the built environment.

Alexander’s training as an environmental engineer and builder tends to give him a demanding sense of what is necessary for creating an entirely well-cultivated environment.^[28] An architect knows that if he puts a staircase in the wrong place he can cause immense problems in the building, problems that are likely to linger for years.^[29] Only a very small subset of the potential patterns one might establish in an environment will adequately balance all the various activities that are going on there. There is thus a great deal of room for going wrong and creating an environmental mess, or at least of missing out on the full level of functionality that might be established.

This concern with the substantive quality of the built environment exists in great tension with Alexander’s participatory ideals. If more people participate in the process of environmental construction yet the results are less functional and satisfactory than under the current non-participatory system, then the process of democratizing environmental shaping will be seen, from a utilitarian perspective, as having failed. For example if the traffic in a city became worse because of the patterns established in a participatory process the goods gained by extending positive self-direction on behalf of the population would be cancelled out by the harms caused to the people forced to simmer in traffic jams. We might refer to this as a tension between democracy as “government of the people” and democracy as “government for the people.”

Alexander’s attempt to resolve the tension between ideals of participation and the drive to deepen functionality is to direct the democratic dialogue towards the renewal of the cultural repertoire upon which a society draws. If the problem is the deskilling of the population so that it can no longer be trusted with the power to shape its environment, then the solution is to work up a new cultural system which might hone and refine the skills of the citizenry – the ideal of a new pattern language as focal point of social creativity.

One improves the cultural system by involving the population in a discussion about what it is doing to its built-environment. One works by a strategy of problematization, taking a set of concerns to which people often give little attention and putting these at the forefront of a social dialogue. *A Pattern Language* is meant to spark a dialogue about spatial shaping; encouraging people to take seriously the influence that the built environment has on the character of the population as a whole.

Alexander's attempt to make the built environment a focal point of dialogue is in some ways similar to work done in the 1960's by environmentalists, feminists and gay rights activists in problematizing things like sexual harassment, environmental pollution or homophobia. In each of these cases some aspect of modern existence which was more or less taken for granted became the focus of widespread social contestation and in the process a set of moves and strategies were developed by means of which people gained new powers in relation to the area of problematization. Christopher Alexander makes this into a much more self-conscious process than anybody else of his era – making the focal point of all his thinking this fundamental practical repertoire this “context of choice” (Kymlicka) from which people draw their basic ideas about what it is appropriate to do. The goal is for society to work together creating a common pattern language which can be accepted by most people and which will encapsulate within it all the practical wisdom that society possesses about how to look after its environment.

Alexander's focus on avoiding top-down control, doing away with typical planning practices and looking on the intelligence of the population as the best foundation for good city-design aligns him in some ways with libertarian attitudes. Compare Alexander's work to the following characteristic passage from the libertarian magazine *Reason*, in which Lynn Stewart attacks the idea of central planning;

The very complexity so often cited by city authorities to justify master plans in fact warrants just the opposite – decentralized decision making coordinated by the actions of millions of individuals, each privy to information unavailable on a grand scale. Cities are but microcosms of the larger economy. What failed in the Soviet Union for its entire economy is bound to fail also in our cities – and for the same reasons. [\[30\]](#)

Lynn Stewart goes on to suggest that good city design is much more likely to arise out of the actions of millions of individuals pursuing their own plans. All one needs to promote coherence in such a system is a pricing system that enables an efficient reckoning of the worth of contributions and the expense of consumption.

Alexander's concern with functionality prevents him from accepting such easy answers. Here is Alexander's discussion of the dangers that can arise if planning is abandoned without putting something else in its place;

“Without a plan the gradual accumulation of piecemeal acts will create a thousand mistakes of organization, twisted relationships and missed opportunities. Without a plan... what guarantees have we that the road system which emerges will in the end be simple and easy to follow?...How can we be sure that the ...riverfront and its potential beauty will not gradually be destroyed by random development?”[\[31\]](#)

For Alexander the urban world is a fragile one; a world where shorelines will either be destroyed or improved upon, where neighborhoods can easily become sociopathic, “a bowl of upturned razorblades.”[\[32\]](#) The idea that people left free to follow their own preferences will create a lively and well-ordered whole is not convincing to Alexander because of his own experiences as a builder and as an architect. As soon as one brings in a substantive goal such as that of improving the humaneness and functional resonance of the environment one can no longer accept easy nostrums in the way that libertarians do

How to give people more freedom to construct their environment, and a greater say in shaping their system, while at the same time holding out the hope that the results might also be coherent and lively? Concern with the question leads Alexander to concentrate on the deliberative process and to try to formulate procedures which would allow people to generate coherent structures without being constrained by plans.

A New Theory of Urban Design

In *A New Theory of Urban Design* [1987] Christopher Alexander and his colleagues Hajo Neis, Artemis Anninou and Ingrid King try to develop a set of rules which would allow people to co-cultivate the common space of their society in a democratic way, escaping the “tyranny” of planning without slipping into chaos.[\[33\]](#)

A New Theory of Urban Design is an account of an experiment in urban planning run out of the Architecture Department at the University of California, Berkeley, in the late 1970's. A group of 18 graduate students took on the role of diverse businesspeople, citizens groups, individuals and associations all proposing projects -- six projects each -- designed to fill up waterfront down by the Bay Bridge. The point of the experiment was to see if people involved in a piecemeal building process could produce coherence, multifunctionality and ecological balance without the use of an overarching urban plan. Could one find principles that would allow for intelligent self-direction in a process of piecemeal building?

The group of students pretended they were CEOs, activists and entrepreneurs involved in a deliberative process constructing an environment they could live in together. They agreed to structure their

dialogue – and the building projects they suggested – according to a set of fundamental principles designed to constrain their projects in ways that would reflect the “best practices” that Alexander and his colleagues had arrived at in their earlier researches. The principles entailed 1) an allegiance to incremental piecemeal design, 2) a concern with the relation between local projects and emergent wholeness at other levels, 3) an attention to the placement of buildings so as to maximize positive space,^[34] 4) an intensification of coherence in the city through creating centers and 5) the promotion of patterns available at other levels and so on. These principles set out constraints on the planning process meant to allow greater participation while at the same time intensifying the humaneness of the results. These principles promote a process designed to unlock and channel the environmental intelligence that Alexander believes most people possess.

One of the most central rules is the one which emphasizes piecemeal design. A population trying to give a more humane character to the city should try to achieve a balance between large medium and small buildings. If one constructs a building that costs ten million dollars one should ideally wait until 10 million dollars have been spent on medium sized buildings and 10 million on small structures of various sorts. This promotes variety in the urban landscape while allowing many more people to have a say in the shaping of an area than if one small group of builders and owners is making all the decisions.^[35] An incremental building process also allows one to correct things as one goes along, dismantling the mistakes that are invariably made in the course of building, capitalizing on one’s successes, and in general treating the city as a kind of living texture one is trying to “heal.”

Contrast this to the current redesign of the ground where the Twin Towers were in New York City. Despite the problems which arose from the scale and immensity of the original Twin Towers, most of the suggested projects entail rebuilding the whole area at once. This not only prevents widespread participation in the process, but also ignores the difficulties inherent with mega-projects. For example, it was discovered shortly after the original towers were constructed that the insulation against fire was grossly inadequate, and that the process for coating the outside of the building in fire retardant had not worked. But with structures of the size of the Twin Towers, millions of square feet in size, there is no way to correct such mistakes.^[36] One simply has to live with them and hope for the best.

Alexander thinks that good city texture and quality require a much more incremental process. His allegiance to piecemeal growth would encourage filling in the area where the Twin Towers were incrementally, over a process of many years, so that mistakes might be corrected and the area might be woven more carefully into the urban fibre;

The piecemeal scheme maintains and repairs the places which are working, and which, over the years, have come to have some human character; the large lump development destroys these places and replaces them with a monolith. The piecemeal scheme finely tunes each new building to the land and places around it; the other scheme...entirely upsets the scale and fabric...[\[37\]](#)

This is a picture of environmental construction as a form of cultivation. Instead of building a whole environment in one fell swoop people enter into the work of building through a slower and more incremental process. Tuning a building to the land entails a dialogue between builders and the land and their own evolving sense of their own requirements. In the course of that dialogue people see what is working and what doesn't and they build up the functionality and coherence of the environment in the same way that a gardener builds up the vibrancy of his beds and plots through a work of weeding and selective nourishment.

Patterns are the building blocks of cultivation. Each good pattern one establishes on the terrain suggests the next one. Perhaps one builds a pathway across a the quadrant of land one is interested in and a bend in that pathway creates a natural space for a kiosk or snack stand. Once that snack stand is established other patterns might recommend themselves – perhaps one establishes a play area for children nearby, so that parents can talk together while still keeping an eye on their children. One layers in pattern after pattern in this way and thereby gradually intensifies the usefulness of the space. Cultivation is a mode of intensification that functions by repeated return to the same bit of land, getting to know it, relating to it as a field where one works off latent and emergent functions and dismantling patterns that don't work, gradually establishing multifunctionality and a sense of organic wholeness. Cultivation is the mode of action that concretizes and “operationalizes” the idea of character-giving with which I opened this paper.

Two of the other rules that Alexander recommends are worth noting here – the attempt to orient local building projects so as to encourage functions emergent at other levels, and the rule that suggests promoting “centers” in the urban texture.

Centers are entities such as the fountain in a plaza, or a courtyard at the heart of a building, or a public staircase at the focal point of a campus quadrangle – any built entity which focuses the forces at work in a space and creates an anchor for its energies. The kitchen table at the heart of a farmhouse kitchen is a kind of center, as are the public squares of 19th century cities like Halifax or Charlottetown. Centers are nodes around which the life in a space gathers and is concentrated, and they are fundamental building blocks in giving character to an environment.

One of the most important procedural rules recommended by Alexander and his colleagues entails the promotion of centers which overlap each other and work together to intensify life in the cities. Thus along with the general rule of incremental piecemeal growth individuals involved in building should see to it that;

As one center X is produced so, simultaneously, other centers must also be produced, at three well-defined levels:

- a. Larger than X. At least one other center must be produced at a scale larger than X, and in such a way that X is part of this center, and helps to support it.
- b. The same size as X. Other centers must be produced at the same size as X, and adjacent to X, so that there is no “negative space” left near X.
- c. Smaller than X. Still other centers must be produced at a scale smaller than X, and in such a way that they help support the existence of X. (NTUD, 23.)

The central function of these rules is to keep people running their minds up and down among various levels which have to be thought together in order to create urban wholeness. Up from the level of the individual building and personal self-interest to the question of the broader directions in which the city might be developing over time. Down from the level of the planning of the building as a whole to the level of its internal structure. Horizontally to the relation with other buildings around; the structures with which one’s own building will interact in order to create positive space. It is another element in Alexander’s picture of an entirely responsible and competent citizenry.

Suppose a businesswoman wants to open up a small coffeehouse. She faces an obvious incentive to create a sense of liveliness in her own main room and on the terrace out front – economic self-interest alone would encourage that. But the owner might also promote functions emergent at other levels. Perhaps the coffeehouse owner and her neighbors realize that the street furniture and lighting might be arranged to help define a movement axis between the park two blocks to the east and the neighborhood’s main drag two blocks to the west. She might then find it to be in her interest to try to promote the park and refine her own street as an arcade and make her coffeehouse into a center within a field of other centers. But she would only be aware of these possibilities if she knew to look for them. This is what the pattern languages and the rules for building procedure are meant to clarify.

It is sometimes said that democratic virtues are harmonizing virtues -- those which allow people to pursue their self-interests in ways that augment rather than enfeeble the self-interest of other people. Alexander’s procedural rules are a set of harmonization protocols for urban growth. They are meant as rules of thumb by means of which the democratic population as a whole might co-construct and co-cultivate their environments. This “rule of centers” is an admonition to responsible citizenship.

Conclusion

A Pattern Language is deeply imbued with the *ethos* of Berkeley California in the 1960's and 70's, what we might refer to as the "Greening of the World" attitude of the 1960's, the idea that a world defigured by inhumane forces needed to be remade as a sustainable habitat for humane beings.[38] The *Whole Earth Catalog* motto "We are as gods and might as well get good at it" summarizes nicely the normative core of this movement; the idea that we possess immense new technological powers and that these bring with them new responsibilities. Canadians became part of this transnational conversation through Expo 67 -- Man and His World/*Terre des Hommes* -- dominated by Buckminster Fuller's geodesic dome.[39] Fuller was one of the leader of this movement to promote a more responsible population, one which would take its new technological powers seriously and develop a new sophistication about habitat.[40] Canadians also had Moshe Safdie's Habitat 67, which like Alexander's work was an attempt to work out a new building and housing system for the future, very much part of the general utopianism in thought about habitat during this era.

The vision of a population which would make itself competent enough to take full responsibility for its environment and self-shaping is in many ways a highly utopian one. It is based on an ideal which is in some ways abstracted from our actually existing law and economy and one would require deep changes in our social attitudes towards the environment. Alexander gives relatively little attention to the issues that would be involved in implementing this vision, and it is difficult to imagine the steps one might take to put any of this into practice, at least in terms of the largest-level patterns (it is not so hard to imagine how citizens might fight for the patterns applicable at the level of household or neighborhood.)

But to suggest that Alexander's theory is weak in terms of its discussion of implementation is not to say that it is not useful as a form of theory and knowledge. The charge of utopianism could be levied against many political theories and political movements, but this takes little away from their importance. The radical feminism that John Stuart Mill's expressed in *The Subjection of Women* came with few realistic suggestions as to how society could achieve the great shift in its fundamental values that would be necessary to realize full equality. Mill's arguments were nonetheless immensely valuable in opening up the political imagination by showing that widely accepted structures and practices might conceivably be improved upon and that there were arguments from justice for doing so. The charge of utopianism could also be brought against John Rawls's *A Theory of Justice* which contains little serious discussion of how its radical ideas might be established in our kind of society. By picturing out what a truly fair liberal society would look like Rawls's helps us see patterns in our own that we might not otherwise perceive. Theories may not be directly applicable to real world practice but may nonetheless do real work in extending our knowledge, monitoring our progress, and encouraging realistic reflection about our general level of competency. Perhaps most of all, such theories can free us from the Medusa-like influence of our habitual practices, sparking the political imagination that is the first step towards change.

In any case, clarifying ideals worthy of the attention and effort of the citizenry represents just one aspect of Alexander's work. Equally important is his attempt to spell out the generative processes by means of which such ideals might be replicated within the world. Alexander's work might be compared to that of a reconstructive scientist attempting to explain the micro-level processes behind highly complex entities; the human genome project, for example, or Stephen Wolfram's recent work in "A New Kind of Science," explaining how complex patterns arise out of the operation of simple cellular automata, an argument very much like Alexander's. Alexander's work attempting to reconstruct the organic wholeness of cities like Amsterdam is very much in line with the strategy of the modern reconstructive sciences.

Scientists do many different things in the modern world, and one of the questions modern political scientists might ask themselves is which scientists we might most fruitfully be imitating. A scientist involved with environmental repair does very different things from a scientist working in a biomedical research institution or a geologist working in an oil company.

Political scientists -- who presumably work for the good of the citizenry in line with constitutional ideals -- might find Alexander's two-track reconstructive method to be a model worth considering. On one hand it entails an attempt to clarify those ideals which might be worthy of effort and attention.[41] It also entails an attempt to specify generative processes to enact and concretize these ideals, the building blocks of a renewed system, the micro-level processes and procedural rules that would promote a renewed and more humanely supportive character in the public sphere? [42]

It is not hard to see why political scientists might want to adopt a strategy of this sort. G.A. Cohen has recently noted the prevalence of “obstetric” visions of historical progress in modern political thinking; the idea that history will automatically produce the things necessary for progress and for our next stage of development.^[43] Cohen claims that this idea has been popularized in our time by Marxism which -- like the liberal belief that changes in the “basic structure” will fix everything -- makes us think progress is a much simpler thing than it really is.

But there is little reason to accept these simplistic visions. Promoting progress is likely to be a much trickier matter than accepting historical inevitability or adopting political “quick fixes.”^[44] It requires that we work out explicit visions of where we want to go. If all this is true then Alexander’s two part method -- clarifying ideals and specifying generative processes -- may be a good model for the way we should proceed in the human sciences.

Of course to suggest that political scientists might spend time refining our collective sense of the projects worth willing (as individuals and as peoples) seems at first sight to contradict norms of value neutrality operative within our ideals of science. But, as Max Weber pointed out, the social sciences cannot be value-neutral in any deep way, since the very choice of objects of study entails a normative perspective.^[45] The question of value neutrality might, in any case, be seen somewhat differently in Canada than in the United States. Freedom is the central value in the American constitution and in much American political philosophy; the famous Lockeanism stressed by Louis Hartz. Ideals of freedom make value neutrality a sensible strategy in such a country, where one just lets a hundred flowers bloom.

But the Canadian constitution focuses on a normative ideal of “good government” which mandates deeper philosophical engagement. To ask what “good” government might mean pushes us to broach questions about the ideal strategies of development for modern populations, which have been part of our ideal of good government since Mill and T.H. Green. We might thus find Alexander’s focus on exploring the ideals which might promote full human functioning, and on reconstructing generative systems which might bring those ideals to earth to give a renewed character to our polity -- to be exemplary for Canadian political scientists concerned with the progress of our field.

Abstract: This article uses the works of the urban theorist Christopher Alexander in order to discuss the connection between democratic theory and the work we do giving character to urban environments. Christopher Alexander is an underappreciated modern theorist whose prescient work linking built environments and social capital overlaps with many of the concerns of modern political thinking. Pondering his conceptual framework encourages us to think in new ways about the role of visions of the good within modern political science, and about the modes of science we might adopt if concerned with questions of collective self-direction.

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[1] Robert Putnam, *Democracies in Flux; the Evolution of Social Capital in Contemporary Society* (New York: Oxford University Press, 2002)

[2] See, for example, the essays gathered in Ronald Beiner and Wayne Norman, eds., *Canadian Political Philosophy; Contemporary Reflections* (Don Mills: Oxford University Press, 2000). It goes without saying that Canada's plurinational character makes this focus crucially important, our great contribution to modern theory, as Norman and Beiner point out in their introduction. One might still ask questions about all the issues *not* broached by a generation of political thinkers who have ended up concentrating on constitutional issues.

It is worth noting an interesting recent exception to this trend towards a focus on stability and justice in G.A. Cohen's remarkable *If You're an Egalitarian How Come You're So Rich?* in which Cohen charts his recent move away from Marxist and liberal theories towards an increasing concern with questions of social ethos of the sort I am concerned with here. See G.A. Cohen, *If You're an Egalitarian How Come You're So Rich* (Cambridge, MA: Harvard University Press, 2000) 3-4.

[3] This theme is stated most clearly at the beginning of Book VIII of *The Politics*, but is leitmotif in that work. See Stephen Everson, ed., *Aristotle the Politics and Constitution of Athens* (New York: Cambridge University Press, 1996), 195.

[4] This is the theme of much of the *Nicomachean Ethics*, stated with particular strength in Book X, chapter 9. See Roger Crisp, ed., *Aristotle Nicomachean Ethics* (Cambridge, UK: Cambridge University Press, 2000)

[5] Again, this comes out most clearly in *Nicomachean Ethics X:9*.

[6] This is not the place to go into the reasons why this discourse faded from influence and why political theory tends now to discuss the self-directing citizenry only in terms of ethnic groups/ peoples struggling for recognition. Perhaps the most obvious reason is that this discourse was tightly tied up with fights for the expansion of the functions of the state, and once the US and Canada developed full welfare states the polemical purpose behind this discourse was no longer present. And of course the idea of the state as tool of a self-directing population was in many ways disgraced by the extremes to which it was taken in fascist and communist regimes. Thus the importance of Alexander's innovative tendency to focus on a population's cultural system rather than on the state, as a tool for self-direction.

[7] Christopher Alexander, *A Foreshadowing of 21st Century Art; the Color and Geometry of Very Early Turkish Carpets* (New York: Oxford University Press, 1993), Serge Chermayeff and Christopher Alexander,

Community and Privacy : Toward a New Architecture of Humanism, [1st] ed. (Garden City N.Y.: Doubleday, 1963), Christopher Alexander, *Notes on the Synthesis of Form* (Cambridge, MA: Harvard University Press, 1964)

[8] Christopher Alexander, "The City as a Mechanism for Sustaining Human Contact," *Environment for Man; the Next Fifty Years*, ed. W. Ewald (American Institute of Planners Conference, 1967.)

[9] Christopher Alexander, Sara Ishikawa, Murray Silverstein, Max Jacobson, Ingrid Fiksdahl-King and Shlomo Angel, *A Pattern Language; Towns, Buildings, Construction* (New York: Oxford University Press, 1977)

[10] Ibid, 193-6

[11] Ibid, 210.

[12] Alexander and his colleagues draw their ideas about the undesirability of highrises and about people's recurring preference for household gardens from the social science literature of their time. They support their arguments against high-rises living by reference to a *British Medical Journal* article showing a correlation between high-rise living and mental disorder. They back up their suggestion for the desirability of household gardens by reference to survey research in which apartment dwellers signal that what they miss most is their ability to have a garden nearby. See Alexander et. al. *A Pattern Language*, 210-212.

[13] Ibid, 513-16, 761-762.

[14] Ibid, 36-40.

[15] The focus on dialogue is particularly obvious in the introduction to *A Pattern Language* ix-xviii, particularly the last two pages of this section.

[16] Ibid, 610-11.

[17] Ibid.

[18] Christopher Alexander, *The Timeless Way of Building* (New York: Oxford University Press, 1979); Alexander, *Notes on the Synthesis of Form*

[19] For example up until the 1930's two thirds of Toronto homes were custom built for the owner or were hand-built by their future occupants. But since mid-century the majority of new building in Canada has been

pursued by speculators. See Richard Harris, “Housing” in Trudi Bunting and Pierre Filion, eds., *Canadian Cities in Transition* (Toronto: Oxford University Press, 1991), 350-377, esp. 356-7.

[20] Alexander et. al., *A Pattern Language*, 311-14, 349-52.

[21] Burke’s well-known passage is; “No man was ever attached by a sense of pride, partiality or real affection to a description of square measurement...We begin our public affections in our family...We pass on to our neighborhoods and our habitual provincial connections. These are inns and resting places...so many little images of the great country in which the heart found something which it could fill.” See Pocock, J.G.A. (ed.) *Reflections on the Revolution in France* (Indianapolis; Hackett Publishing Company 1987)173.

[22] Alexander et. al, *A Pattern Language*, 76-90.

[23] Ibid, 437-459.

[24] Ibid, 71-4.

[25] Ibid, 52.

[26] Ibid, 4-5.

[27] Ibid, 20-4.

[28] We might see this as an elitist quality in Alexander’s work – although of a non-coercive sort, (and thus not invidious.) But one might also see this as common sense. People go to financial consultants to learn better patterns of saving and book-keeping. If we need to train ourselves even in areas as dear to our hearts as our bank accounts we might also need to promote a science to guide us in creating a well-cultivated environment among modern technological means.

[29] See Alexander’s discussion in Stephen Grabow, *Christopher Alexander; the Search for a New Paradigm in Architecture* (Boston: Oriel Press, 1983)

[30] From Lynn Stewart, “The Seduction of Planning,” in Robert W. Poole and Virginia I. Postrel, *Free Minds & Free Markets : Twenty-Five Years of Reason* (San Francisco Calif.: Pacific Research Institute for Public Policy, 1993), 257-262, p. 259.

[31] Christopher Alexander, Murray Silverstein, Shlomo Angel, Sara Ishikawa and Denny Abrams, *The Oregon Experiment* (New York: Oxford University Press, 1975)

[32] Christopher Alexander, "A City Is Not a Tree," *Zone* 1-2, May (1986)

[33] Christopher Alexander, Hajo Neis, Artemis Anninou and Ingrid King, *A New Theory of Urban Design* (Berkeley, CA.: Oxford, 1987)

[34] Imagine two buildings placed so that a natural courtyard is formed between them. That would be a positive space.

[35] Alexander et. al *A New Theory*, 32-6.

[36] Alexander makes a similar criticism of the College of Environmental Design at Berkeley in Alexander et. al. *The Oregon Experiment*, 78-9.

[37] Ibid, 73-6.

[38] I coin this term from the title of Charles Reich's somewhat woolly 1971 bestseller *The Greening of America* Charles A. Reich, *The Greening of America* (New York: Bantam, 1971)

[39] See the many similarities between Alexander concerns and those detailed in the "Themes" section of the Expo 67 guidebook Charles Milne, ed., *Expo 67 Official Guide* (Montreal: Maclean-Hunter Publishing Company Limited, 1967), 39-65.

[40] See for example R. Buckminster Fuller, *Operating Manual for Spaceship Earth* (New York: Simon and Schuster, 1969); R. Buckminster Fuller, *Utopia or Oblivion; the Prospects for Humanity* (London: Penguin Books, 1970). Note also the guiding role Fuller plays in Stewart Brand, ed., *The Last Whole Earth Catalog; Access to Tools* (Menlo Park, CA: Portola Institute/Random House, 1971), 3-4.

[41] Canadian political science over the past twenty-five years has been overwhelmingly concerned with ideals of the mutual recognition of peoples, (largely because this is an ideal of such overwhelming importance given our constitution and history.) But that is presumably just one part of the list of ideals we might need to become fully competent in monitoring and directing our collective self-development and give a more humane character to our society.

[42] Of course once this model of ideal and repertoire has been fully worked-out one also needs to address the distinctive questions of implementation – how can people go about promoting the construction of a new generative system. Alexander is very weak as a thinker about this third step – the move from the specification of an ideal generative system to the specification of strategies of implementation. This is one

of the great failings of his work, at least judged from the perspective of the perfect theory which would do all things well.

[43] Cohen, “Hegel in Marx: The Obstetric Motif in the Marxist Conception of Revolution,” in *If You’re An Egalitarian*, 58-78.

[44] Cohen, *If You’re An Egalitarian*, 3.

[45] If one chooses to study women and politics, or immigration then one is assuming that these things are important, and that idea of importance arises from a particular normative stance. But within this normative frame one can adopt methods which are more or less influenced by one’s biases. This inescapability of normative issues pushes us to think more clearly about the normative projects we are pursuing, and makes the clarification of ideals – what I have been referring to here as “projects worth willing” -- an essential part of our study in the social sciences. See Max Weber, “Objectivity in the Social Sciences,” in Michael Martin and Lee C. McIntyre, eds., *Readings in the Philosophy of the Social Sciences* (Cambridge, MA: The MIT Press, 1994).