LandSCAPES: A Typology of Approaches to Landscape Architecture

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- 1. S design as Synthesis
- 2. C Cultivated expression
- 3. A landscape Analysis
- 4. P Plural design
- 5. E Ecological design
- 6. S Spiritual landscapes

These categories have distinctive approaches to landscape architecture on eight dimensions: (1) its goals, (2) the process used in design or analysis; (3) main clients or audiences; (4) the scale of concern; (5) intellectual or knowledge base; (6) ethical approach; (7) relation to the natural world; and (8) the approach's analysis of power relations or the larger role of landscape architecture in society. By classifying approaches and thinking about such classifications, landscape architects can reflect upon and debate dimensions of the profession that are too often implicit and invisible.

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s the practice of landscape architecture differentiated most by style and project type, or are there other important differences in approach among members of the profession? This paper presents a typology or classification of six landscape architecture approaches or theories of practice and analyses the underlying values of each (see Table 1). These approaches stake out the majority of landscape architecture practice in the U.S. across a variety of specialties. The six approaches are summarized by the acronym *land*SCAPES²:

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We argue that each of these approaches involves a distinctive way of practicing landscape architecture on several dimensions: its goals, the process used in design or analysis, main clients or audiences, the scale of concern, intellectual or knowledge base, ethical approach, relation to the natural world, and the approach's analysis of power relations or the larger role of landscape architecture work in society (see Table 1, horizontal axis).

The identity of landscape architecture has evolved and expanded since its founding in the late nineteenth and early twentieth centuries. The profession has also incorporated stylistic changes prevalent in the broader architectural world—from modernism through postmodern styles. Writings about the profession have focused critical attention on *style* or on the practicalities of particular kinds of *projects* such as corporate campuses or public parks. In contrast, the landSCAPES typology provides a framework for analyzing practice as a *value laden process*, that is representing the range of ways that landscape architects go about their work, and the core values that they express.

There are many reasons why it would help landscape architects to examine the procedural and value dimensions of landscape architecture practice as represented in the landSCAPES typology. By classifying approaches and thinking about such classifications, landscape architects can reflect upon and debate dimensions of the profession that are too often implicit and invisible. For example, do landscape architects see their work as politically neutral or as a force advocating the preservation

				Client/		Intellectual		Approach to	Analysis of
Approach		Goals	Process	Audience	Scale	base	Ethics	nature	power
Design as Synthesis	S	Integration, problem solving	Landscape architecture as problem solving— analyzing the problem and synthesizing an approach	Government, corporate, and private clients who pay for professional competence	Varied—from private gardens and corporate campuses to plans for national parks	General preofessional knowledge	Doing good through professional work	Do not get caught up in arguments about whether nature has intrinsic worth— they are busy solving human problems	See LAs as doing good— a coprorate campus may be for a powerful corporation but it is an environment enjoyed by workers
Cultivated expression	С	Artistic expression	Intuitive and expressive; some base in art history	Patrons who are prepared to pay for art	Small to medium— at most the scale of a large urban park.	History and criticism	Artistic expression	Plants are a means of human artistic expression, and are combined with other materials	Works for patrons (or aspires to) that are part of the economic or political elite—this kind of expression needs people prepared to pay for it.
Landscape analysis	Α	Large scale landscape protection	Draws on natural science research but applies this to managing and conserving large landscapes using more generic principles	Government or non-profit groups (or some private clients with very large landholdings who need to manage land areas	Very large— habitats, watersheds, greenways	Ecology, physical geography, some cultural geography	Various environmental ethics—the larger natural world is a focus either intrinsically or because protecting it will protect humans	See ethics	Allied with government and powerful interest groups to gain control over large landscapes; some work on eduaction to build constituencies; sees high levels of government as potential allies and aspires after high levels of control.
Plural design	Р	Empowerment and participation of users	Professional knowledge and local/user knowledge interact	The least advantaged neighborhood residents, etc.	Small	Democratic theory, citizen participation general professional knowledge, local knowledge	Egalitarian and democtratic	Nature is a setting for human life.	Assumes that users can be given power over their own environments; brackets larger issues of inequality to deal with immediate needs
Ecological design	Ε	Design grounded in nature	Draws on natural science research but applies this to <i>design</i> problems	Government, corporate, and private clients who want to restore, enhance, or supplement existing environments	Small to medium— at most the scale of the restoration of a mine or waste facility.	Ecology, horticulture	Various environmental ethics—the larger natural world is a focus either intrinsically or because protecting it will protect humans	Try to create landscapes that create human-scaled ecosystems, though still respecting the natural world first.	They ignore human– human power relations— though of course that doesn't mean that they are absent.
Spiritual Landscapes	S	Deep connection of humans and nature	Some design intuition but also reflecting knowledge about psychology, theology, etc.	Non-profit and government clients who are interested in landscpes for healing	Small to medium	Psychology, theology/ religion, medicine	Humanistic (though itcould be somewhat biocentric)—these are landscapes for humans even if part of the purpose is connection to nature	Nature is a setting for human life (but in this case its spiritual and transcendent dimensions).	They ignore human– human power relations— though of course that doesn't mean that they are absent.

of the natural world? Does landscape practice promote sustainability in today's world? Do particular approaches promote social equity or maintain social hierarchies? What forms of information or knowledge are most used by particular landscape architects? How does the profession define beauty? The typology of approaches is helpful in this context by articulating the substantial differences among landscape architects in their answers to these questions.

As we show below, the profession of planning has thought a great deal about issues of process, values, and the politics of planning and in doing so planners have become relatively sophisticated about their own work, and capable of choosing among approaches. The field of architecture has a literature on this issue too, mainly focused on different approaches to design decisionmaking. With a language to talk about such issues, planners and a number of architects have been able to make considered choices about their practice. In landscape architecture, this kind of analysis and debate can help make practitioners conscious of the assumptions that they make in their work, how they are constrained by external forces and their own perspectives, and how they can choose to change.

In contrast to some procedurally based theories in planning and architecture, these approaches are not abstract processes applicable to any kind of project, but specific approaches linked to particular ones. That is, these approaches are rich and particular rather than universal, reflecting the landscape architecture practices that we analyzed.

Of course there are overlaps in approach, as the same landscape architect may use different approaches on different projects, change approaches over the years, or even combine approaches within a single project. However, the approaches represent distinctive ways of dealing with design. A reflective landscape architect will be able to choose the most appropriate approach for the situation, rather than just following conventional practice.

The following paper is in three parts. The first part introduces the concept of a typology of processes, using examples of urban planning and architecture to show the variety and uses of such typologies in related fields. In the second part, we outline each of the landSCAPES approaches, examining their components and presenting examples. In the third part, we explore the implications of this analysis for landscape architecture practice. Overall, each of the approaches in the typology provides a different path toward excellence. Consciousness of these differences can create a more reflective, complex, and relevant landscape architecture practice.

Part I: Background

Typologies of Theories. Theories are generally thought of as abstractions that help explain events, and they can also articulate patterns of relationship among phenomena (Faludi 1973, 22). In the world of practice, theories can help practitioners understand their own work and its relation to the larger society and the natural world. In the professions, theory frequently has a normative component, since it provides guidance on what makes good practice and not just an explanation of its character.³

Typologies are classifications. In architecture the term "typology' has been most used in the sense of a classification of spatial "types" where types are models, prototypes, or primitive building forms (Franck and Schneekloth 1994). The notion of *type* frequently has both functional and symbolic dimensions. This has been extended to landscape, for example in Condon's typology of built landscape types: clearing, allee, orchard, terrace, street, square, yard, and cloister (Condon 1994, 80). These types are then seen as forming a language of design (Lavin 1992, 88-92; Vidler 1986; Colquhoun 1981).

However, the use of typologies as classifications is much broader than the study of spatial types. Ordering and classifying is important in both analysis and theory in a range of fields and subject areas. In the context of social sciences, Tiryakian (1968) proposes that the typology has three functions—correcting misconceptions and confusions about relationships between concepts, organizing knowledge around clearly defined parameters, and helping direct theory building and research (see also Yiftachel 1989, 24).

LandSCAPES is a typology or classification of approaches or theories where "theory" is used loosely to cover a cluster of concepts, themes, and frameworks that over time have tended to coalesce into distinctive ways of working or perhaps types of practice (Lawrence 2000, 608). These theories provide frameworks for helping practitioners understand and explain their worlds and they also provide normative guidance on how to do good work. They help explain differences among practitioners, as well as the strengths and weaknesses of different forms of practice. It is not directly about the landscape types-such as parks, yards, or gardens—but about the goals landscape architects have, the knowledge they draw on, and the methods used in design.

Both planning and architecture have developed typologies of such approaches and not just of environmental or building types. Understanding the character of these typologies provided a starting point for the land-SCAPES typology.

Typologies in Planning. Typologies of planning theories have tended to focus on the procedural dimensions of practice.⁴ While some planning approaches have been conceptualized by their proponents as largely technical, others have incorporated political and ethical dimensions. For example, Table 2 presents a number of these typologies, with a fairly inclusive list of such categories in the left column. Following the early dominance of *blueprint planning* and master plans, the rational planning process has provided a core model for planning since the middle of the twentieth century. This model

presents planning as a form of rational decision making that moves systematically from goal formulation through analysis to plan development and implementation in a process that, while sometimes engaging in politics, generally tries to keep out of the fray. Since the 1950s, Lindblom has pointed to the limited and incremental character of standard planning practice, which are bounded in terms of goals, options, issues, and proposed activities. As a reaction in the 1960s, liberal advocates (along with equity or progressive planners) began pointing to the essentially political nature of planners' work, arguing that planners would best serve

the public interest by making planning available to those with the least social and economic advantages. This radical approach sees standard planning practice as misguided unless subject to broad democratic or redistributive processes. Many radical planners have also questioned assumptions about valid knowledge, ethics, and social equity. In recent years, a cluster of planning approaches has developed around a conception of collaborative planning, or planning that is more concerned with consensus and structured public and stakeholder involvement than with other aspects of process.

As can also be seen in Table 2,

recently there has been an emergence of theories concerned with good urban form, particularly concerning sustainability issues. In spite of a superficial resemblance to early blueprint planning, these new physically oriented planning approaches are highly concerned with process. While all approaches address issues of decision making and the role of planning in society, for many the ultimate urban or regional form (such as the ecological character of cities and regions) can outweigh process.⁵

Typologies in Architecture and Design. So far, only a limited literature in the field of architecture has

Generic Category	Hudson 1979	Forester 1982a,b/1989	Friedmann 1987	Briasoulis 1989	Lawrence 2000	Fainstein 2000
Blueprint						Corbusian Modernist/ Physical Determinist
Rational	Synoptic	Technician	Policy Analysis/ Social Reform	Comprehensive/ Rational	Rationalism	Rational model (p 452)
Incremental (Lindblom)	Incremental	Incrementalist		Incremental	Pragmatism	Incrementalist
Mutual learning/ collaborative	Transactive		Social Learning	Adaptive & Participatory/ Consensual	Communication and Collaboration	Communicative/ Collaborative
Advocacy (Davidoff 1965)	Advocacy	Liberal advocate	Social Mobilization?	Advocacy (with a conservative slant)	Political- Economic Mobilization	
Radical/Marxists	Radical	Structuralist	Social Mobilization		Political- Economic Mobilization	
Progressive (social justice)		Progressive	Social Mobilization		Political- Economic Mobilization & Socio- Ecological Idealism	Just City
Visionary/ Urban form					Socio- ecological idealism	New Urbanism
Specialized/ Unusual categories			Contingency			

focused on issues of process, and this has been restricted to the process of design decision-making—a single component of practice. As was discussed earlier, the design fields have instead developed typologies of places, spaces, and styles (Schneekloth and Franck 1994, 15–17).

However, some processoriented typologies have emerged. Broadbent (1973, chapters 2 and 20) outlines four approaches to design: (1) pragmatic design (trial and error, common practice, structural considerations); (2) iconic design (using accepted forms); (3) analogic design (more creative, drawing for inspiration on random forms); and (4) canonic design (using standard geometric or proportional systems as a basis for design). Rowe (1987, chapter 3) has developed a more complex typology of practitioners to include issues of style and "orientation." His categories are: functionalists ("form follows function"); populists (acknowledging user preferences and popular tastes); conventionists (historical reference); and formalists (akin to Broadbent's analogic design). Rowe (1987, 56-91) offers two additional process typologies focused on design decision-making at the fine-grained scale of architect and project. One typology involves methods for generating solutions from scratch (through trial and error, generating and testing, means-ends analysis, and problem space planning). The second typology offers rule of thumb methods for finding solutions (through anthropometric analogies, literal analogies, environmental analogies, and formal language).

We found these architectural process typologies important for this paper given their focus on design thinking rather than design products, although issues such as client role, ethics, aesthetics, and power are only addressed as minor or implicit aspects. We believe, however, that a richer classification remains to be developed within the design professions, for example one that addresses long term values and implications, or one that incorporates elements as formalism and corporate practice within a working framework.

The LandSCAPES Typology. The landSCAPES typology introduces approaches that reflect the character of the profession as it has developed historically. These approaches may also be seen to underlie categories for awards, the subject matter of journals and college courses, and the topics of conferences and books. Rather than focusing exclusively on project types, however, these categories encourage thinking about underlying approaches to the same problem or project. Among landscape architects, process has so far been most aggressively discussed by those involved with what we call plural design and landscape analysis (for example, Steinitz 1990; Hester 1985, 1990). For those using other approaches, project outcome has typically been viewed as most critical. However, this focus on outcomes does not mean that process is unimportant in these approaches, just that it is less explicit.

While the names of the approaches are our inventions, we believe most will be familiar to landscape architects. Typically, landscape architects will have chosen a particular approach or approaches in their practice or will specialize in one, or a limited number, of approaches.

Methods. The six approaches were identified through an iterative process. After a preliminary typology was developed based on a review of the profession's history and key writings, this was tested for its fit with recent work. In our search for examples of recent professional work, we scrutinized project profiles in *Landscape Architecture* from January 1997 through December 2001. We made two surveys of those five years, the first to create our set of typologies, the second to research projects in light of the categories we had created. We chose Landscape Architecture because of its wide professional readership, its coverage of a variety of upcoming professional work, and its annual ASLA Awards program. However, we were aware that published projects would not necessarily

parallel current professional work in all respects, given editorial preferences and a strategic necessity on the part of the publishers to privilege exceptional and memorable projects.

We chose to focus on recent work in *Landscape Architecture* that was newly "off the boards," and were encouraged by earlier reviewers to count the number of projects within each category during the five-year period (see Table 3). Quantifying, however, revealed a number of problems. Were we to weight main features equally with the vignettes in "Rip Rap" and the "Technical" sections? Should we pass over the many features on historic or past projects, or features on noteworthy practitioners that included a lifetime of practice? There were some inevitable problems of overlap too: we encountered two "synthesis" projects, which clearly included an ecological component, plus one example of "cultivated expression" with a strong element of "spiritual design." Quantifying again caused us to question the representativeness of Landscape Architecture. For example, we suspect that many "plural design" projects are more commonly represented in local or organizational newspapers, given their modest scale. We also found scant inclusion of the "landscape analysis" category, although we knew this involved many professionals in national

	#	%
Landscape as Synthesis	95	30
Cultivated Expression	91	29
Landscape Analysis	2	1
Ecological Design	85	27
Plural Design	26	8
Spiritual landscapes	18	6

and state departments. For this approach we referred to (but did not count) specialized journals such as *Landscape and Urban Planning* and publications by professionals such as Ervin Zube, Ian McHarg, and Julius Fabos.

Part 2:

Approaches to Landscape Architecture

Design as Synthesis. Design as synthesis or integration is the core approach of the landscape architecture profession, and describes most of the work done by landscape architects in urban design, housing, and general site planning projects. Design as synthesis involves "synthesis" at multiple levels. The approach involves design that brings together disparate elements and creates a solution that can resolve contradictions.6 This resolution has sometimes been referred to as the "staged-process" model, which typically moves through a sequence of steps from defining a problem, analyzing it, and synthesizing a design, to implementing or producing the design (see review in Rowe 1987, 46-49). This process may at times be iterative, allowing opportunities for feedback, but there is a sense of *working* systematically through a problem and synthesizing a solution. The design as synthesis approach also brings together professionals from a variety of interests, and backgrounds, so there is a sense of synthesis as collaboration or in*tegration* (compare with, Beauregard 1989, 385).⁷ It epitomizes the landscape architecture experience as initially described by Olmsted as the bringing together of "multitudinous natural and man-made parts in harmonious relation" (Sutton, 1997). While all our approaches may unite diverse parts, they will be limited to one or two dimensions. Design as synthesis, on the other hand, involves finding an inclusive middle ground (see Figure 1).

Historically, the profession came into existence in the U.S. through Olmsted's work on Central Park, in which a designed landscape provided a key synthesizing element by creating a visual, social, and iconographic focus for New York City, while also systematically solving infrastructure problems and cleaning up the City. Boston's subsequent Emerald Necklace achieved the same kind of synthesis through a chain of parks extending to Boston's outer suburbs. Subsequent "Olmsted" parks have performed this synthesizing function nationwide. In all cases, landscape architects have worked in collaboration, not only with other professionals but in a kind of "collaboration" with the city's disparate parts, a mix of neighborhoods, natural features, infrastructure, and jurisdictions. This collaborative/synthesizing function has always been more pronounced in landscape architecture than in architecture.

While the approach may involve creativity and intuition, this is in the service of problem solving and collaboration, defining a problem and working to a logical and mutually acceptable solution. This work is done for a range of clients, from government to corporate and private. The scale of the work can vary from streetscape improvements and corporate campuses to plans for resorts, towns, and communities. The realistic and practical design approach draws on what we call general professional knowledge as taught in universities, tested in licensing procedures, and discussed in association journals. While the work may refer to the character of the location, local plant communities, and local historical themes, there is no time for intensive historicism, nor high style design, or indepth social research. This approach sees an overall obligation to serve both citizens and the environment within bounded circumstances, and within the context of professional collaboration. For example, a project may serve a powerful corporation but it can also be an environment enjoyed by workers, or a design may harmonize with the environment while ignoring broader ecological impacts. The emphasis is on pragmatic efficiency, given the complexities of the project itself.

We found many recent parallels to Central Park, for example,

Philadelphia's Schuylkill River Park Project. This is a waterfront concept for Philadelphia's down-at-heel Schuylkill River. The landscape architects (the Delta Group) undertook to draw together a dissipated shoreline, varied land uses, a diffuse and archaic transportation system, and rich historical elements to create a workable system for the new city, thus transforming an industrial waterfront to a cultural corridor. An important goal was to connect the University City and Philadelphia's high-tech shore by creating bike paths to the urban periphery. Landscape architects worked with diverse clients, drawing funding from local, state, federal, and private sources, "each with its own strings attached" (Stein 2000, 49). The City's Streets Department contributed more than \$7 million of ISTEA funds, then private agencies and volunteer groups helped draw up inventories of existing landforms to create a GIS database. In a process that demanded extensive analysis, the project drew on the site's resources, creating "roomlike spaces" under bridges, and trails and bike paths out of industrial wasteland, in a final product that promises to "reclaim the tidal Schuylkill as the City's common ground" (Stein 2000, 51). Some additional projects might include recent work on the University of California San Diego campus (Leccese 1997), the neo-traditional riverwalk along the Milwaukee River (Maynard 1997), and a number of large-scale international projects.

Given the constraints of large "synthesizing" projects, landscape architects may engage local artists and sculptors to design any requisite special features. For example, the landscape architects Melendrez Babbelas engaged the local artist Blue McRight to design an artwork for the Los Angeles Staples Center, creating gargantuan "teardrops" out of woven wire to highlight the entrance (Hammatt 2000a, 16).

Upholding the middle ground can be a strength and a weakness for landscape architects practicing design as synthesis. Apart from facing compromise on social and environ-



Figure 1. Design as Synthesis: Darling Harbour Redevelopment, Sydney, Australia. Master Planning and Design Guidelines: Design, Inc; Urban Design: MSJ Group. Though it is important to recognize, like many projects in this category, that multiple firms and designers have contributed their signature over a period of years. Photo: Ann Forsyth.

mental grounds, as has been mentioned, many also find it hard to get publicly recognized for their design work. While a notable building may assume the name of its architect, a three-mile strip of linear parkway is seldom associated with those responsible for its design and creation. Often the more successful the landscape project, the less attention it draws to its making. However, the strengths of synthesis are considerable. Complex environments offer numerous opportunities for the skills of landscape architects, and the benefits from good landscape architecture are readily apparent to many groups, from economic developers and city officials to environmentalists and local neighborhoods.

Cultivated Expression. This approach is seen in the work of a relatively few high-profile practitioners, displaying a high degree of artistic attainment. These projects are typically imageable and invite acclaim for their artistic merit. The focus is on creating new and unique works of art. Individuals or firms often develop a recognizable style that they refine over a number of projects; with each new work becoming a page in the story of a body of work. On occasion such practitioners have formed schools associated with specific styles, as in the case of the Concord School in New England or the Southern California garden architects around the turn of the century, or later "modernists" such as Rose, Eckbo, and Kiley (see Figure 2).

Landscape architects in this category have had intense but varied relationships to history. These relationships range from the strongly historicist approach of neotraditional landscape architects, such as Jellicoe and Farrand, to the militantly anti-traditional approach of Rose, to partially historicist approach of Kiley (Walker and Simo 1996). However, typically the process of design is seen as intuitive and personal, reflecting the specific experiences of the designer. This often gives profound importance to a designer's background, as it might include the

European travels of Beatrix Farrand or Kiley, or the intensely personal relationship of Burle Marx to Brazil or Barragan to Mexico.

For these landscape architects, design products are often rigorously structured, observing a logic of scale, proportion, and sequence. Designs may emerge through use of metaphor or analogy; or they may aim for a sense of harmony and timelessness. Often they are deliberately provocative, with some using dissonance to provoke reactions. These highly artistic landscapes are typically discrete, dependent on a protected setting, and rich in association.

The ways of talking about work most closely approximate architects, particularly those most interested in formal issues. A quote from Canadian architect Arthur Erickson explains some of this particular approach to creativity as art:

> Architecture is not simply a form-giving language of conscious thought, which commits to a rationale. Although there is a purpose to the building and a logic to its organization, the concept for its form comes from the creative depth within the psyche, an amalgamation of the life experiences that have been assimilated into the ocean of the unconscious we carry within us. I never know during the act of design why I do what I do. I am sure this is common for any artist, writer, poet, painter, or architect. Picasso said, "I do not seek, I find." It is this moment of finding that is the "Eureka" of the creative act; its source unknown. It is only when I am asked why, that some of the influences can be dredged up out of the unconscious. You do not think your way through a design, you feel your way. The act of creation is dictated by an inner motivation, the feeling of what is right for a composition whose meaning is not yet, nor may ever be, clear to the creator. The rightness of a composition is arrived at beyond thought, but guided by its conditions and the sense of appropriateness. That is why I used to advise my students, "Don't think. When you design with thought, it is very restrictive. It is better to find your solution out of the chaos of your feelings and then begin to seek the structure, discipline and spaces

that can clearly embody them." (Erickson 2000)

From landscape architecture, Laurie Olin makes a similar point, though using less personal language and stressing knowledge of form: Where do forms come from? Forms come from forms first. Forms do not come from words. They cannot. Words can describe the physical forms, but they do not (or did not) originate them; nor can they perform operations upon



Figure 2. Cultivated Expression: Federal Courthouse Plaza, Minneapolis, Minnesota. Designer: Martha Schwartz, Inc. Photo: Frank Fitzgerald, used by permission.

them. One must be familiar with a repertoire of forms before one can use them or manipulate them.

Art, and landscape architecture as a subfield of art, proceeds by using a known body of forms, a vocabulary of shapes, and by applying ideas concerning their use and manipulation. (Olin 1988, 155)

Recent examples of this category include the more celebrated high-profile work of EDAW, Olin Associates, Martha Schwartz, George Hargreaves, Michael Van Valkenburgh, and Peter Walker (Brown 1991). Contemporary environments include private gardens, corporate headquarters, and the grounds of art galleries and major public buildings. A notable recent example is Olin's Sculpture Garden in the Washington National Gallery. As a "thoughtfully crafted landscape of diverse spaces," this project creates an enclosed and concentrated milieu into which Laurie Olin has incorporated not only a pervading American Classicism and the picturesque vision of Andrew Jackson Downing's unbuilt plan for the Mall, but finally what he calls "post-de-Stijl geometry" (Brown 2000, 53-9).

It is in this area of cultivated expression that landscape architects have received most individual recognition. Most often, an exceptional project location and high public visibility have favored this work, while good funding and generous contracts have enabled creative fantasies. Disadvantages have included vulnerability to adverse criticism since, more than the other categories, this work has invited scrutiny on aesthetic grounds. For instance, we noted that the Olin Partnership's recent design for the Getty Center in Los Angeles was followed with an email survey of landscape architects' opinions on the strengths and weaknesses of the project (Thompson 2000).

Landscape Analysis. Landscape planners and analysts attempt to preserve and maintain large natural and cultural landscapes, and draw on ecology, physical geography, and some aspects of cultural geography to do this. However, the emphasis here is on application. They take the often-specialized work of natural scientists

and devise integrated systems that sustain natural processes and habitats, blending compatible land uses and separating incompatible ones, often preserving cultural landscapes. They also create generic designs such as buffers and corridors to ensure long term sustainability. Although there are parallels with design as synthesis, here the outcome is generally a framework for preservation, conservation, or restoration rather than a proposal for creating something different. Instead of project-specific designs, landscape analysts and planners typically offer design guidelines to cover large areas (Steiner et al. 1988) (see Figure 3).

Given their concern with habitats, large-scale drainage areas, riparian corridors, and greenways, landscape analysts are interested in controlling large areas, and to do this they work for government departments or influential public and private agencies. Their commitment has been to protect the larger natural world, both intrinsically and because protecting the natural world will protect humans. Often they involve themselves in environmental education to build constituencies for their work. While some of this work is published in Landscape Architecture, this group has parallel journals such as Landscape and Urban Planning.8



Figure 3. Landscape Analysis: Master plan for the Sanoran Preserve, Pheonix, Arizona. Principal authors: James Burke and Joseph Ewan, The Herberger Center for Design Excellence, Arizona State University, Tempe, Arizona. This arm of the profession played an important role during landscape architecture's early years with the annexation of the country's wilderness areas, as they achieved cooperation with national, state, and regional governments. This government connection was further strengthened by their activities during Roosevelt's New Deal in the depression era, when again landscape architects were engaged in conservation practices.

Landscape planning and analysis requires a heavy dependence on scientific expertise; it also involves negotiation with private interests. The knowledge base of landscape planners and analysts is often distinct from those of other landscape architects, drawing on the teachings of regional planners such as Geddes, Benton Mackaye, and later, McHarg and Lewis. Techniques involve GIS and other computer technologies, although their goal transcends the technical in the effort to give "expression to the potential harmony of man-nature" (McHarg 1969, 5). This approach is also strongly linked to the natural sciences.

> Where else can we turn for an accurate model of the world and ourselves but to science? We can accept that scientific knowledge is incomplete and will forever be so, but it is the best we have and it has great merit, which religions lack, of being self-correcting. Moreover, if we wish to understand the phenomenal world, then we will reasonably direct our questions to those scientists who are concerned with this realm-the natural scientists. More precisely, when our preoccupation is with the interactions of organisms and environment-and I can think of no better description for our concern-then we must turn to ecologists, for that is their competence.

We will agree that science is not the only mode of perception that the poet, painter, playwright and author can often reveal in metaphor what science is unable to demonstrate. But if we seek a workman's creed which approximates reality and can be used as a model of the world and ourselves, then science does provide the best evidence. (McHarg 1969, 29)

Early examples of this category include Wallace-McHarg Associates' Plan for the Valleys north of Baltimore, and projects led by Ian McHarg and outlined in Design with Nature (Wallace-McHarg Associates 1964; McHarg 1969). It also includes a variety of landscape and visual assessment projects, such as Ervin Zube's visual analysis of the Virgin Islands and his Inventory and Interpretation of Selected Resources of the Island of Nantucket (Zube 1966). In recent years landscape analysis and planning has increased with increased urbanization, loss of farmland, and environmental degradation. These factors have led to a marked rise in public sensitivity about the environment and a plethora of private and public commissions, agencies, and programs to regulate, control, and enhance the environment.

However, dependence on public policy has created dilemmas for landscape analysts as diminished funds for government programs and the increasing privatization of many national and state parks has introduced a new era of entrepreneurial partnerships. These partnerships often combine landscape analysis with proposals for development that draw from other approaches, such as design as synthesis and ecological design. An example is the redesign by Hargreaves Associates of approximately 1500 acres of national park land along the tree-covered hills of the San Francisco coastline. Through this project, a former US Army post is refashioned to include a golf course, a Public Health Service, a conference center, a national cemetery, a visitor center, and a residential neighborhood (Machotka 2000).

While landscape analysts are frequently in a position to assume a powerful professional role, this has on occasion caused criticism, for example when their institutional work has raised tensions with longstanding residents and landowners (Michaels et al. 1999). By and large, however, landscape planners have enjoyed extended opportunities for long-term project work (given their relative freedom from the vicissitudes of the private market), collaboration with like-minded environmental agencies, secure funding, and a growing body of practical knowledge.

Plural Design. This is the landscape architectural equivalent of the advocacy and progressive planning traditions, and of social architecture. Plural design among landscape architects is concerned mostly with adapting mainstream design styles to local situations, and giving users a voice in decision making, often working over several years to ensure implementation of a project. This may also include locating funding and finding ways to maintain projects in poor communities. The approach assumes that users can be given power over their own environments, and addresses larger issues of inequality by dealing with immediate needs. It is also an attempt to empower residents in small ways through increased knowledge about their environment, thus indicating a different conception of expertise from other forms of landscape architecture. Randolph Hester (1989, 1990) summarizes the key elements of this approach based on his study of people working in the area of what he calls "community design."

> This sample of community designers has a rather unified, shared vision of their work. They characterize it as the planning and creation of everyday environments for people who have little access to design resources. The client is typically a group including minorities, the very old and very young, or the poor oppressed by some environmental inequity. The goals of their work are to create incremental environmental justice and to empower their clients. The process is participatory, and often involves action at the policy level as well as the site design level . . .

... they believe that their work enhances a sense of community, helps overcome environmental anomie, educates the community designer and the client, increases self-esteem of the citizen participants, and shares the joy of creating environments. (Hester 1988, 136–137)



Figure 4. Plural Design: YouthRap Garden, Holyoke, Massachusetts. Designers: YouthRap youth group participants, Urban Places Project with U.Mass landscape architecture planting design class, and other community members. Photo: UPP—Patricia McGirr, Ann Forsyth, Henry Lu, used by permission.

This kind of practice can be located in private firms, voluntary networks, non-profit groups, and university design centers and workshops, although these are typically outnumbered by those in planning and architecture (see Forsyth et al. 1999, 2000 for reviews of service learning in landscape architecture and design more generally) (see Figure 4).

Noteworthy examples from Landscape Architecture magazine include Mohammed Nuru's work with the San Francisco League of Urban Gardeners (SLUG) in the early 1990s. Nuru has created a staff of 100 workers and a budget of \$6 million to administer programs for habitat restoration, marketing compost and soil products, and "adopt a sidewalk" programs, while employing welfare recipients to work full time (Owens-Viani 2000). Another example was the work of Balmori Associates, New Haven, in participating with the lowincome Dixwell neighborhood before drawing up the Master Plan for Farmington Canal, a linear park through neighborhood land (Langdon 1995). A third example was the work of Barrio Planners in East Los Angeles, where Frank Villalobos combined his landscape architectural practice with campaigns for environmental justice in East Los Angeles. Through active work in local citizens' groups, Villalobos prevented the relocation of two incinerators and a prison to East Los Angeles neighborhoods (Stein 1992). Also in East Los Angeles, Achva Stein's 1995 design for Uhuru Gardens was a response to local preferences with a mini-urban forest, a freedom tree, outdoor instruction areas, a solar office and community garden, a marketplace to sell produce, and an African forest area with pond.

Randolph Hester has been the profession's most active spokesperson over the last three decades, dedicating his career to community design, community participation, and design solutions that counter mainstream practice (Hester 1985, 1990; Mack 1990; McCormick 1992; Thompson 1994).

The rewards of plural design have been the experience of handson community work and the awareness of benefits achieved. Also, for many there has been the opportunity to be innovative and resourceful. Landscape architects practicing in this way have recourse to a number of local or national organizations, such as the Association for Community Design, and many organic gardening or urban gardening networks. However, plural design has typically included some time consuming processes, such as training people in basic landscape and communication skills, or engaging in prolonged relationships with local administrations to gain funding.

Ecological Design. The category we have called "ecological design" includes landscape architects working in a variety of capacities and scales for government, corporate, and private clients on the restoration and enhancement of the existing environment. Work ranges from erosion control, water quality control, wetland restoration, and reforestation to a variety of innovative building techniques such as straw bale, rammed earth, or adobe. Like landscape analysts, these designers draw on natural science research, often combining this with specialized horticultural and building techniques. Like the landscape analysts, ecological designers have a commitment to the larger natural world, either intrinsically or because protecting it will protect humans. As in the case of landscape planning and analysis, recent environmental degradation has accelerated the demand for ecological design. However, unlike landscape analysis, ecological designers' work on specific design problems typically results in altering the landscape. This means that the scale of the projects is often substantially smaller than the scale of problems taken on by landscape analysts, and there is some emphasis on creating the new. As Lyle describes:

> To generate deep form requires a rational understanding of natural systems in combination with intuitive imagery, and thus a design process that combines high levels of both analytical and creative thinking....

What I propose then is that we

take the underlying complex and elegant ecosystematic order of nature as the essential and fundamental inspiration for design. Too often, landscape architects have ignored the inspiration for creativity offered by natural processes and have chosen instead to view "ecological factors" as constraints on creativity. Too often, too, they have responded to nature by shaping pale imitations of her forms in the picturesque tradition and in doing so have produced shallow form. (Lyle 1991, 40)

Projects are highly site specific, often drawing on some unique ecological situation. Recent examples in Landscape Architecture include experimenting with salt-resistant plants to create windbreaks for Rhode Island garden (Hammatt 2000b), sod roofs for a local Connecticut museum as a means to control storm water and insulation (Thompson 2000), and a number of erosion and water protection projects. It should be noted that state and local parks and recreation departments are routinely engaged in erosion control, wetland restoration, and other environmental activities nationwide, though these are not often publicized (see Figure 5).

Given the concern to promote environmental stability, there is a strong emphasis on public education, as may be seen by the proliferation of handbooks, design guidelines, and other material for public use. An indication of educational concerns might also be seen in the number of ecological schoolyards, visitor centers, and educational trails featured in Landscape Architecture, notably designed to teach students about ecosystems. These included the Cesar Chavez Elementary School in San Francisco, the La Conte Elementary School in Berkeley, and the Crestview School in Boulder, all of which recreated natural habitats (Danks 2000). Recently, work about sustainability has encouraged collaboration between ethnic communities searching for ethnic-based solutions to environmental problems, creating some overlap with plural design.

Since work in this category is often highly project specific, drawing on local habitats and building techniques, the range of work is often limited in terms of place, and in spite of the desire for education and proselytization, expertise does not easily transfer. It is a further disadvantage that the sheer innovation of ecological design often makes it unacceptable to the public at large, and even colleagues practicing design as synthesis or cultivated expression, whose work displays a more manicured character (Mozingo 1997). Moreover, tensions can often develop between market imperatives and ecological needs. However, an advantage is the increasing funding opportunities for ecological design, and the fact that ecological design work can be highly publishable in journals and magazines beyond the profession.

Spiritual Landscapes. This approach sees the environment as a place of healing and transcendence (Wasserman 1998; Steinitz 1995, 191). Landscape architects working for private and government clients have with increasing frequency in recent decades created memorials, sensory gardens, and meditation courtvards for a variety of groups and situations, drawing on a range of theologies, religions, and medicinal lore. While related to other approaches, such as cultivated expression and ecological design, these "spiritual" landscapes have an overall aim that is far different from other designs. Here the connection between humans and the natural world is emphasized in ways that go beyond the common professional concerns to re-establish spiritual and emotional connections between humans and nature. Of all the design professions, landscape architects have a unique capacity to make this connection, particularly in their sensitivity to growth and change. As Wasserman describes in an analysis of memorial design:

> Plants symbolize hope and regeneration. They also clarify the cycles and patterns of life, death, and rebirth. Seasonally, this happens with tree foliage emerging, dropping, and re-emerging.



Figure 5. Ecological Design—Prairie Waterway, Park Place, Farmington, Minnesota. Designers: Balmori Associates with Paul Barten, Hydrologist, in collaboration with the Design Center for American Urban Landscape. Photo: Frank Fitzgerald, Collection of Design Center for American Urban Landscape, used by permission.

Changing colors of leaves and flowers animate a memorial and provide healing and comforting properties. (Wasserman 1998, 54)

Also noteworthy is the mainstream character of this approach in the U.S. In spite of the introspective subject matter, noteworthy professionals engage in such practices, and projects are often widely publicized. In dealing with profound and important issues like grief, perception, memory, and sensual experience, landscape architects have found new ways of being accessible to a broader public (see Figure 6).

The recent design for the Oklahoma City National Memorial by the Butzer Design Partnership follows a long line of Holocaust and war memorials, which have arguably accelerated since the noteworthy Vietnam War Memorial in Washington DC, and Jellicoe's Kennedy Memorial in Runnymede, England. The Oklahoma City monument is a composite site consisting of a Memorial Center, a museum and visitors' center, and an adjacent Oklahoma City Memorial Institute for the Prevention of Terror-

ism and Violence (O'Connell 2001). Work was awarded through a nationwide competition attracting 624 entries, and was adjudicated by landscape architects Richard Haag and Ignacio Bunster-Ossa, among others. The design combines a theme of mourning with national and religious symbolism. A comparable recent project is Michael Boland's AIDS -Garden in the Golden Gate Park, San Francisco (Cooper Marcus 2000). Comparable, though less celebrated, are a number of spiritual retreats and meditation centers throughout the country. These centers include a spiritual retreat in Oberlin, Ohio, which consists of 20 acres of meditational and ceremonial spaces for spiritual groups. Another such center is the Shalom Farm, a retreat for rural ministry in southwestern Minnesota in which farmland is regenerated in a kind of spiritual rebirth, using ecological design principles explored by John Lyle (Hammatt 2000c). These introspective retreats frequently manifest a holistic approach, drawing on Eastern and other traditional philosophies, and using earth, water, and fire symbolism.

Landscape architects have welcomed projects of this kind for many reasons. Work draws on skills uniquely suited to landscape architecture (not to be shared with neighboring disciplines), expressing the fuller ambitions of well-known writers in the field such as Jellicoe (1993), Newton (1971), and Simonds (1961). This work does not overtly appear to compromise professional integrity with market imperatives. In addition, the work provides unusual opportunity for a free range of creativity, as it frequently offers protected and sequestered settings, while drawing on rich historic and religious associations.

Part 3:

Implications of the Landscapes Typology

Since its early beginnings in the U.S., the field of landscape architecture has developed a rich practice with a number of distinctive approaches, together exploring a range of issues and concerns. We believe the next step is for the profession to think systematically about that practice, and that a conceptual framework such as landSCAPES can provide a basis for constructive analysis. Such a framework might also help chart out areas requiring reflection or research, direct the education of landscape architects towards distinction in specific skills, and make professionals more effective players in the political arena.

Table 1 lays out the eight dimensions we used to evolve the land-SCAPES typology: (1) goals, (2) process, (3) client or audience, (4) scale, (5) knowledge base, (6) ethics, (7) nature, and (8) power. We found great differences in the way practitioners approached these dimensions. For instance, a process may vary from a formalized sequence of steps used by analysts, to the looser and more inclusive process of those practicing design as synthesis, to the still looser and more iterative process employed by plural designers. *Clients* may vary from government bodies typically sponsoring large-scale projects, to

small non-profit organizations seeking counter-cultural landscapes, to the users who determine plural design, to the future and often-unknown clients of ecological designers. Knowledge is viewed differently again. While landscape analysts and ecological designers may engage intensively with ecological science, other professionals may be forced to make partial explorations into related fields and even to make compromises in order to get their work done on time. Critical knowledge in plural design, on the other hand, may be gleaned from users themselves. Perceptions of the landscape may differ again with approach. For some, nature is intrinsically valuable, while for others it is a setting for human interaction. Project scale (always critical for landscape architects given the huge range in scope) can crucially affect professionals' relation to their design, as the limited space of much high-style projects may allow a level of fine-grained detailing that is impossible at the regional scale

This analysis of approaches reveals some basic dilemmas within the profession. Of all the approaches, plural design alone addresses the role of clients and users in a complex way, aggressively raising questions about user involvement and the broader participation of the socially or locationally disadvantaged. This is not to say that landscape architects show no ethical concern. On the contrary, in regard to ethics, landscape architects reveal they have given much thought to the value of their work in relation to the natural environment, and are guided by definitions of stewardship as laid out during the profession's founding years. This is exemplified by Jellicoe's statement that "Landscape design is the most comprehensive of the arts . . . the art of the whole of man's environment" (Spens 1992, 273), and by Newton's definition of the field as the art "... of arranging land, together with the spaces and objects upon it, for safe, efficient, healthful, pleasant human use" (Newton 1971, 3). A powerful interest reinforcing this belief among professionals lies in the character of the land itself, often drawing



Figure 6. Spiritual Landscapes: Healing Garden: Good Samaritan Regional Medical Center, Phoenix, Arizona. Designed in 1996 by Christie Ten Eyck. Photo: Katherine Crewe.

on deep ecology or the visual character of landscape.

While there has been an overall tendency among landscape architects to focus on this stewardship role as a way of explaining current practice and representing the profession to the wider world, we suggest some rethinking. Politically, landscape architects have often been forced to seek out the powerful to promote and subsidize their work, and have not shown themselves specifically concerned with the disadvantaged. This focus contrasts with related fields that consider themselves serving the public interest in an active political arena.⁹ As landscape architects undertake more complex work in the public realm, we suggest all approaches pay attention to who is collaborating, who is using their work, and what longterm political issues are being considered. Debates within the profession about issues of political power could make landscape architects more formidable players in a political arena, and would help develop a critique whereby the profession could expand its horizons.

Among the approaches we identified, those practicing cultivated expression embody the image of landscape architecture to the wider public. Works by well-known practitioners such as Kiley and Halprin, and their present-day counterparts such as Olin, are often the most memorable, the most frequently written about, the most photographed, and the most taught to students. Their works are often the best preserved over time and the least subject to the vicissitudes of urban change. Yet ironically, our analysis pointed to some radical differences between these practitioners and the rest. Most professionals are battered by rapid change, burgeoning development, significant resource constraints, and political cross-currents throughout all stages of their work. This raises key questions of how a wider range of landscape architecture practice might be effectively represented so that the profession can become more varied and relevant? How can landscape architecture education be adjusted to teach the important skills needed in approaches other than cultivated expression?

Generally, a study of the strategies, knowledge, and beliefs of landscape architects points to great opportunities at the present time. There is an urgent need today for those practicing design as synthesis, given their capacity to resolve contradictions in urban and rural environments and to create positive holistic solutions. As U.S. populations migrate in into growing cities and towns, new environments are created with glaring contradictions, which need to be solved. The innumerable small towns and sprawling suburbs searching a sense of history and identity, demand the skills of landscape

architects of this kind. Ethnic groups or dispersed cultural groups seeking a visible focus; complex environments grappling with seemingly incompatible living arrangements; all offer numerous opportunities for the skills of landscape architecture. This synthesis might be carried even further to include counter-cultural ecological and social elements hitherto not part of the range of landscape architectural work. Design as synthesis could itself draw from the experience of plural design in this engagement with diversity.

In the field of landscape analysis, there was little representation in Landscape Architecture of the extensive work done in the U.S., as has been noted. However, the mention of George Hargreaves Associates' modification of a national park in San Francisco drew attention to a changing predicament for those practicing landscape analysis, particularly those in government work, namely the privatization of national park lands, and their adaptation to new concerns and claims. Clearly this calls for a broadening of the range of analysts' work, to continue the same commitment to broad ecological goals while accommodating changing circumstances and integrating more extensive design work.

The two categories most in need of recognition and mainstreaming were plural and ecological design. Both have the strengths and rewards of their strong local base, yet both suffer limitations. While plural design brings the rewards of interaction with a community, it often challenges practitioners' political skills. Their engagement with marginalized populations also often excludes this approach from the professional mainstream. However, the growing range of non-profit organizations, particularly in the field of urban gardening, present opportunities for networking and empowerment across the country. Perhaps a similar network is available to those practicing ecological design? We believe that some targeted communication between these two categories and the

profession as a whole might help mainstream both groups: landscape analysts might systematically incorporate the work of ecologists into their guidelines; all groups might adopt accumulated knowledge from those practicing plural design.

Finally, the high visibility of the work in our category of spiritual design suggests the opportunity for professionals to make real contributions to issues of meaning and faith. This provides opportunity to raise the question: Does the profession merely draw from theology and psychology or does it have potential to make lasting contributions to the society at large?

Concluding Thoughts

Our survey also showed that landscape architects are certainly reflecting about their practice in the areas of education, ethnic and cultural diversity, and the scope of professional work. However, these current debates do not preempt the need for scrutiny of existing landscape architecture approaches and the assumptions motivating them.

The landSCAPES typology provides a productive, if preliminary, way of understanding and explaining landscape architecture practice. It potentially makes explicit six quite different paths to excellence in the field. While it is possible to examine the world of landscape architecture from the viewpoint of only one approach, this typology provides a language for understanding and valuing other ways of doing landscape architecture. It exposes underlying differences, points to areas of potential cross-fertilization and dialogue, and creates a framework for asking significant questions about the profession. It points to areas where education can be reformulated to value different paths in practice. Hopefully, it can provoke both reflection and transformation within the field.

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Notes

1. The authors contributed equally to this article.

2. We came up with the categories and then searched for a word that they might fit—and S.C.A.P.E.S. emerged.

3. We use the term "theory" in this paper somewhat differently from its use in the term "design theory" or design philosophy, where it denotes a launching pad for inspiration rather than a way of explaining events (see discussion in Riley 1990). Some design writers such as Rappoport distinguish between theories (explanatory), models (predictive), and frameworks (organizing) (quoted without citation in Steinitz 1995, 200; Riley 1990, 49). While this distinction may be useful at times, in fact theories of the kind that we are talking about are involved in all three concepts. Models are based on theories and can also help refine them, and frameworks are a kind of theory explaining through organizing.

4. Planning theory as a field is wider than these approaches and includes such areas as analyses of the role of planning in relation to government and the private sector, and planning ethics. Sources for this discussion include Bolan (1967); Etzioni (1967); Faludi (1973); Davidoff (1965); Lawrence (2000); Yiftachel (1989); Fainstein (2000); Friedmann (1987); Briassoulis (1989); Forester (1989); Hudson (1976); and Healey (1997).

5. Planners do have the equivalent of the landscape architects' stylistic classification (in terms of movements within planning, such as garden cities, city beautiful, urban sustainability, decentralizations, or urban containment) often conceptualized as "substantive" theory, theories of good urban form, or the good urban plan debate (Yiftachel 1989, 27; Hall 1996; Forsyth 1997). This kind of classification of style has occurred at the general scale of the broad approaches physical planning in the previous sentence and for approaches to or styles of particular types of plans. For example Kaiser and Godschalk (1995) concluded that there have been five main types of land use plans in the U.S. over the past 50 years that would be equivalent to different schools of modernist garden design in landscape architecture: (1) Land Use Design Plans, (2) Land Classification Plans, (3) Verbal Policy Plans, (4) Development Management Plans, and (5) Hybrids.

6. Design as Synthesis traditionally has elements of rational and blueprint planning, but more contemporary practice has changed with the times and become more sophisticated about such issues as phasing and participation. 7. This approach has many similarities to the core tradition of modernist city planning described by Beauregard (1989, 385). In this tradition, which developed from a common background with early landscape architecture practice, planners had a belief in the "'synthetic' city," where the "task for planners is to take the fragments produced by the contradictions and struggles of capitalism and integrate them into a unique and orderly whole." In addition "planners were to transcend specialization and provide the contextual integration for numerous experts involved in the reform of the industrial city."

Anthrop (2001) contains an interesting discussion of the relationship between *Landscape and Urban Planning* and more scientifically oriented journals such as *Landscape Ecology*.
The vast majority of planners work for the public sector, for firms serving the public sector, or for non-profit organizations fulfilling public sector-like roles. The exceptions are planners working in private sector development, and even then they are meant to ultimately serve the public interest.

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