

Making designs on plans: observations of distinctions between planning and design

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IN THE LANDSCAPE ARCHITECTURAL PROFESSION the words *planning* and *design* are often used without differentiation. In addition to creating misunderstanding over our intent, confusing planning with design can result in missed opportunities for our work to benefit from the discrete strengths of each. This paper examines designers' use of the terms *planning* and *design*, and the influence of those choices on the drawings they create. It also explores the subtle but important differences in the principles, tools, and processes of planning and design.

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	plan	design
noun	a drawing or diagram drawn on a plane.	an underlying scheme that governs functioning, developing, or unfolding ... the arrangement of elements or details in a product or work of art.
verb	to devise or project the realization of ... to have in mind: intend. (Webster 1993, p.889)	to create, fashion, execute, or construct according to plan ... to draw the plans for. (Webster 1993, p.313)

A plan is not a design

PLANNING, DESIGN AND MANAGEMENT of the land: these areas of responsibility broadly define the profession of landscape architecture. And while these three terms are carefully articulated in policy statements and professional publications, less care seems to be given to them in everyday use. In particular, the words *planning* and *design* are often used without differentiation. At what price do we fail to make and apply distinctions between planning and design in our practice? In addition to creating misunderstanding over our intent, confusing planning with design can result in missed opportunities for our work to benefit from the discrete strengths of each. Broad sweeping plans that lack design detail display the shortcomings of applying only planning to site design. In contrast, richly detailed master plans that entail comprehensive planning complemented by place-specific designs, illustrate the successes that are possible when these two processes are applied correctly.

In North America, planning and design are separate professions. Planners are engaged in physical and social planning, primarily developing community and regional plans to guide future development. Design, however, is the domain of landscape architects and architects. Their focus is spatial design and the creation of places. A simple overview of the terms *plan* and *design* might suggest that one whose professional title is planner, plans, while the designer, designs. However, although one rarely reads or hears of a planner calling their work design, designers often refer to their work as planning, particularly when the project

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REFLECTIONS

involves the future form and character of large areas. Specifically, professional reports and academic texts written by and for designers often use the words *plan* and *design*, and *planning* and *designing* interchangeably.

Very little seems to have been written on the distinctions between planning and design. Carl Steinitz' (1994) keen articulation of the word *design* generates ideas about the tasks and products of landscape architects who define their work with this word. He says: 'I like to think of *design as a verb* as the asking of questions and *design as a noun* as the character of the answers.' (1994, p.188). While his differentiation between the use of *design as a noun* and *as a verb* clarifies the specific activities and products of landscape architecture, his thinking focuses upon the words most often associated with the profession. What, for instance, of those landscape architects and other designers who define their creations as *plans* and their work as *planning*? It is doubtful that they only have in mind a solution. It is more likely that they intend 'to create, fashion, execute or construct' or, in other words, *design*.

As defined by Webster's Dictionary (1993, p.889), a *plan* is 'a method devised for making or doing something or achieving an end'. The word *design* carries that same primary definition. However, close examination reveals that the meanings, explicit and implicit, of the two words sharply diverge from that common primary definition. The dictionary definitions of *plan* and *design* provide a starting point for understanding the distinct charges of our profession. Further exploration of planning and design (and designers' vocabulary choices) are presented in this paper. The influence of these vocabulary choices is most immediately seen in the drawings we create. In addition, examination of differences in the principles, tools, and processes of planning and design reveals subtle but important distinctions between the two.

Designs and plans

The consequences of our vocabulary choices are clearly revealed in our final products: plans and designs. This is evident when looking at plans and designs for projects of similar scale and type. The current use of the term *design* in the type of larger scale work most often associated with *planning*, emphasises the effectiveness of using both terms in the context of landscape architecture. The difference between planning that stops with planning, and planning that is completed by design, is most readily apparent in community and regional scale projects. While most community plans provide two-dimensional images of the relationships between land uses and infrastructure systems, very often the topography of a community is not delineated and the natural systems are buried beneath other land uses. However, recent new urbanist designs for communities illustrate how these graphic conventions can be incorporated within design. The residential areas are yellow, but the articulation of streets, delineation of lot lines and definition of natural systems express a place-specific life and character.

Duany and Plater-Zyberk's plan for Avalon Park, *Towns and Town-Making Principles* (1992), has as its subtitle 'A Regional Plan', although the text begins with the statement, 'Avalon Park is a design of regional scale'. This subtitle and introduction provide an example of the confusion many designers seem to bring to their work. While the subtitle implies a traditional regional plan composed of land-use bubbles and infrastructure lines and icons, describing the work as a design implies that a unique vision is articulated in the drawings. These

drawings reflect the choice of language. Villages are defined by greens and public structures, while a detailed hierarchy of streets define the neighbourhoods. The traditional colour vocabulary of land-use plans is transformed from a plan to a design by the site-specific information provided.

Similarly, Peter Calthorpe (1993) does not distinguish between plans and designs. In writing about his work, he is concerned with the patterns and structure of the places, and uses the terms *plan* and *design* interchangeably. However, his drawings are clearly designs for specific places. Although encompassing large areas, they are more than two-dimensional representations of future communities. The three-dimensional rendering of stream corridors and wooded areas, the networks of streets and paths, and the delineation of contours through line and shade change a typical land-use plan into a design for a place to live, work and play. Like Duany and Plater-Zyberk, Calthorpe's work emphasises the difference between planning and design and the rich possibilities derived from engaging both when constructing regional scale plans. The success of environments built from new urbanist designs is under continual debate and they remain new and untested. What is apparent, however, is the success of the drawings, and the ability of designers to envision and communicate the effect of a large scale work that is often presented only as bubbles and lines. These drawings allow the public to comprehend that vision before construction and to understand the unique qualities of the place to be created.

Randall Arendt (1996), author of *Rural by Design* and *Conservation Design for Subdivisions*, also addresses large scale planning issues from the perspective of a designer. *Rural by Design* uses aerial perspectives to explain the potential living environments created by design principles applied at a planning level. The use of three-dimensional images allows visualisation by residents, decision makers and others, of the spaces created within specific landscapes. While the principles of *Conservation Design for Subdivisions* can be quantified in traditional planning terms such as *percentage of open space* and *densities*, they are also illustrated thoroughly with two and three-dimensional illustrations. This means that important concepts such as clustering structures and respecting rural vegetation patterns are not left to the reader's imagination and interpretation. Rather than being presented with simple figure-ground drawings that may or may not be understood by all involved in the creation of a place, we are given place-specific designs demonstrating Arendt's planning principles. It is by the application of design method to planning concepts that Arendt's work is differentiated from that of so many others in the field.

Finally, Philip Lewis's approach to greenway design (1996) is a testimony to the value of design method for regional scale plans. While the big picture reveals broad reaching designs, a closer look at his work leads us to site-specific scaled features he calls 'Discovery Centers'. The 'Discovery Centers' allow specific natural and cultural resources to be displayed and interpreted. Lewis's recent text, *Tomorrow by Design*, puts forward a regional design process to 'guide land use, design, development and restoration' (1996, p.7). His process integrates 'resource value inventory, creative analysis, synthesis of two- and three-dimensional design options, and a specific educational effort ... to assure citizens a role in the decision-making process' (1996, p.47). His work is further refined by a discussion of what he terms 'landscape personalities'. Lewis believes that these personalities reflect the 'local colors, textures, patterns, and spatial qualities that make each

unique' (1996, p.63). His inventory of resources includes those which are perceptual, reflecting his belief that three-dimensional space may be one of our most important and perhaps most neglected resources. Design permeates his vocabulary. Even when writing about the *Circle City Urban Constellation* that encompasses 17 million people in Illinois, Wisconsin and Minnesota, he calls it a 'design case study'. Although his work involves more people and land than most can comprehend, it is done with an eye for detail and attention to individuals. He deciphers immense landscapes by applying design principles, tools and processes.

The vocabulary choices, conscious and unconscious, were made by each of these designers for reasons other than a simple preference for one word over another. Each choice is permeated by the principles, tools and processes unique to *design*. A closer look at the principles, tools and processes specific to *planning* and *design*, further reveals the many influences, both great and small, that come with our vocabulary choices.

Principles: the foundations of professional practice

The principles and theories that support the professions associated with planning and design are very different in scale and focus. However, while principles associated with each profession overlap in regards to the practice of creating places, they approach the responsibility from different perspectives.

Planning principles largely address programmes and policies. Growth management, economic development, open space conservation and transportation improvement are some of the principles that guide planners in their professional practice. Planning theory structures thinking on the municipal scale and larger. In contrast, design principles use the elements of 'line, color, shape, direction, texture, scale, dimension, motion' (Dondis 1991, p.21). These elements allow creation of 'something to be executed' or a place that designers 'devise for a specific function or end' (Webster 1993, p.313). Rather than applying a standardised response, designers are concerned with the uniqueness of each site. 'What elements dominate which visual statements is determined by the nature of what is being designed or, in the case of nature, what exists' (Dondis 1991, p.21). Application of these principles requires attention to detail and responsiveness to specific conditions. Whether designing the texture and pattern of a paved surface, or the texture and pattern of a city's street grid, formulating a response to the specifics of a site results in the creation of a rich and engaging place. Design theory, therefore, involves relationships between, and visual perceptions of, design elements, whether they are as small as the brick in a patio or as large as a building in a city block.

Tools: the devices we employ

The most basic influence on the differences between planning and design is perhaps the result of the tools each method uses. If we examine the various devices of the two professions (planning and design) we find differences that are subtle but substantial. The standards and conventions, the illustrations and articulation of details, and the means of implementation of both lead to marked differences in end results. Individually the dissimilarities seem small, but their cumulative impact can be considerable.

STANDARDS AND CONVENTIONS

Each profession is governed by standards and conventions. These rules govern the vocabulary, both written and graphic, as well as the implementation of plans and designs. Land-use allocations, transportation system requirements and all other decisions made by planners are influenced by categorised and codified standards. An example of standards used by a planner would be the following: neighbourhood parks are known to serve 2,000 residents; office buildings generate 14 vehicle trip ends per 1,000 square feet of floor area; and elementary schools require ten acre sites, with an additional one acre for each 100 students. These standards typically address a large number of people and the individual is affected but not served. At a smaller scale, the actions of designers are influenced by standards that focus on human comfort. A standard curb is 7" in height. Any more or less will result in unsure footsteps and personal injury. The most comfortable seating height is 18". Any more or less will not encourage people to sit down.

Although design standards and conventions are typically more human-scaled than those of planning, they are still only guidelines. Until the specific qualities of people and places are explored, we do not know whether 2,000 people can or should be served by a park, and we do not know how the benches in the park will be crafted. It might be said that *planning* creates the intent to do something and *design* is the actual doing. Guided by the ideas established in planning, designing brings specific materials, places and people into a design. Planning a boulevard requires an understanding of traffic flows, infrastructure requirements and safety regulations. Designing a boulevard requires the application of site-specific solutions to create a thoroughfare that meets the planning standards, conforms to design standards and responds to a specific place in a unique way.

GRAPHIC REPRESENTATIONS

Plans and designs are created from particular perspectives. A plan, by definition, is a two-dimensional product. It is flat and, as 'two-dimensional' is defined, 'lacking depth of characterization' (Webster 1993, p.889). The International City Management Association's (ICMA) definition of a plan takes the form of a policy statement: a city plan '1) is an expression of what a community wants; 2) serves as a guide to decision making; and 3) represents fulfillment of a legal requirement' (ICMA 1979, p.65). The plan is a representation of the planning principles and theories that the association will use to shape a community's future. While some of these are physical improvements, others are social programmes and economic strategies. Planners' plans provide symbolic illustration of a broad range of policies and programmes.

While designer's designs are often expressed as two-dimensional images, they are also articulated with three-dimensional representations as well. The dictionary's definition of *three-dimensional* speaks to the importance of the added dimension: 'describing or being described in well-rounded completeness' (Webster 1993, p.313). The examples of community and regional scale work approached as design rather than planning cited earlier, show the value of three-dimensional views. Anton Nelessen expounds upon the importance of multi-dimensions in his text, *Visions for a New American Dream*:

Anyone who wants to plan and build a community must be able to visualize two- and three-dimensional space and the four-dimensional impact on the user. One must understand these relationships at the smallest scale first, in order to apply them to a larger scale (1994, p.iv).

The manner in which details of a plan or design are represented is also a critical tool. The detail and technicalities of a plan are typically explained through a series of tables and matrices. Numbers often define the boundaries and scope of a plan. In contrast, the detail of a design is typically explained through a series of drawings (these are referred to as 'details'). These close-up views of the design express the specific quality and character of the project. Viewed in total, they present a comprehensive vision of what might be created.

IMPLEMENTATION

Finally, the means by which a plan or design is implemented also influences the built environment. This final documentation of the future vision for a place is lasting, and determines whether it will be built as envisioned or remain only an idea. Plans are expressed and implemented through policies and codes. Nonspecific in character, these documents typically address health, safety and welfare issues. Designs, if expressed beyond a series of drawings inserted in text, typically take the form of guidelines. These documents are similar to, but distinct from, policies. Illustrated with graphics, guidelines convey the three-dimensional character of a place and are specific to it. Implementation of planning detail is accomplished through design, highlighting the sequential nature of these two very different activities.

Process

The differences between planning and design are shown most clearly when considering the nature and function of process. In planning, it is the plan that gives focus to the process. The point of a plan is 'to create a basis for debate, discussion, and conflict resolution' (ICMA 1979, p.165). In contrast, design derives focus from the process, which involves a series of standard activities applied specifically to the site in question. Each design involves: a site inventory and analysis; concept development; alternatives; the final design; implementation/construction, and evaluation. These differences in foci result in very different final products.

The result of a planning process is the approval of concepts and agreement on direction. These are typically more important than the graphic representation and, in fact, may be difficult or impossible to visualise. On the other hand, the design process is focused on production of three-dimensional solutions in response to specific situations. Each step of the design process requires graphic representation, in order both to conduct the activity and document the result.

Conclusion

This paper was inspired by watching Philip Lewis (Director of the Environmental Awareness Center, University of Wisconsin) leap to his feet during a student presentation and draw attention to a student's use of the word *planning* rather than *designing* when describing the drawings for a 200-mile greenway system. As the presentation resumed, a visible change took place. Although the drawing on the wall addressed a plan for a five-county area, the discussion shifted from

sweeping overviews of watersheds to detailed descriptions of specific places that might be incorporated into the greenway design. The character of those places became real for those listening and the plan was transformed into a design, regardless of scale. This subtle distinction in language and perspective continued to influence choices and decisions as the project was completed.

The titles of planning and design texts written by Lewis (1996) and another esteemed landscape architect, Ian McHarg, illuminate the importance of vocabulary choice. Ian McHarg did not choose to title his book *Plan with Nature*; Philip Lewis's text is not *Tomorrow by Plan*. These landscape architects exhort us to design with nature and to arrive at tomorrow through design, with intent and for specific functions. Although many would describe, by virtue of scale alone, the work of these individuals as planning, the authors clearly see their work as design. Their projects encompass thousands of acres or, in Lewis' case entire states, but they have defined them as design. They use the principles, tools and processes of design, and in doing so focus on the particular elements that create unique places for specific people.

The planning and design of the land are discrete responsibilities of landscape architects. Recognising and applying the unique principles, tools and processes of both these obligations is essential to the practice of our profession. To do this, we must be precise in our vocabulary choices, and clear in our communication with students, clients and colleagues. In addition, it is possible for landscape architects to bring a new dimension to work typically thought of as planning. By applying design principles, tools and processes to community and regional scale work, we can create visions for specific places. Initiating a large scale project with planning and completing it with design (that is, making designs on plans), creates rich, multi-dimensional designs for the future.

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