Yi-Fu Tuan

Space and Place

The Perspective of Experience
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Space and place are familiar words denoting common experiences. We live in space. There is no space for another building on the lot. The Great Plains look spacious. Place is security, space is freedom: we are attached to the one and long for the other. There is no place like home. What is home? It is the old homestead, the old neighborhood, hometown, or motherland. Geographers study places. Planners would like to evoke "a sense of place." These are unexceptional ways of speaking. Space and place are basic components of the lived world; we take them for granted. When we think about them, however, they may assume unexpected meanings and raise questions we have not thought to ask.

What is space? Let an episode in the life of the theologian Paul Tillich focus the question so that it bears on the meaning of space in experience. Tillich was born and brought up in a small town in eastern Germany before the turn of the century. The town was medieval in character. Surrounded by a wall and administered from a medieval town hall, it gave the impression of a small, protected, and self-contained world. To an imaginative child it felt narrow and restrictive. Every year, however young Tillich was able to escape with his family to the Baltic Sea. The flight to the limitless horizon and unrestricted space
of the seashore was a great event. Much later Tillich chose a place on the Atlantic Ocean for his days of retirement, a decision that undoubtedly owed much to those early experiences. As a boy Tillich was also able to escape from the narrowness of small-town life by making trips to Berlin. Visits to the big city curiously reminded him of the sea. Berlin, too, gave Tillich a feeling of openness, infinity, unrestricted space. Experiences of this kind make us ponder anew the meaning of a word like "space" or "spaciousness" that we think we know well.

What is a place? What gives a place its identity, its aura? These questions occurred to the physicists Niels Bohr and Werner Heisenberg when they visited Kronberg Castle in Denmark. Bohr said to Heisenberg:

Isn't it strange how this castle changes as soon as one imagines that Hamlet lived here? As scientists we believe that a castle consists only of stones, and admire the way the architect put them together. The stones, the green roof with its patina, the wood carvings in the church, constitute the whole castle. None of this should be changed by the fact that Hamlet lived here, and yet it is changed completely. Suddenly the walls and the ramparts speak a quite different language. The courtyard becomes an entire world, a dark corner reminds us of the darkness in the human soul, we hear Hamlet's "To be or not to be." Yet all we really know about Hamlet is that his name appears in a thirteenth-century chronicle. No one can prove that he really lived, let alone that he lived here. But everyone knows the questions Shakespeare had him ask, the human depth he was made to reveal, and so he, too, had to be found a place on earth, here in Kronberg. And once we know that, Kronberg becomes quite a different castle for us.²

Recent ethological studies show that nonhuman animals also have a sense of territory and of place. Spaces are marked off and defended against intruders. Places are centers of felt value where biological needs, such as those for food, water, rest, and procreation, are satisfied. Humans share with other animals certain behavioral patterns, but as the reflections of Tillich and Bohr indicate, people also respond to space and place in complicated ways that are inconceivable in the animal world. How can the Baltic Sea and Berlin both evoke a sense of openness and infinitude? How can a mere legend haunt Kronberg Castle and impart a mood that infiltrates the minds of two
famous scientists? If our concern with the nature and quality of the human environment is serious, these are surely basic questions. Yet they have seldom been raised. Instead we study animals such as rats and wolves and say that human behavior and values are much like theirs. Or we measure and map space and place, and acquire spatial laws and resource inventories for our efforts. These are important approaches, but they need to be complemented by experiential data that we can collect and interpret in measured confidence because we are human ourselves. We have privileged access to states of mind, thoughts and feelings. We have an insider’s view of human facts, a claim we cannot make with regard to other kinds of facts.

People sometimes behave like cornered and wary animals. On occasion they may also act like cool scientists dedicated to the task of formulating laws and mapping resources. Neither posture holds sway for long. People are complex beings. The human endowment includes sensory organs similar to those of other primates, but it is capped by an exceptionally refined capacity for symbolization. How the human person, who is animal, fantasist, and computer combined, experiences and understands the world is the central theme of this book.

Given the human endowment, in what ways do people attach meaning to and organize space and place? When this question is asked, the social scientist is tempted to rush to culture as an explanatory factor. Culture is uniquely developed in human beings. It strongly influences human behavior and values. The Eskimos’ sense of space and place is very different from that of Americans. This approach is valid, but it overlooks the problem of shared traits that transcend cultural particularities and may therefore reflect the general human condition. When note is taken of “universals,” the behavioral scientist is likely to turn to the analogue of primate behavior. In this book our animal heritage is assumed. The importance of culture is taken for granted; culture is inescapable, and it is explored in every chapter. But the purpose of the essay is not to produce a handbook of how cultures affect human attitudes to space and place. The essay is, rather, a prologue to culture in its countless variety; it focuses on general questions of human dispositions,
capacities, and needs, and on how culture emphasizes or distorts them. Three themes weave through the essay. They are:

(1) The biological facts. Human infants have only very crude notions of space and place. In time they acquire sophistication. What are the stages of learning? The human body lies prone, or it is upright. Upright it has top and bottom, front and back, right and left. How are these bodily postures, divisions, and values extrapolated onto circumambient space?

(2) The relations of space and place. In experience, the meaning of space often merges with that of place. "Space" is more abstract than "place." What begins as undifferentiated space becomes place as we get to know it better and endow it with value. Architects talk about the spatial qualities of place; they can equally well speak of the locational (place) qualities of place. The ideas "space" and "place" require each other for definition. From the security and stability of place we are aware of the openness, freedom, and threat of space, and vice versa. Furthermore, if we think of space as that which allows movement, then place is pause; each pause in movement makes it possible for location to be transformed into place.

(3) The range of experience or knowledge. Experience can be direct and intimate, or it can be indirect and conceptual, mediated by symbols. We know our home intimately; we can only know about our country if it is very large. A longtime resident of Minneapolis knows the city, a cabdriver learns to find his way in it, a geographer studies Minneapolis and knows the city conceptually. These are three kinds of experiencing. One person may know a place intimately as well as conceptually. He can articulate ideas but he has difficulty expressing what he knows through his senses of touch, taste, smell, hearing, and even vision.

People tend to suppress that which they cannot express. If an experience resists ready communication, a common response among activists ("doers") is to deem it private—even idiosyncratic—and hence unimportant. In the large literature on environmental quality, relatively few works attempt to understand how people feel about space and place, to take into account the different modes of experience (sensorimotor, tac-
tile, visual, conceptual), and to interpret space and place as images of complex—often ambivalent—feelings. Professional planners, with their urgent need to act, move too quickly to models and inventories. The layman accepts too readily from charismatic planners and propagandists the environmental slogans he may have picked up through the media; the rich experiential data on which these abstractions depend are easily forgotten. Yet it is possible to articulate subtle human experiences. Artists have tried—often with success. In works of literature as well as in humanistic psychology, philosophy, anthropology and geography, intricate worlds of human experience are recorded.

This book draws attention to questions that humanists have posed with regard to space and place. It attempts to systematize humanistic insights, to display them in conceptual frames (here organized as chapters) so that their importance is evident to us not only as thoughtful people curious to know more about our own nature—our potential for experiencing—but also as tenants of the earth practically concerned with the design of a more human habitat. The approach is descriptive, aiming more often to suggest than to conclude. In an area of study where so much is tentative, perhaps each statement should end with a question mark or be accompanied by qualifying clauses. The reader is asked to supply them. An exploratory work such as this should have the virtue of clarity even if this calls for the sacrifice of scholarly detail and qualification.

A key term in the book is “experience.” What is the nature of experience and of the experiential perspective?
Experience is a cover-all term for the various modes through which a person knows and constructs a reality. These modes range from the more direct and passive senses of smell, taste, and touch, to active visual perception and the indirect mode of symbolization.¹

Experience

\[ \text{sensation, perception, conception} \]
\[ \text{EMOTION} \quad \text{emotion} \]
\[ \text{thought} \quad \text{THOUGHT} \]

Emotion tints all human experience, including the high flights of thought. Mathematicians, for example, claim that the design of their theorems is guided by aesthetic criteria—notions of elegance and simplicity that answer a human need. Thought tints all human experience, including the basic sensations of heat and cold, pleasure and pain. Sensation is quickly qualified by thought as one of a special kind. Heat is suffocating or prickly; pain is sharp or dull, an irritating tease or a brutal force.
Experience is directed to the external world. Seeing and thinking clearly reach out beyond the self. Feeling is more ambiguous. As Paul Ricoeur put it, “Feeling is . . . without doubt intentional: it is a feeling of ‘something’—the lovable, the hateful, [for instance]. But it is a very strange intentionality which on the one hand designates qualities felt on things, on persons, on the world, and on the other hand manifests and reveals the way in which the self is inwardly affected.” In feeling “an intention and an affection coincide in the same experience.”

Experience has a connotation of passivity; the word suggests what a person has undergone or suffered. An experienced man or woman is one to whom much has happened. Yet we do not speak of the plant’s experiences, and even of the lower animals the word “experience” seems inappropriate. The young pup, however, is contrasted with the experienced mastiff; and human beings are mature or immature depending on whether they have benefited from events. Experience thus implies the ability to learn from what one has undergone. To experience is to learn; it means acting on the given and creating out of the given. The given cannot be known in itself. What can be known is a reality that is a construct of experience, a creation of feeling and thought. As Susanne Langer put it: “The world of physics is essentially the real world construed by mathematical abstractions, and the world of sense is the real world construed by the abstractions which the sense organs immediately furnish.”

Experience is the overcoming of perils. The word “experience” shares a common root (per) with “experiment,” “expert,” and “perilous.” To experience in the active sense requires that one venture forth into the unfamiliar and experiment with the elusive and the uncertain. To become an expert one must dare to confront the perils of the new. Why should one so dare? A human individual is driven. He is passionate, and passion is a token of mental force. The emotional repertoire of a clam is very restricted compared with that of a puppy; and the affective life of the chimpanzee seems almost as varied and intense as that of a human being. A human infant is distin-
guished from other mammalian young both by his helplessness and by his fearsome tantrums. The infant’s emotional range, from smile to tantrum, hints at his potential intellectual reach.

Experience is compounded of feeling and thought. Human feeling is not a succession of discrete sensations; rather memory and anticipation are able to wield sensory impacts into a shifting stream of experience so that we may speak of a life of feeling as we do of a life of thought. It is a common tendency to regard feeling and thought as opposed, the one registering subjective states, the other reporting on objective reality. In fact, they lie near the two ends of an experiential continuum, and both are ways of knowing.

To see and to think are closely related processes. In English, “I see” means “I understand.” Seeing, it has long been recognized, is not the simple recording of light stimuli; it is a selective and creative process in which environmental stimuli are organized into flowing structures that provide signs meaningful to the purposive organism. Are the senses of smell and touch informed by mentality? We tend to slight the cognitive power of these senses. Yet the French verb “savoir” (to know) is closely related to the English “savour.” Taste, smell, and touch are capable of exquisite refinement. They discriminate among the wealth of sensations and articulate gustatory, olfactory, and textural worlds.

The structuring of worlds calls for intelligence. Like the intellectual acts of seeing and hearing, the senses of smell and touch can be improved with practice so as to discern significant worlds. Human adults can develop extraordinary sensitivity to a wide range of flower fragrances. Although the human nose is far less acute than the canine nose in detecting certain odors of low intensity, people may be responsive to a broader range of odors than dogs are. Dogs and young children do not appreciate flower fragrances in the way human adults do. Young children’s favorite odors are those of fruits rather than flowers. Fruits are good to eat, so preference for them is understandable. But what is the survival value of sensitivity to the chemical oils wafted by flowers? No clear biological purpose is served by this sensitivity. It would seem that our nose, no less
than our eyes, seeks to enlarge and comprehend the world. Some odors do have potent biological meaning. Body scents, for example, may stimulate sexual activity. Why, on the other hand, do many human adults find the smell of decay repulsive? Mammals with noses far keener than the human tolerate and even appreciate carrion odors that would disgust men. Young children also appear to be indifferent to fetid smells. Langer suggests that the odors of decay are *memento mori* to grown people but carry no such meaning to animals and small children. Touch articulates another kind of complex world. The human hand is peerless in its strength, agility, and sensitivity. Primates, including man, use their hands to know and comfort members of their own species, but man also uses hands to explore the physical environment, carefully differentiating it by the feel of bark and stone. Human adults dislike having sticky matter on their skin, perhaps because it destroys the skin’s power for discernment. Such a substance, like dirty spectacles, dulls a faculty of exploration.

The modern architectural environment may cater to the eye, but it often lacks the pungent personality that varied and pleasant odors can give. Odors lend character to objects and places, making them distinctive, easier to identify and remember. Odors are important to human beings. We have even spoken of an olfactory world, but can fragrances and scents constitute a world? “World” suggests spatial structure; an olfactory world would be one where odors are spatially disposed, not simply one in which they appear in random succession or as inchoate mixtures. Can senses other than sight and touch provide a spatially organized world? It is possible to argue that taste, odor, and even hearing cannot in themselves give us a sense of space. The question is largely academic, for most people function with the five senses, and these constantly reinforce each other to provide the intricately ordered and emotion-charged world in which we live. Taste, for example, almost invariably involves touch and smell: the tongue rolls around the hard candy, exploring its shape as the olfactory sense registers the caramel flavor. If we can hear and smell something we can often also see it.
What sensory organs and experiences enable human beings to have their strong feeling for space and for spatial qualities? Answer: kinesthesia, sight, and touch. Movements such as the simple ability to kick one's legs and stretch one's arms are basic to the awareness of space. Space is experienced directly as having room in which to move. Moreover, by shifting from one place to another, a person acquires a sense of direction. Forward, backward, and sideways are experientially differentiated, that is, known subconsciously in the act of motion. Space assumes a rough coordinate frame centered on the mobile and purposive self. Human eyes, which have bifocal overlap and stereoscopic capacity, provide people with a vivid space in three dimensions. Experience, however, is necessary. It takes time and practice for the infant or the person born blind but with sight recently restored to perceive the world as made up of stable three-dimensional objects arranged in space rather than as shifting patterns and colors. Touching and manipulating things with the hand yields a world of objects—objects that retain their constancy of shape and size. Reaching for things and playing with them disclose their separateness and relative spacing. Purposive movement and perception, both visual and haptic, give human beings their familiar world of disparate objects in space. Place is a special kind of object. It is a concretion of value, though not a valued thing that can be handled or carried about easily; it is an object in which one can dwell. Space, we have noted, is given by the ability to move. Movements are often directed toward, or repulsed by, objects and places. Hence space can be variously experienced as the relative location of objects or places, as the distances and expanses that separate or link places, and—more abstractly—as the area defined by a network of places (Fig. 1).

Taste, smell, skin sensitivity, and hearing cannot individually (nor perhaps even together) make us aware of a spacious external world inhabited by objects. In combination with the "spatializing" faculties of sight and touch, however, these essentially nondistancing senses greatly enrich our apprehension of the world's spatial and geometrical character. Taste labels some flavors "sharp," others "flat." The meaning of these
Experiential Perspective

A. Space defined by relative location of trading posts (Aivilik woman)

- Greenland
- Port Harrison
- Cape Dorset
- Frobisher Bay
- Lyons Inlet
- Repulse
- Southamton Island (home base)
- Eskimo Point
- Marble Island
- Wothus Island
- Brandon
- Ottawa Islands
- White man's land
- More white men

B. Bounded space of Aivilik Eskimo hunter

- Fort Ross
- Ponds Inlet
- Iglulik
- Admiralty Inlet
- Bathurst

Figure 1. Space as relative location and bounded space. The Eskimo (Aivilik) woman's space is essentially defined by the location and distance of significant points, mostly trading posts (A), as perceived from the home base on Southamton Island, whereas the idea of boundary (the coastline) is important to the male Eskimo's sense of space (B). Edmund Carpenter, Frederick Varley, and Robert Flaherty, Eskimo (Toronto: University of Toronto Press, 1959), page 6. Reprinted with permission from the University of Toronto Press.

Geometrical terms is enhanced by their metaphorical use in the realm of taste. Odor is capable of suggesting mass and volume. Some odors, like musk or tuberosa, are "heavy," whereas others are "delicate," "thin," or "light." Carnivores depend on their acute sense of smell to track down prey, and it may be that their nose is capable of articulating a spatially structured world—at least one that is differentiated by direction and distance. The human nose is a much atrophied organ. We depend on the eye to locate sources of danger and appeal, but with the support of a prior visual world the human nose too can discern direction and estimate relative distance through the strength of an odor.
A person who handles an object feels not only its texture but its geometric properties of size and shape. Apart from manipulation, does skin sensitivity itself contribute to the human spatial experience? It does, though in limited ways. The skin registers sensations. It reports on its own state and at the same time that of the object pressing against it. The skin is not, however, a distance sensor. In this respect tactile perception is at the opposite extreme of visual perception. The skin is able to convey certain spatial ideas and can do so without the support of the other senses, depending only on the structure of the body and the ability to move. Relative length, for example, is registered when different parts of the body are touched at the same time. The skin can convey a sense of volume and mass. No one doubts that "entrance into a warm bath gives our skin a more massive feeling than the prick of a pin."12 The skin, when it comes in contact with flattish objects, can judge approximately their shape and size. At the micro level, roughness and smoothness are geometric properties that the skin easily recognizes. Objects are also hard or soft. Tactile perception differentiates these characteristics on spatio-geometric evidence. Thus a hard object retains its shape under pressure whereas a soft object does not.13

Is a sense of distance and of space created out of the ability to hear? The world of sound would appear to be spatially structured, though not with the sharpness of the visual world. It is possible that the blind man who can hear but has no hands and can barely move lacks all sense of space; perhaps to such a person all sounds are bodily sensations and not cues to the character of an environment. Few people are so severely handicapped. Given sight and the power to move and handle things, sounds greatly enrich the human feeling for space. Human ears are not flexible, so they are less equipped to discern direction than, say, the ears of a wolf. But by turning the head a person can roughly tell the direction of sounds. People are subconsciously aware of the sources of noise, and from such awareness they construe auditory space.

Sounds, though vaguely located, can convey a strong sense of size (volume) and of distance. For example, in an empty
cathedral the sound of footsteps tapping sharply on the stone floor creates an impression of cavernous vastness. As for the power of sound to evoke distance, Albert Camus wrote: “In Algeria dogs can be heard barking at night over distances ten times greater than in Europe. The noise thus takes on a nostalgia unknown in our cramped countries.” Blind people develop an acute sensitivity to sounds; they are able to use them and their reverberations to evaluate an environment’s spatial character. People who can see are less sensitive to auditory cues because they are not so dependent on them. All human beings learn, however, to relate sound to distance in the act of speaking. We alter our tone of voice from soft to loud, from intimate to public, in accordance with the perceived physical and social distances between ourselves and others. The volume and phrasing of our voice as well as what we try to say are constant reminders of proximity and distance.

Sound itself can evoke spatial impressions. The reverberations of thunder are voluminous; the squeaking of chalk on slate is “pinched” and thin. Low musical tones are voluminous whereas those of high pitch seem thin and penetrating. Musicologists speak of “musical space.” Spatial illusions are created in music quite apart from the phenomenon of volume and the fact that movement logically involves space. Music is often said to have form. Musical form may generate a reassuring sense of orientation. To the musicologist Roberto Gerhard, “form in music means knowing at every moment exactly where one is. Consciousness of form is really a sense of orientation.”

The various sensory spaces bear little likeness to each other. Visual space, with its vividness and size, differs strikingly from diffuse auditory and tactile-sensorimotor spaces. A blind man whose knowledge of space derives from auditory and tactile cues cannot, for some time, appreciate the visual world when he gains sight. The vaulted interior of a cathedral and the sensation of slipping into a warm bath both signify volume or spaciousness, although the experiences are hardly comparable. Likewise the meaning of distance is as varied as its experiential modes: we acquire the feel of distance by the effort of
moving from one place to another, by the need to project our voice, by hearing the dogs bark at night, and by recognizing the environmental cues for visual perspective.

The organization of human space is uniquely dependent on sight. Other senses expand and enrich visual space. Thus sound enlarges one’s spatial awareness to include areas behind the head that cannot be seen. More important, sound dramatizes spatial experience. Soundless space feels calm and lifeless despite the visible flow of activity in it, as in watching events through binoculars or on the television screen with the sound turned off, or being in a city muffled in a fresh blanket of snow.17

Human spaces reflect the quality of the human senses and mentality. The mind frequently extrapolates beyond sensory evidence. Consider the notion of vastness. The vastness of an ocean is not directly perceived. “We think the ocean as a whole,” says William James, “by multiplying mentally the impression we get at any moment when at sea.”18 A continent separates New York from San Francisco. A distance of this order is apprehended through numerical or verbal symbols computed, for example, in days’ journeys. “But the symbol will often give us the emotional effect of the perception. Such expressions as the abysmal vault of heaven, the endless expanse of ocean, etc., summarize many computations of the imagination, and give the sense of enormous horizon.” Someone with the mathematical imagination of Blaise Pascal will look at the sky and be appalled by its infinite expanse. Blind men are able to know the meaning of a distant horizon. They can extrapolate from their experience of auditory space and of freedom in movement to envisage in their minds’ eyes panoramic views and boundless space. A blind man told William James that “he thought few seeing people could enjoy the view from a mountain top more than he.”19

The mind discerns geometric designs and principles of spatial organization in the environment. For example, Dakota Indians find evidence of circular forms in nature nearly everywhere, from the shape of birds’ nests to the course of the stars. In contrast, the Pueblo Indians of the American South-
west tend to see spaces of rectangular geometry. These are examples of the construed space, which depends on the power of the mind to extrapolate far beyond the sense data. Such spaces lie at the conceptual end of the experiential continuum. Three principal types, with large areas of overlap, exist—the mythical, the pragmatic, and the abstract or theoretical. Mythical space is a conceptual schema, but it is also pragmatic space in the sense that within the schema a large number of practical activities, such as the planting and harvesting of crops, are ordered. A difference between mythical and pragmatic space is that the latter is defined by a more limited set of economic activities. The recognition of pragmatic space, such as belts of poor and rich soil, is of course an intellectual achievement. When an ingenious person tries to describe the soil pattern cartographically, by means of symbols, a further move toward the conceptual mode occurs. In the Western world systems of geometry—that is, highly abstract spaces—have been created out of primal spatial experiences. Thus sensorimotor and tactile experiences would seem to lie at the root of Euclid’s theorems concerning shape congruence and the parallelism of distant lines; and visual perception is the basis for projective geometry.

Human beings not only discern geometric patterns in nature and create abstract spaces in the mind, they also try to embody their feelings, images, and thoughts in tangible material. The result is sculptural and architectural space, and on a large scale, the planned city. Progress here is from inchoate feelings for space and fleeting discernments of it in nature to their public and material reification.

Place is a type of object. Places and objects define space, giving it a geometric personality. Neither the newborn infant nor the man who gains sight after a lifetime of blindness can immediately recognize a geometric shape such as a triangle. The triangle is at first "space," a blurred image. Recognizing the triangle requires the prior identification of corners—that is, places. A neighborhood is at first a confusion of images to the new resident; it is blurred space "out there." Learning to know the neighborhood requires the identification of significant
localities, such as street corners and architectural landmarks, within the neighborhood space. Objects and places are centers of value. They attract or repel in finely shaded degrees. To attend to them even momentarily is to acknowledge their reality and value. The infant’s world lacks permanent objects, being dominated by fleeting impressions. How do impressions, given to us through the senses, acquire the stability of objects and places?

Intelligence is manifest in different types of achievement. One is the ability to recognize and feel deeply about the particular. In distinction to the schematic worlds in which animals live, the schematic worlds of human beings are also richly populated with particular and enduring things. The particular things we value may be given names: a tea set is Wedgwood and a chair is Chippendale. People have proper names. They are particular things and they may well be the first permanent objects in the infant’s world of unstable impressions. An object such as a valued crystal glass is recognized by its unique shape, decorative design, and ring when lightly tapped. A city such as San Francisco is recognized by its unique setting, topography, skyline, odors, and street noises. An object or place achieves concrete reality when our experience of it is total, that is, through all the senses as well as with the active and reflective mind. Long residence enables us to know a place intimately, yet its image may lack sharpness unless we can also see it from the outside and reflect upon our experience. Another place may lack the weight of reality because we know it only from the outside—through the eyes as tourists, and from reading about it in a guidebook. It is a characteristic of the symbol-making human species that its members can become passionately attached to places of enormous size, such as a nation-state, of which they can have only limited direct experience.