

CULTURES AND SPACES

The Effects of Varying Dimensions of Environmental Perception on Human Communication

Richard Harris

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Social research of any kind is advanced by ideas; it is only disciplined by fact.

C. Wright Mills (1959, p. 71)

“Space speaks.” With this pithy dictum, Edward T. Hall, nearly forty years ago, introduced his then-original concept that cultures could be differentiated by their use and perception of space (Hall 1959, p. 187). Hall, however, both in this work and in *The Hidden Dimension* (1966), his later book devoted wholly to the public and private uses of space in humans, chose to concentrate on intercultural differences in personal space - concepts of privacy and crowding. Although in this second book he discusses briefly the effects of urbanization and automobile culture on human space perception, there is curiously little extended discussion of the psychological and, hence, interactional effects of different types of space, especially “large space.” Although, for instance, Hall makes the perceptive and (for 1966) prophetic comment that: “The great danger in the United States today is the continuing destruction of the outdoors” (Hall 1966, p. 168), he does not go on to say why this is a danger, and fails to distinguish between different kinds of “outdoors.” For a sensitive interculturalist like Hall to betray these hidden assumptions about the nature and importance of the “outdoors” is surprising, but by no means rare; few writers have looked closely at this question.

In this present paper, therefore, I should like to consider in more detail how different kinds of space might affect human communication, both in intercultural and intracultural interactions. That is, I shall investigate the often unacknowledged role played by the environment (in the most general sense of the term) in forming the assumptions that so strongly influence our interactions with others, perhaps especially those from different cultural backgrounds. This is clearly a field of inquiry with historical, geographical and psychological dimensions. As Yi-Fu Tuan, one of the small number of scholars to have dealt in any depth with this topic asks: "What are our views on our physical environment, natural and man-made? How do we perceive, structure, and evaluate it? What have been, and what are, our environmental ideals? . . . What are the links between environment and world view?" (Tuan 1974, p. 1)

The first step in such an investigation must be the creation of a conceptual framework by which environmental effects may be studied. There are clearly many ways in which such a framework could be constructed. One possibility, for instance, might be to take an historical perspective on changing attitudes to the environment, as Sir Keith Thomas did in his wonderful study of the representation of the natural world in England over the period from the sixteenth to the nineteenth centuries (Thomas 1984). A similar, though more psychological approach was taken by Don Gifford in his book on changes in perception in the course of the nineteenth century (Gifford 1990). The problem with this perspective, though, as with the complementary geographical focus, is that they both necessarily sacrifice historical and geographical breadth of reference for depth of detail. Any attempt to be more comprehensive with regard to these aspects, as in Derek Wall's ambitious compendium of environmental thought (Wall 1994), tends to veer uncertainly between the Scylla of superficiality and the Charybdis of fragmentation.

In view of these limitations then, I should like in this paper to approach the topic by means of a conceptual route which, to my knowledge, has not been previously attempted: that of environmental magnitude, or scale. By this, I mean that the environment exerts effects that can be usefully differentiated in terms of their immediacy or proximity to the perceiver, as well as by their perceived size. This is not to say that the strength or importance of the effects is directly correlated to this perceived proximity or dimensional quality; I am merely suggesting a kind of taxonomy by means of which environmental

influences may be identified and investigated. Any taxonomy in the social sciences is, of course, an artificial, inherently arbitrary device; its categories, applying as they do to the infinitely protean nature of the human organism, can be neither totally comprehensive nor perfectly mutually exclusive. Nevertheless, I believe that the approach outlined in this paper does offer a new perspective on a strangely neglected area of human behavior; whether that perspective leads on to fresh insights and deeper understanding is for others to judge; knowledge is increased and refined by dialectic. "In the end," says C. Wright Mills, "if the end comes, we just have to beat those who disagree with us over the head; let us hope the end comes seldom. In the meantime, being as reasonable as we are able to be, we ought all to argue." (Mills 1959, p. 77)

In this scheme, I have designated six main environmental dimensions, or perceptual frames. As noted above, these are not discrete categories, and some overlap is inevitable. There are, however, sufficient differences between them to justify their use in providing a framework and a starting point for discussion. In descending order of magnitude, then, they are as follows:

The first dimension I have termed Cosmological, and I use it to refer to an individual's conception of his or her relation to the universe. This would involve ideas regarding the Earth's position in space and its relationship with other cosmic bodies. More subtly, whether the cosmos is explained by science, religion or magic would be an important element. The existence and location of invisible, non-material realms of being (such as Heaven and Hell) would form part of this cosmological perception, as would ideas concerning the meaning and importance of cosmic phenomena such as comets and meteors.

Coming down to Earth, as it were, my next term is Geographical, and I use it to refer to ideas regarding the shape and disposition of the world's lands and peoples. Orientation and perceptions of size and distance fall into this category, as do levels of knowledge of, and interest in, other regions. The size and importance of one's own region is obviously a crucial factor. Maps, both mental and physical, are important indices of this conceptual and perceptual complex.

My third term is Environmental, and I use it here to refer to the type of physical landscape surrounding the individual, along with climatic and other ecological aspects. The variety and intensity of the sensory environment also form part of this frame, as do the symbolic meanings and values attached to various aspects of the surrounding natural phenomena by the individual and his or her culture.

The Social category refers to community and settlement patterns, the study of which has been called ekistics (Doxiadis 1963). Degrees of accommodation to the physical environment, urbanization, concepts of privacy, individuality, insularity and commonality are all included here, as are even more explicitly political considerations such as decision-making processes, economic assumptions and structures and degrees of communal participation.

Under the term Domestic I consider the arrangement of dwelling places and working environments together with the attitudes towards them. Emotional attachment to physical to dwellings can be investigated here, along with degrees of permanence, differentiation of areas, territoriality and openness. Ideas about the family and its concomitant obligations in terms of authority and domicile also fall into this frame.

Finally, I use the term Personal to refer to individual requirements with regard to space. Possibly owing to its being the most easily observed of my six categories, this has been a traditional focus in communication studies under the name of interpersonal proxemics, and much research has been done since Hall introduced it as a legitimate area of study. Non-verbal behavior is especially relevant here in providing indicators of such factors as degrees of adaptation to setting and definitions of intimacy.

As repeatedly emphasised, there is obviously overlap between the above categories: cosmological conceptions clearly influence symbolic structures, for instance, and personal, social and domestic beliefs are to a certain extent interdependent. Nevertheless, as I hope the following discussion will show, such a conceptual structure affords valuable insights into the effects that different levels of environmental factors might have on human thought, behavior and interaction. In this present paper, for reasons (appropriately enough) of space, I shall confine myself to the first three categories, the

'big spaces' of the cosmological, the geographical and the environmental. The remaining three categories will be the subject of a subsequent paper.

The Cosmological Dimension

It is generally accepted that one of the most important developments in the history of human thought in the West since Classical times was the change from the Ptolemaic conception of a geocentric universe to the Copernican heliocentric model. Thomas Kuhn makes use of this great conceptual readjustment as a defining illustration of his notion of a scientific paradigm shift (Kuhn 1970), and many writers have traced its influence on such momentous historical phenomena as the Protestant Reformation, the Renaissance and the Enlightenment. (See, for instance, Thomas 1971 or Tarnas 1991.) There is little doubt that this demotion of humanity from its place at the centre of the universe was bound to threaten and ultimately destroy the static world view of the Mediaeval church, which explains the determined contemporary Catholic opposition to Copernicus and proponents of his theory such as Galileo. The undermining of transcendent authority (and, by extension, that authority's worldly representatives) by the Copernican Revolution has clearly had social consequences far removed from its scientific importance.

As a more current, if somewhat less dramatic example of the influence of a changed cosmological perspective, it is surely arguable that the 1969 photographs of the Earth taken by the Apollo astronauts had a profound influence on environmentalist concerns. (The first Earth Day was in 1970.) While there existed a widespread intellectual awareness of the Earth as a spinning, watery sphere revolving around a fiery, gaseous mass, nothing had really prepared most people for the breathtakingly beautiful images of that delicate, blue orb surrounded by stark blackness. People were suddenly able, it seemed, to identify with the whole planet as home, rather than confining their allegiances to ethnic groups, regions or nation states - Benedict Anderson's "imagined communities." (Anderson 1991) Although this unitary vision has hardly had the idealist impact hoped for by some, it has had profound impact on the membership, the policies and the influence of such transnational groups as Greenpeace and the Worldwide Fund for Nature.

Fantastically different cosmological conceptions may of course be found in the

ethnographic literature, the view of the earth as a flat disc supported by four elephants standing on the shell of a giant turtle being only one of the more bizarre and better-known examples. Subtler differences exist, however. A British anthropologist, Tim Ingold, has written a fascinating essay on the implications of different cosmological images in the developed world, particularly those that stem from envisaging the cosmos as a globe, rather than a sphere. In his view: "Unlike the solid globe, which can only be perceived as such from without, spheres . . . were to be perceived from within." (Ingold 1993, p. 33) The dominant Western image of the globe thus tends to encourage an attitude of separation and detachment, exemplified by the exploitative use of science and technology. Interestingly, he goes on to discuss the architectural form of the dome as a concrete symbol of how these apparently opposing conceptions may be reconciled: "A sphere on the inside, a globe on the outside, this form has a cosmic resonance of near-universal appeal." (Ingold 1993, p. 42)

Another example of how cosmological concepts affect attitudes towards the planet and towards other people is found in religious beliefs. If, as for many Christians, the Earth is merely a station on the way to an infinitely superior realm of existence, then the concept of stewardship loses a great deal of its meaning. In an essay of seminal importance to the environmentalist movement, the historian Lynn White Jr explicitly blamed Judaeo-Christian civilization for the ecological degradation of the planet. (White 1967) In a more recent example of this attitude, Ronald Reagan's nomination for Secretary of the Interior, James Watt, was asked at his Senate confirmation hearing his views on how best to preserve the environment for future generations. "I do not know how many generations we can count on before the Lord returns," was his reply. (Boyer 1992, p. 141) His appointment was confirmed.

Many cultures envisage different planes of existence, such as Heaven, Earth and Hell, connected by a cosmic axis which is represented by either a natural object, such as a tree or a mountain, or an artificial one, such as a pillar or a building. Buddhists, for instance, revere this axis as either the mythical Mount Meru or the actual Mt Kailas in Tibet, while Christians see the Cross as symbolizing the union of Heaven and Earth, its location in Jerusalem; for Muslims, it is the sacred stone in Mecca. The cosmic axis must pass through the centre of the world, and there was thus appreciable political advantage for

ancient cities in marking the location of the cosmic axis within their boundaries. John Michell, in his examination of such sites in ancient Europe, calls this “symbolic centrology” (Michell 1994), and it is not too far-fetched, perhaps, to see its echo in the competition among modern-day cities for the tallest building in the world. This obsession with being at the centre of the world, however, is really a feature of the next section.

The Geographical Dimension

China has always thought of itself as “the Middle Kingdom.” While this may originally have had some physical justification, referring to the country’s geographical position between the cold, barren lands to the north and the inhospitable jungles to the south, between the sea to the east and the deserts to the west, there is no doubt but that the term contributed to what outsiders have often perceived as China’s arrogant assumption of being in the centre of things. As was mentioned above, however, this is by no means an isolated phenomenon: many cultures similarly conceive of themselves as being in the central, therefore most important position, with regard to their neighbors. This tendency can certainly be encouraged by creative, or at least careful cartography.

So entrenched are cartographic conventions that it is hard to accept their arbitrary nature and the possibility of others - especially when those conventions result in maps favoring the appearance of the dominant culture. In a recent book, *Maps and History* (Black 1997), Jeremy Black has made a refreshingly critical study of this political aspect of cartography, admitting to “a concern about mapping that relates to present interest in the power of maps as means to approach and present situations, and the process by which cartography reflects power.” (Black 1997, p. 239) Earlier in the book he notes that in the sixteenth century Mercator, in devising a projection that facilitated navigation, simultaneously enlarged the apparent size of the possessions of his patron, the King of Spain. The characteristic feature of Mercator projection in exaggerating the size of land masses near the poles was the reason it was used by the British in the nineteenth century: Canada was made to look gigantic, vastly increasing the apparent size and spread of the British Empire (although India was correspondingly reduced in apparent territory). The distortions are massive; on Mercator projection, Greenland looks to be twice the size of South America, while in reality being only a little larger than Mexico, and looks much

larger than Australia although it is in fact only just over one-quarter of the size.

Other factors than projection can also heavily influence the perception of the world as mediated by maps. With the partial justification that the zero meridian, by convention, passes through Greenwich, near London, British maps have always portrayed London as the centre of the world. Apart from encouraging a no doubt already latent ethnocentrism, Asian countries (the “Far East”) seem to be hanging on to the far edge of the world, and the massive scale of the Pacific Ocean is ridiculously diminished. (It is a literally disorienting experience for a European to encounter for the first time a map centred on the 180-degree meridian, such as is commonly found in Asia and the United States.) Combined with Mercator projection, the zero meridian orientation makes Europe and North America seem overwhelmingly dominant and central, with Asia and the southern hemisphere reduced to insignificance.

In 1972, Arno Peters attempted to redress the distortion inherent in Mercator projection by producing a map that employed equal-area projection, which represented land areas in proportion to their actual size. This restored visual prominence to the developing world, but has yet to attain general acceptance, taking until 1989 for a full atlas to be produced. The Peters projection, however, retained the convention of placing North at the top of the page and generally centred the map on the zero meridian, still giving the developed north “superiority” over the southern hemisphere. In 1979, MacArthur published his *Universal Corrective Map of the World*, which placed South at the top of the page and centred the map on the meridian running through Canberra, but this map has yet to achieve more than novelty appeal outside Australasia.

Even without the encouragement of maps, people have a tendency to see their own region as the centre of the universe, and care only selectively at best about the nature of areas beyond those boundaries. Saul Steinberg’s famous *New Yorker* cover, which showed a massively foreshortened view of the world from 9th Avenue, Manhattan, probably represents the world view (translated to their own areas) of large numbers of people. The buildings on the corner of 9th Avenue are drawn in meticulous, recognizable detail, and individual structures are identifiable as the cross street slopes down to the river. On the other side of the Hudson, a narrow, featureless strip represents Jersey, which is followed by

a slightly wider, undifferentiated area dotted with names like Kansas City, Nebraska and Las Vegas. Beyond that is a blank band labeled the Pacific Ocean, the other side of which are three distant blurs vaguely labeled Japan, China and Korea. As Joyce Davis (albeit rather piously) remarks: "The more we learn about geography - where we live, where and how others live, what our similarities and differences are, and how we can alter the future of the earth - the greater our capacity will be to influence our future for the better." (Davis 1994 p. 16)

The Environmental Dimension

Wallace Stegner once wrote that whatever landscape a child is exposed to early on, that will be the sort of gauze through which he or she will see all the world afterward. (Stegner 1995) A graphic example of this is provided by Colin Turnbull, in his ethnographic classic *The Forest People*. (Turnbull 1961) Turnbull relates how, one day, he took one of his Mbuti Pygmy friends out of the dense Ituri rain forest where he had spent all his life on a long journey on foot. At one stage they came out of the forest onto a high plateau overlooking the savanna grasslands, far below - and Turnbull's companion was terrified. The light was too bright, the sky too high, the scale too vast; but what really impressed Turnbull was that his Mbuti friend had no sense of perspective: the giraffes and other animals on the plain below were, to him, miniatures, no bigger than his hand. Living in the rain forest had developed in the Mbuti a superbly adapted sense of sight with regard to gloomy conditions and short distances, but had not prepared them in the slightest for the wide panoramas of the open grassland.

Given the vast range of different environments around the Earth to which humans have adapted, it is little wonder that responses to these habitats, both physical and psychological, vary correspondingly. Arctic dwellers can distinguish immediately between dozens of different types of snow and ice, indistinguishable to an outsider, and can navigate confidently across huge swathes of apparently uniform whiteness, devoid of landmark or feature. The Simpson desert of central Australia, to visitors one of the most inhospitably barren places on the surface of the Earth, is a comfortable, fecund home to the Aboriginal tribes who live there. On a less dramatic scale, many urban dwellers feel ill at ease in the country, just as rural visitors to the big city are similarly ill-equipped to deal with its very

different demands. It is often forgotten that “culture shock” may involve more than adapting to new linguistic and sociocultural patterns; the physical environment itself can be a powerful factor.

There may also be a powerful effect exerted by what might be termed symbolic considerations. Native Americans, especially the nomadic tribes, were in equal measure mystified and horrified by the nineteenth century white settlers’ attitude to the land. Concepts of land ownership were incomprehensible to them, as, for some tribes, was the idea of desecrating the ground with ploughs, railway lines and mineshafts. Similar conflicts were encountered by the British in Aotearoa-New Zealand, when the British attempted to colonise “empty” land traditionally reserved by the Maoris for spirit beings. As Julian Burger comments: “Respect for the spirit world was fundamental to Maori society, but fell outside the comprehension of the British legal system.” (Burger 1990, p. 61)

In large part, the above two examples are a legacy of what Rupert Sheldrake has called the “disenchantment of the world” by Protestant reformers. (Sheldrake 1990, p. 20) By contrast, Roman Catholics have generally accepted the idea that spiritual power pervades the Earth, and Catholic attacks on traditional pagan sacred places have been made with the aim of rendering them Christian rather than wiping them out altogether. Max Weber showed how Protestant beliefs informed both the growth of science and the materialist ethic of capitalism (Weber 1930), and Talcott Parsons, Weber’s translator, argues persuasively that the Protestant ethic not only “constitutes a continuing substratum of our [American] national culture,” but that it “has been so pervasively institutionalized that it comes to form a kind of matrix that has selectively shaped the attitudes of the adherents of the other principal religious traditions.” (Parsons 1978, p. 121)

A depressing illustration of the power of this set of attitudes and the mutual incomprehension they can engender is furnished by the writer Norman Lewis, who recently visited a remote jungle site in Irian Jaya where an American company had created the biggest copper mine in the world, essentially by destroying an entire mountain and filling an adjacent valley with the spoil. Lewis describes the environmental degradation of the place, as well as the squalid condition of the forcibly dispossessed Amungme tribe. He then

reports a conversation with a senior company employee who is in charge of the Local Community Development Project and also a member of the Summer Institute of Linguistics, the deceptive name of the largest and most influential fundamentalist Protestant mission in the world: “ ‘Don’t the Amungme regard these mountains as holy?’ He laughed it off. ‘Let me say this,’ he said. ‘What’s a mountain to them? These mountains are not even so valuable as a single pandanus nut tree.’ ” (Lewis 1993, p. 237)

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