Chapter I
Paths and Patches:
Patterns of Geognosy and Gnosis

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ABSTRACT

Map, mazes, myths, magic, and mathematics, computation, cognition, community, and the constructed environment, all reveal something of our internal models of space. Whilst the spaces we inhabit have many objective properties, we only perceive and process certain of these, and add many social and subjective qualities of our own. In fairy tales and science fiction, some of the “real” properties are let slip, yet the worlds remain comprehensible. Studying the essential and nonessential qualities of space can guide the construction and navigation of information spaces. However, the very idea of information spaces, and indeed cyberspace, presupposes that spatial metaphors can make sense of information. This chapter explores the relationships between our understandings of physical space and conceptual spaces; from childhood memories, to transarticulation, the way words shape our conceptual and physical landscape, we will see that our understandings of space and of knowledge itself are similarly shaped.

INTRODUCTION

In previous talks and papers, I have explored the way we as humans understand the physical world (Dix, 2000; Dix 2001; Dix, Friday, Koleva, Rodden, Muller, Randell, & Steed, 2005). Artefacts, words, and abstractions, such as maps, mazes, myths, magic, and mathematics, computation, cognition, community identity, and the constructed environment, all reveal something of our internal models of space. Whilst the space in which we live has many objective properties, we only perceive and process certain of these, and add many social and subjective qualities of our own. In fairy tales and science fiction, some of the “real” properties are let slip, yet the worlds remain comprehensible. By observing which properties can be lost, we understand more clearly what is essential.
My own reason for studying the essential and nonessential qualities of space has been to understand the construction and navigation of information spaces. Others have had similar motivation; for example, the Tower project used theories of space syntax to lay out information objects in virtual spaces (Prinz, Pankoke-Babatz, Graethe, Gross, Kolvenbach, & Schäfer, 2004). However, the very idea of information spaces, and indeed cyberspace, presupposes that spatial metaphors can make sense of information. In this chapter, we will explore the relationships between our understandings of physical space and conceptual spaces. From childhood memories of the back lanes on the way to school, to transarticulation, the way words shape our conceptual and physical landscape, we will see that our understandings of space and of knowledge itself are similarly shaped.

OF MAPS AND MAPMAKERS

Cartographic Journey

Whilst I have always loved maps, I recall first being prompted to look at the history of maps by someone who was describing the way maps had “developed” towards the “true” maps we have today. The idea that the Cartesian bird’s-eye view is categorically “true” piqued me somewhat and, as we shall see, it is not even modern.

In fact, mapmaking is an ancient art. A clay tablet, discovered in 1930 at Ga-Sur at Nuzi (in modern Iraq), is often described as “the earliest known map.” It is dated at about 2,200 BC, and depicts a river running between two hill ranges and dividing into several channels with named places. Given it is incised into clay, the lines and location lack precision, but ignoring this, it takes a surprisingly “modern” bird’s-eye perspective. Whilst this is perhaps the oldest known map of a region, mapping goes further back still. In 1963, excavations at the ancient town of Catal Hyuk (now in modern Turkey) found a wall painting depicting what is believed to be the township itself, dated at 6,200 BC. The painting is also surprisingly “modern,” a bird’s-eye view of the streets and houses.

Nearly a thousand years later than the Ga-Sur map, the Egyptian mayor of Thebes, Sennefer, made himself a tomb that Victorian Egyptologists called the “Tomb of the Vineyards” because of the garden painting on its ceiling. Yet again this garden plan is amazingly “modern,” very similar to the slightly too tidy plan views of 18th century grand gardens. The garden extends from a riverside with several walled enclosures and different areas, all viewed clearly from above. Except the trees. In the garden, trees are depicted in orchard areas and alongside the river and paths; clearly not one-to-one with real trees, there are too few, more to give an impression. However, the trees are not shown from above, but side-on iconic images, just like in a children’s cartoon story. Strangely though, look at a forested area on a modern UK Ordnance Survey map. To distinguish coniferous and deciduous woodland we find small iconic trees, just like those in Sennefer’s garden plan more than 3,000 years before.

Jumping forward another few thousand years to the early 17th century, John Speed produced some of the most accurate and popular maps of his day. The coastlines of these probably differ little from those drawn today, and on many of his maps, there are town plans for major centres, again very similar to those you might find in a current road atlas. However, his 1610 map of Wales is particularly interesting. Its coastline is cartographically highly precise; but, look inland and things are far more vague. Mountains are drawn as small conic side views, symbolic of mountainous country, but clearly bearing no relation to the actual panorama or plan. Rivers also are drawn, yet do not appear to have any of the precision of the coastline.

On reflection, the reason for this difference is obvious. The precise Cartesian location of the coastline was of the utmost importance for
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