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When people talk about accessing information on the World Wide Web, they use expressions or words that refer to traveling through space. Even though the agent is not actually in motion, the linguistic forms chosen suggest that the agent is moving along a trajectory towards a destination. For instance, people talk about "travelling on the information superhighway", "surfing the net", "going to a web site", and "crashing into a deadend". Such phrases are metaphorical in that they involve a mapping of image-schemata (Lakoff, 1987; Johnson, 1987; Turner, 1987), such as SOURCE-PATH-GOAL, from the source domain of physical travel onto the target domain of information access. This kind of language use is not arbitrary but results from a coherent system of metaphorical thought in which the abstract is expressed in concrete terms.

Our analysis is based on a large corpus of linguistic data relating to the World Wide Web. Some data were gathered from popular press and technical books and articles. Additional data were collected through surveys in which both experienced and naive participants provided written responses to questions about their Web use. One of these surveys appeared on the World Wide Web itself. The remaining data were collected through online verbal protocols obtained while both experienced and naive participants used the web to access specific information.

The data we collected suggest that people conceptualize information as physical objects located at particular points in space. These information objects can be manipulated, moved, and stored; for example, "I picked up that brain from David's web page and moved it over to mine". These objects can be inspected from different directions; for example, "I got here from Yahoo yesterday, but today I found it from the Media Lab." Our data provide substantial evidence to show that even people with little or no exposure to the web understand and respond appropriately to language that reflects metaphorical thought relating to travel in two dimensions. Nevertheless, we also observed a few cases in which people with little prior exposure to the World Wide Web relied on other metaphors to think about and express motion in information space. For instance, two individuals used phrases such as "dial up the web page" or "what is the number I call to see that web page?", which suggests that they were mapping a telephone call onto information access on the web.

Why exactly is it that spatial metaphors are used when talking about accessing information? Lakoff (1987), Gibbs (1994), and others would probably argue that basic conceptual schemas, such as trajectory, motivate such thought and that this is reflected in the language used. Perhaps a more difficult question is why people conceive of themselves as actively moving through information space, when in fact what is actually happening is that information *moves* toward them; more precisely, the data indexed by a particular URL is transmitted from a distal computer to a user's screen at his or her request. We believe the answer lies in people's everyday interactions with objects in the world: ordinarily, when a person wants a distal object, he or she must exert energy and move to obtain it. This accords with Johnson's (1987) view of bodily experience.

Finally, our data suggest that people ordinarily conceive of the Web as a two-dimensional graph that supports mainly local movement. For instance, participants routinely spoke of "going back one" and of "following a chain of links". Yet the Web is multi-dimensional. The very notion of hypertext is of a system of multiply and arbitrarily interconnected nodes. But because people must move through the web in time, its multi-dimensional structure is transformed (both internally and externally) into simpler linear paths. For example, utterances such as "I went to Yahoo, then to entertainment, then to a Smashing Pumpkins web site, and I then I came back to Yahoo" reflect a linear way of thinking about the Web. Thus, even though time is metaphorically conceived as space (Lakoff & Johnson, 1980), in this case, time helps structure spatial concepts as well.

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