

The Art of Way finding

In modern era we've become accustomed to instantaneous transfer of information filtered by applications that act as a kind of guardian of information. In the realm of finding one's way, we use GPS and devices that take us from point A to point B without giving it a second thought. Are we slowly losing the cognitive processes that our ancestors had, and at what price? I use the theme of navigation as an avenue to explore the question of what we've lost in the information age. Cultures, such as the Polynesians, the Vikings and the early European explorers developed navigational schema that relied on a person's relation to the environment to find one's way.

The concept of navigation often takes on a metaphorical meaning of how one lead's one's life or achieves goals. Recent work on the organization of cognitive processes in the context of navigation has shown that this may be more than a simple metaphor: that navigation is a kind of template of how we organize our thoughts around future actions.

Lecture 1: Mental constructs and the origins of celestial navigation

Humans in particular, and mammals in general possess a cognitive map that creates a neural replica of the environment. Recent work in neuroscience has found the basis of this map. The nature of how this functions with respect to individual differences is illuminating. In particular the question of how people behave when they are lost speaks to the connection between cognitive processes and behavior.

In addition, I trace the development of celestial navigation with its curious origins in the practices of astrology.

Lecture 2: Wave piloting in the Marshall Islands

Of all the Pacific Island navigation cultures, the practice of wave piloting in the Marshall Islands is perhaps the most curious. Indigenous navigators employ the patterns of wave reflections and refractions with respect to the dominant swell to find their way among islands. Stick charts are a teaching aid and also a kind of map of wave formations for the apprentice navigator. Somehow the navigators are able to extract subtle information of the wave patterns in the presence of large backgrounds from wind-blown chop and the dominant swell. In this lecture I explore these practices, and the ingenious design of voyaging canoes in the Marshall Islands.