CHAPTER 6

Studying Lexical-Semantic Fields in Languages: Nature Versus Nurture, or Where Does Culture Come into It These Days?

The study of the interaction between language, culture and cognition has a long tradition. It is now generally accepted that different speech communities may have different styles of speaking, reflecting differences in cultural values. Reflexes of such cultural behaviour may be found in, for example, verbal taboos. This type of research, usually subsumed under the heading of “ethnography of speaking”, is now well established in particular through the work of scholars such as Bauman, Gumperz, Hymes, Irvine, and Sherzer.

The kind of research that is the focus of this chapter is more controversial. It involves the investigation of lexical-semantic fields, in particular those related to colour, the expression of space and direction, kinship terminology and the like. It is also concerned with language and thought interactions as cognitive processes; but at times authors hold diametrically opposed views when it comes to the evaluation of the relative role played by culture in the structuring of such semantic fields.

Below, I first sketch the historical background of this type of research, and show how it has received new impetus over recent decades from research on language typology and universals. Somewhat paradoxically I then defend the view that, as a result of this more recent research paradigm, we may have fallen again into a “Whorfian” trap in our attempts to explain cross-linguistic variation.

6.1 Investigating the Interaction between Language and Cognition: Research on Colour Terminology

There is by now a huge bulk of literature on the interaction of language and cognition deriving particularly from the scholarly work of American and Russian researchers; see, for example, Rice (1980), and the influential work of Vygotsky (1962). Vygotsky examined the crucial role of language in mediating the growth of cognitive abilities in young children; it was his view, for example, that external, social reality interacts with the elementary mental functions of
young children through language. (See Luria 1981 as a further example of such research from the time of the former Soviet Union.)

Modern research on the interaction between language and cognition, using experimental methods, is generally assumed to have started in the 1950s when Brown and Lenneberg (1954) and Lenneberg and Roberts (1956) published the results of their experimental research. These American psychologists were aiming at objectively characterising and comparing language categories in terms of their denotational referents. Brown and Lenneberg, for example, decided to investigate the interaction between language and cognition through research on the description of colour, since colour was assumed to be a universal phenomenon, having boundaries which could be plotted on known dimensions, and which were contiguous with one another, sharing their boundaries.

Actual scientific interest in colour terminology dates back to at least the nineteenth century. The German researcher Geiger (e.g. 1871, 1872) proposed what was probably the first “cross-cultural” evolutionary theory of colour names. Geiger assumed an additive progression of at least six stages. First, ‘black’ and ‘red’ (as meta-categories) were named, suggesting a vague conception of something coloured. Second, ‘black’ and ‘red’ stood in contrast to one another. Third, ‘yellow’ was registered. Fourth, ‘white’, previously included in ‘red’, was distinguished. Fifth, ‘green’ developed from ‘yellow’. Sixth, and last, ‘blue’ developed. Geiger argued that so-called “primitive” people had fewer colour names because they were physiologically underdeveloped. For Geiger, having no word ‘blue’ meant that the person could not see blue.

A fellow German physical anthropologist and contemporary, Virchow, contested this view. He examined speakers of varieties of Nubian (a group of languages now classified as Nilo-Saharan), living in Berlin during the same period, who “although displaying anomalies of colour vocabulary were quite able to discriminate colours in all parts of the spectrum, demonstrating this by sorting and matching coloured papers and wools.” (See Andree 1878 and Kirchhoff 1879 for a discussion.)

In their experimental studies of colour terminology seventy-five years later, Brown and Lenneberg (1954) used the so-called “Munsell Chart”, a stimulus array consisting of 329 colour chips. They defined the category of colour as being composed of three psychophysical dimensions or perceptual attributes:

1. hue (intensity)
2. value (lightness, dominant wavelength)
3. chroma (saturation, purity)