Language culture and thought

Colour terms

Pr. Maha El Biadi

- Colour is all around but it is not everywhere treated in the same way. The terms people use to describe color give us another means of exploring the relationships between different languages and cultures.

- The color spectrum is a physical continuum showing no breaks at all as it has fuzzy boundaries.

- Yet we parcel it out in bits and pieces and assign names (colour categories) to the various component parts: green, blue, yellow, red, and so on.

- An interesting issue is how colors are referred to in different languages.

- Are color terms arbitrary (socially constrained), or is there a general pattern? (Universal constraints)

- If there is a pattern, what are its characteristics and why might it exist?

1-Do color terms affect color perception?

2. Are color categories determined by largely arbitrary linguistic convention? (socially constrained)

Berlin and Kay's study of colour terms

- In 1969, Berlin and Kay tried to answer questions such as these, drawing on data from a wide variety of languages.

- They carried out a study of the colour systems of 98 languages.

- Their research was originally designed as an experimental test of **linguistic relativity**:

    - Each language performs the coding of experience into sound in a unique way (total arbitrariness)

- Berlin and Kay divised a method in order to elicit basic colour words from the informants.

- Each subject was instructed to map both **the focal point** and **the outer boundary** of each of his basic colour terms on the presented **Munsell table.**

The Munsell table

- Some colours are **better examples of a given category** than others are.

- It is usually a single colour which is the best example of the category (the prototype)

- We can say a good red, slightly red.

The criteria of Berlin and Kay

1-a single word, e.g., blue or yellow, not some combination of words, e.g. light blue or pale yellow.

2-It must not be the obvious sub-division of some higher-order term, as both crimson and scarlet are of red.

3-It must have quite general use; i.e., it must not be applied only to a very narrow range of objects, as, for example, blond is applied in English almost exclusively to the color of hair and wood.

4-It must not be highly restricted in the sense that it is used by only a specific sub-set of speakers, such as interior decorators or fashion writers.

- According to Berlin and Kay, an analysis of **the basic color terms** found in a wide variety of languages reveals certain very interesting **patterns**.

- People are very consistent in their choice of the prototypes (the basic colour) terms (but not in where they place boundary colours) and **11 foci were identified**.

- If a language has 11 basic colour terms, then the encoded categories are:

    – WHITE, BLACK, RED, GREEN, YELLOW, BLUE, BROWN, ORANGE, PINK, PURPLE, and GREY

- Languages with 11 (12) basic colour terms: Arabic (Lebanese), Bulgarian, English, German, Hebrew, Hungarian (12!), Japanese, Korean, Russian (12!), Spanish, Zuni, …

- If a language has **fewer than 11** basic colour terms, then there are strict limitations on which categories it may encode.

- Berlin and Kay concluded that there is **a universal inventory of only 11 basic colour categories**:

  – almost all languages use either these 11 or fewer.

- Russian is acknowledged to have twelve since it has **two in the blue region**: **sinij** 'dark blue' and **goluboj** 'light blue',

- If a language has only two terms, they are for equivalents to **black** and **white** (or dark and light).

- If a third is added, it is **red**.

- The fourth and fifth terms will be **yellow** and **green**, but the order may be reversed.

- The sixth and seventh terms are **blue** and **brown**.

- Finally, as in English, come terms like **gray, pink, orange**, and **purple**, but not in any particular order.

- All other terms for colors are combinations like grayish-brown, variations like scarlet, modifications like fire-engine red, and finally the kinds of designations favored by paint and cosmetic manufacturers.

| I | II | III | IV | V | VI | VII |
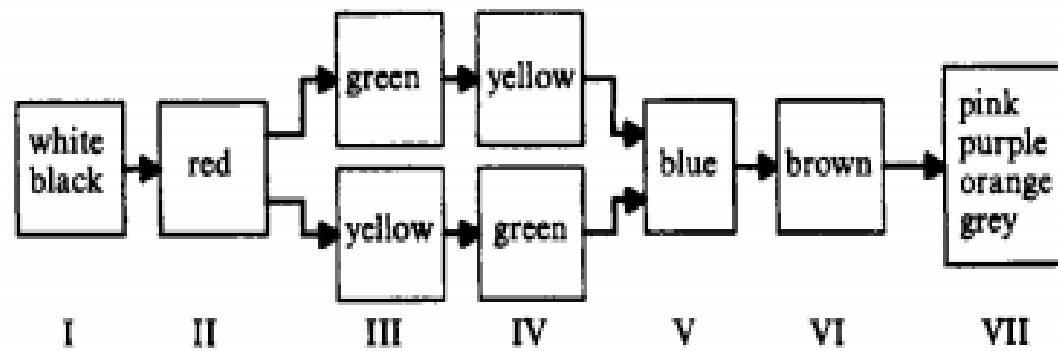
A pattern of 7 stages

- An attempt has been made to relate the extent of color terminology in specific languages with the level of cultural and technical complexity of the societies in which these languages are spoken.

- There is some reason to believe that communities that show little technological development employ the fewest color terms; e.g., the Jalé of New Guinea (pacific ocean) have words corresponding to dark and light alone.

- On the other hand, technologically advanced societies have terms corresponding to all eleven mentioned above.

Colour systems displaying universal patterns (The universalist stance)

- One approach to investigating color terminology in languages is predicated on the scientific fact that **the color spectrum is an objective reality**:

- it is 'out there,' waiting to be dealt with and, moreover, we know that humans possess rods and cones in their retinas specifically dedicated to color perception.

- The claim here is that human cognition is so alike everywhere that everyone approaches the spectrum in the same way.

- Moreover, as cultural and technological changes occur, it becomes more and more necessary for people to differentiate within the color spectrum.

- Instead of picking bits and pieces of the spectrum at random as it were and naming them, people, no matter what languages they speak, **progressively sub-divide the whole spectrum in a systematic way**.

- The similar naming practices appear to follow from human cognitive needs that are the same everywhere.

- **Technologically advanced societies** have terms corresponding to **all eleven stages** mentioned above.

- **Societies in intermediate stages** have **intermediate numbers**: for example, the Tiv of Nigeria have three terms; the Garo of Assam and the Hanunóo of the Philippines have four; and the Burmese have seven.

- What this view says is that people display **regular patterns** which gives support to the idea that there are some universals in the use of colour term.

- The idea that there is a pattern shows that there are some universal constraints which govern the way people use colour terms in various languages.

- It is true that differences do exist which might lead us to concude that each language has worked out a unique system in a totally arbitrary way.

- Berlin and Kay's findings, however, provide what can be seen as the proof for the view saying that there are some universal contraints which lead people to use colour terms in a patterned manner (a predictable pattern).

- And this is what the 7 stages that Berlin and Kay show concerning these universal patterns.
- All languages contain **terms** for WHITE and BLACK: 1={W, B}
- If a language contains three terms, then it contains a term for RED: 2={W, B, R}
- If a language contains four terms, then it contains a term for either GREEN **or** YELLOW: 3={W, B, R, G}, 4= ={W, B, R, Y},

Colour terms as social constructions (The relativist stance)

- Lucy (1997) is highly critical of the above claim, declaring that you cannot find out what 'color' means to speakers by simply asking them to label Munsell color chips.

- He says (p. 341): 'color is not "out there" in the light but in our perceptual interpretation of light, . . . communicatively relevant encodings of visual experience do not lie "in there" in the biology but in socially anchored linguistic systems.'

- In this alternate view, color systems are social constructions rather than biologically determined ones. The issue is still unresolved.

Do colour terms affect perception?

- In the years since then, new findings have arisen that suggest a subtler view. The new evidence suggests that Whorf was **partly right** with respect to each of these two questions.

- As noted above, several studies suggest that the answer is **'yes'**, at least in connection with color.

- With respect to question 1, color names do influence color perception – but primarily in the right visual field, and less so in the left.

- With respect to question 2, color naming across languages does reflect universal tendencies, as shown in earlier work – **but also some degree of local linguistic convention**.

- Some studies have shown that there is 'categorical perception' (CP: faster or more accurate discrimination of stimuli that straddle a category boundary) for color, and that differences in color category boundaries between languages predict where CP will occur.

- Moreover, several of these studies, and others have shown that color CP disappears with a concurrent verbal interference task, confirming that color CP is language based.

- We do know that if speakers of any language are asked to identify the parts of the spectrum, they find one system of such identification much easier to manipulate than another.

- They find it difficult to draw a line to separate that part of the spectrum they would call yellow from that part they would call orange, or similarly to separate blue from green.

- That is, assigning precise borders, or marking discontinuities, between neighboring colors (marginal colours) is neither an easy task for individuals nor one on which groups of individuals achieve a remarkable consensus.

- However, they do find it easy, and they do reach a better consensus, if they are required to indicate some part of the spectrum they would call typically orange, typically blue, or typically green.

- That is, they have consistent and uniform ideas about 'typical' (basic) colors. Speakers of different languages exhibit such behavior, always provided that the appropriate color terms are in their languages.

- Berlin, B. and P. Kay (1969). Basic Color Terms: Their Universality and Evolution. Berkeley: University of California Press.

- Lucy, J. A. (1997). The Linguistics of 'Color.' In C. L. Hardin and L. Maffi (eds.), Color Categories in Thought and Language. Cambridge: Cambridge University Press.

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