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THE LANGUAGE OF VISION II: SHAPE

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Project	Categories and concepts across language and cognition
Task	Linguistic elicitation for shape vocabulary using "shape booklet"
Goal of task	To investigate how languages encode shape – specifically (1) whether there is dedicated vocabulary for encoding shape and (2) how much consistency there is within a community for describing shape.
Prerequisite	You must have completed "Language of perception" (pp. 10-21). To conduct this task you need – a shape booklet

Background

We are interested to find how, and to what extent, your language makes shape distinctions. This area of visual experience is in principle "effable" in the sense that a child may easily learn shape categories from names labeling stable external exemplars which can be seen and felt. Nevertheless, there are very varying reports as to the extent to which languages "bother" to code shapes, as one might expect from differential inventories of traditional artifacts, different cultural preoccupations with craftsmanship, etc. There have been interesting persistent reports of cross-cultural differences in perception related to the nature of the built environment. The 1898 Torres Strait expedition already reported differential susceptibility to the Müller-Lyer illusion, and people who live in round huts apparently are less able to read two converging lines as a reflex of perspective (Segall, Campbell &.Herskovits 1963).

Recent psychological work has found conflicting evidence for universals of geometrical knowledge (Dehaene, Izard, Pica & Spelke 2006), or against them (Roberson, Davidoff & Sapiro 2002). We don't therefore actually know whether the Gestalt predictions about natural "good forms" (like circles, squares, triangles) are generally true or not, and to what extent they are related to linguistic categories.

Shape has been thought to be an important element of the content of nominals – Western children for example show a "shape bias" when constructing categories on the basis of novel word referents (Landau, Smith & Jones 1988). Jackendoff has thought shape distinctions would be confined to the nominal arena, and would not be found in general spatial relators like adpositions (see e.g. Landau & Jackendoff 1993). But work by the L&C group has shown these effects to be language dependent.

Languages are known to differentially code shape. Our nominals designating "circle", "square", "triangle", "cylinder", "cube", "sphere", etc., are probably cross- linguistically rather rare, and likely to be non-existent in nonliterary languages. On the other hand, many languages are known to make shape distinctions in classifiers, predicate adjectives and positional verbs, and even in verbal affixes. For example, Tzeltal has no nouns for abstract shapes, but it does have some 200 positional verbs which make many highly specific shape distinctions (e.g. 'waisted, of jar', 'located, of cylindrical container', 'located, of upside down hemispherical container'), with one pair describing small vs. large spheres (see Brown 1994, Levinson 1994). Similarly, North American languages make many shape distinctions in verbal affixes, of the kind 'out through a tubular space', 'in container', 'concave side up', etc. (examples from Kuruk and Nishga from Mithun

1999:142-7). Shape distinctions are often found in classifiers; it has often been claimed that these are simply of the 1D (line), 2D (circle/square), 3D (cube/sphere) type, but more detailed distinctions are often made, as in Miraña (Seifart 2006). These examples argue against the claims in Landau & Jackendoff (1993), where it is suggested that detailed shape distinctions would be found only in the nominal vocabulary, and only very schematic ones in spatial relators and predicates.

Shape is potentially cross-modal – you can feel it, as well as see it. Here we are primarily interested in the *visual* aspects of shape. That means we are especially interested in the relation between 2D and 3D forms – for example, if there is a word for square is it also used for cubes, and similarly for round vs. spherical. Earlier work on Tzeltal suggests that there is often verbal conflation over the 2D/3D shapes, indicating that we are here dealing specifically with a visual phenomenon (a circle and a sphere are visually similar, but haptically distinct).

Research questions

What terms are there for abstracted shape (as opposed to shape plus material, shape plus function etc.)? What form class are shape distinctions made in? In your language, how namable are shapes? How much consistency is there within the speech community for describing visually perceived shape? Are gestalt shapes easier to name? Are the same terms used for 2D and 3D shapes?

Task

The task is designed to elicit vocabulary for shape. How do people talk about shape and what resources do languages provide for doing so?

Consultants

Aim to test 12 participants. Keep a note of participants age (approximate age is fine), gender, and full linguistic background.

Stimuli

The shape kit is a single booklet with 20 pages. The booklet includes Gestalt "good shapes" and non-prototypical shapes, 2D and 3D variants, and also some pages include more than one exemplar.

Procedure

Remember to video~audio-tape your session.

In this task, we are interested in how people directly encode shape information. Ask the consultant in their native language *How does it look?* or *Is there a name for this*?

NOTE: Try to focus your consultant to produce one word descriptions where possible. We are interested in the most concise codification of shape terms where they exist in a speech community, rather than elaborate ad-hoc circumlocutions.

Analysis

Each consultant's response will be coded for word/phrase/construction used to describe shape. This will then be analyzed for (1) consistency across consultants and (2) category of response, i.e., are responses (a) evaluative, (b) descriptive, or (c) source-oriented.

Outcome
Data will contribute to a description of the "grammar of perception" in the field language, intended for a collected volume. The pooled cross-linguistic data will also contribute to an overview publication on the encoding of the senses across languages.

Optional post-task elicitation
The task above focuses on the direct encoding of shape, but we are also interested in linguistic distinctions for encoding shape wherever they are made. It would be interesting to know what form class they are made, and what form class they are *not* made. This means you may wish to conduct further investigation of this domain. One possibility is to conduct further elicitation with these stimuli, asking is there another way to describe it. For example, could I say "Give me the X one", or "the one that X-sits", or "pass the three X ones"?

Another possibility is to try a director-matcher task. This was been the procedure followed Eleanor Rosch (1973) in her investigation of shape with the Dani, and also Roberson, Davidoff & Sapiro (2002) with the Himba. Make copies of the shape stimuli. Number them on the back, and order them randomly in front of a Director and Matcher screened of from one another. Put the video camera on the Matcher. Put a stone on the picture to be described by the Matcher, speak the number of the stimulus on the tape, so you have a complete record.

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