

# Talking About Hybrids: A Cross-Linguistic Experimental Study

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Hybrids are objects containing two or more component parts belonging to different conceptual categories, for example a mermaid, with the upper torso of a human but the lower body of a fish. Although hybrids occur throughout the world in art, literature, myth and religion, one may readily create pictures of novel hybrids with new combinations of familiar objects. Such pictures may then be used as experimental stimuli, in order to investigate the creative cognitive processes which humans employ to conceptualize and talk about strange new objects encountered for the very first time.

This paper presents a first experimental examination of the following general hypothesis governing the ways in which humans conceptualize and talk about hybrids:

(1) *The Animacy Hypothesis*

- (a) *In Conceptualization*: When conceptualizing a hybrid, it is assigned to the category of the component higher on the animacy hierarchy;
- (b) *In Language*: When talking about a hybrid, grammatically prominent positions contain expressions referring to the component higher on the animacy hierarchy.

For example, in the case of a mermaid, the Animacy Hypothesis predicts that we will think of it as a human with some fishlike characteristics (rather than a fish with some human-like characteristics), and that we will describe it eg. as *a human with the lower body of a fish* (rather than *a fish with the upper body of a human*).

This paper is concerned primarily with the linguistic hypothesis in (1b). The experimental stimuli consisted of 24 pictures of hybrids, 4 hybrids each for the 6 logically possible combinations of 4 basic ontological categories instantiating the Animacy Hierarchy: *human > animal > plant > inanimate*. Subjects were asked to describe each hybrid with a simple phrase. The experiment was given to 40 or more subjects each in Indonesian and Minangkabau, and, for purposes of comparison, also Hebrew. Some typical examples of subjects' responses are given in (3) - (5) below.

The results of the experiment provide strong support for the Animacy Hypothesis in (1b). In each of the three languages tested, the number of responses consistent with the Animacy Hypothesis is greater than the number opposed to it, at a statistically significant level. Nevertheless, interesting differences emerge between the three languages, the relative strength of the Animacy Effect exhibiting the following pattern:

(2) Hebrew, Minangkabau > Indonesian

These differences may be accounted for in terms of typological properties of the respective languages. First, a substantial body of evidence suggests that the animacy hierarchy is more strongly grammaticalized in Hebrew than it is in Minangkabau and Indonesian; this predicts the pattern *Hebrew > Minangkabau, Indonesian*. Secondly, whereas Hebrew possesses a dedicated conjunction 'and', its Indonesian counterpart is limited to very formal registers, while in Minangkabau it is completely absent; since the presence of a dedicated conjunction makes it possible to describe the hybrid in a symmetric manner neutral with respect to the Animacy Hypothesis, this predicts the pattern *Minangkabau > Indonesian > Hebrew*. In conjunction, then, these two conflicting typological predictions account for the observed pattern in (2) above.

In conclusion, some speculations are offered as to whether the ways in which we talk about hybrids influence the ways in which we think about hybrids, as per (1a), thereby providing a potential instance of a Whorfian effect of language on thought.

Examples of subjects' descriptions  
of the following experimental stimulus:



(3) *Examples Consistent with Animacy Hierarchy*

- |     |                                                                                                                                     |            |
|-----|-------------------------------------------------------------------------------------------------------------------------------------|------------|
| (a) | Manusia dengan bagian atas seperti burung<br>person with part above like bird<br>'person with an upper part like a bird'            | <i>Ind</i> |
| (b) | Manusia elang<br>person eagle<br>'eagle person'                                                                                     | <i>Min</i> |
| (c) | gever meħupas                      lecipor teref<br>'man dress.up:PASS:PRS:SGM to-bird prey<br>'a man dressed up as a bird of prey' | <i>Heb</i> |

(4) *Examples Inconsistent with Animacy Hierarchy*

- |     |                                                                                                                                                                                      |            |
|-----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| (a) | Seekor burung Garuda memiliki kaki menyerupai kaki manusia<br>one-CLF bird phoenix AG-OWN-EP leg AG-resemble leg person<br>'a phoenix that possesses legs like the legs of a person' | <i>Ind</i> |
| (b) | Saikua buruang baikua urang bakaki duo<br>one-CLF bird DEPAT-tail person DEPAT-leg two<br>'a bird with a tail of a two-legged person tail'                                           | <i>Min</i> |
| (c) | cipor meħuberet                      leguf taħton enoři<br>bird join:PASS:PRS:SGF to-body lower human-ADJ<br>'a bird joined to a human lower body'                                   | <i>Heb</i> |

(5) *Examples Neutral with respect to Animacy Hierarchy*

- |     |                                                                                                                                                                 |            |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| (a) | Siluman                                      rajawali<br>[kind.of.mythical.invisible.hybrid.creature] sparrowhawk<br>'a sparrowhawk <i>siluman</i> '            | <i>Ind</i> |
| (b) | Saparo buruang, saparo urang yang sedang mangapakan sayap<br>one-half bird one-part person REL PROG AG-flap-EP wing<br>'half bird, half man flapping his wings' | <i>Min</i> |
| (c) | ħaci neřer / řayit - ħaci adam<br>half eagle hawk half person<br>'half eagle/hawk - half person'                                                                | <i>Heb</i> |