Spatial mapping of verbal tense forms in the Russian language

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It has been repeatedly demonstrated that carriers of different languages comprehend time using different spatial metaphors (Boroditsky, 2011). The Chinese use the vertical axis: time flows for them “from top to bottom”. And the carriers of some Australian languages comprehend time in geographical coordinates: the past is always located in the east, and the future is in the west. All these effects, however, were shown using the paradigm of explicit reasoning about the order of events: people were asked about earlier and later events in terms of spatial coordinates. In this study, the goal is to determine whether the strategy of spatial time mapping is preserved with the implicit processing of words expressing different temporal references, verbs of past and past time. The eye-tracking method is fundamental in our work because it allows implicit identification of automatic cognitive processes. The study involved 32 people, native speakers of the Russian language. The results showed that our hypothesis concerning the Russian language and the representation of temporal forms in the mind of the native speaker works with the exact opposite. The view of the subjects while listening to the past tense verbs was directed to the left and up, contrary to our hypothesis. We do not know what exactly this effect is related to, perhaps it is a kind of reconstruction of events in the mind of a person. For further confirmation of the existence of this effect, further studies based on other languages are needed.

Keywords: eye-tracking, space, languages.