



Russian Blues: Linguistic Recognition of Color Perception Induced by Bilingualism



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INTRODUCTION

Names for colors vary cross-linguistically but color categories are consistent. Numerous studies have shown how different languages divide color space differently (e.g., [1], [2]). For example, English has the lexical word for “**blue**” to encompass both light and dark blue colors, but Russian has separate basic color terms for light blue (*goluboy*) and dark blue (*sinii*). This means that individuals whose L1 is English and who learn Russian as an L2 may experience neural restructuring that affects the way they perceive colors.

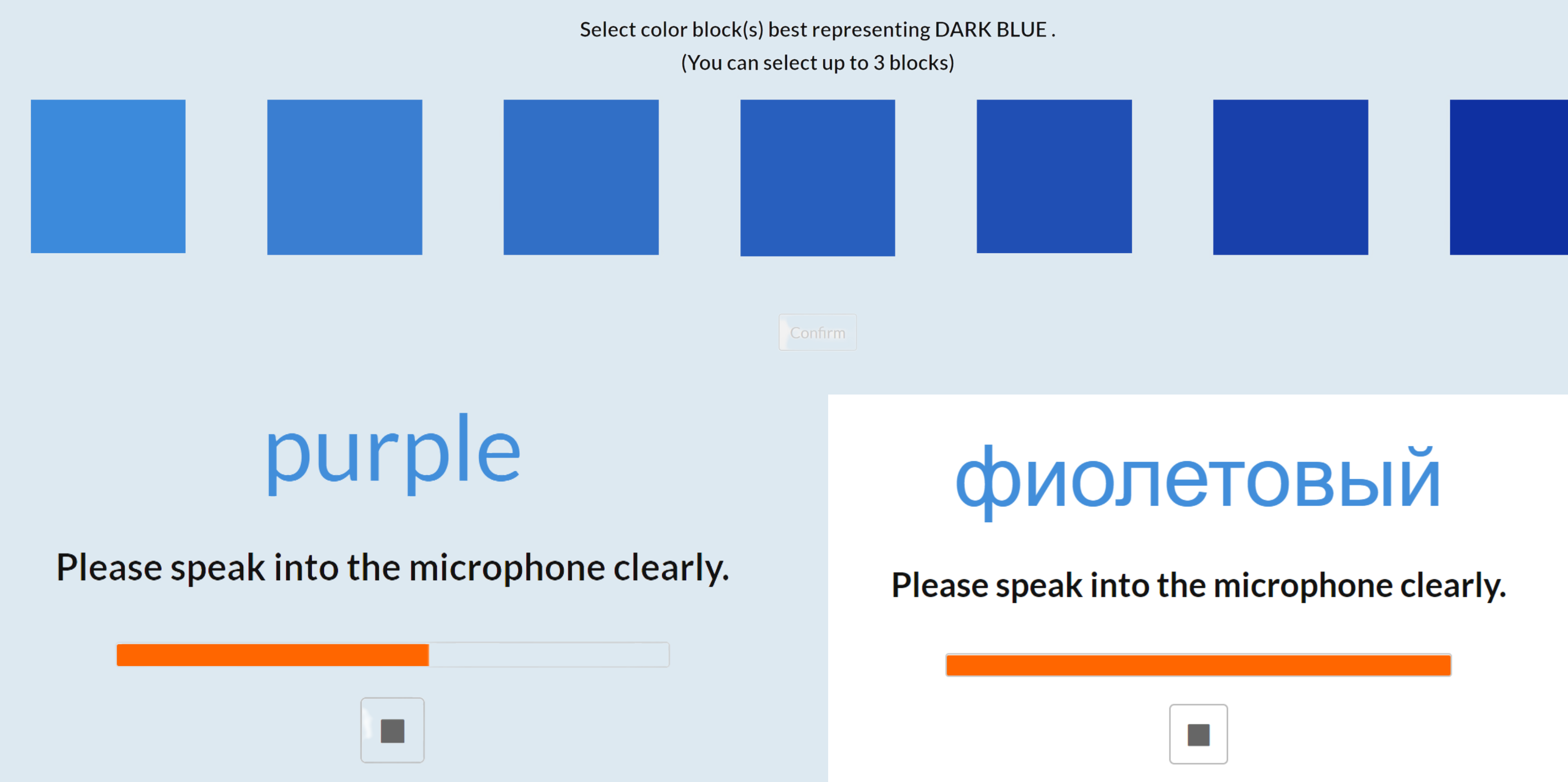
OBJECTIVES

- 1.) What is the degree to which knowledge of Russian coupled with English causes a change in color perception and a “temporary” conflict between the two languages?
- 2.) Does this difference between languages led to differences in how people discriminate color?

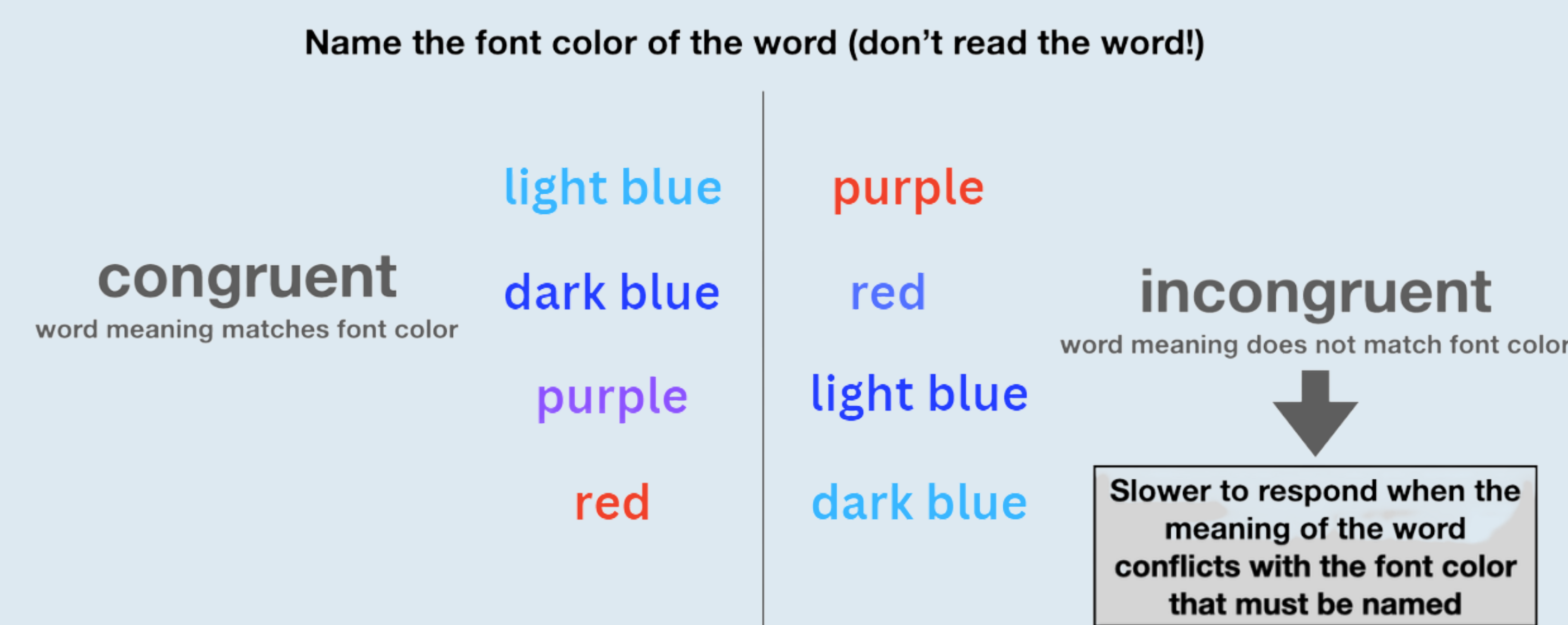
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METHODOLOGY



The Stroop effect



PARTICIPANTS

- 18 to 35 years old
- Bilingual Russian-English speaker (Have learned both languages simultaneously either before the age of 6 or as a second language)
- No color vision impairment

PREDICTIONS

Native speakers of Russian will have a higher Stroop effect since they differentiate between the two colors. The longer participants learn and are immersed in an L2 environment (i.e., English in the U.S.) that has different color terms may influence how speakers' categorized and processed color in their native language(s) affecting their performance on a color perception test.

REFERENCES

- [1] Winawer, J., Witthoft, N., Frank, M. C., Wu, L., Wade, A. R., & Boroditsky, L. (2007). Russian blues reveal effects of language on color discrimination. *Proceedings of the National Academy of Sciences*, 104(19), 7780–7785.
- [2] Twomey, C.R., Roberts, G., Brainard, D., and Plotkin, J.B. (2021) What we talk about when we talk about colors. *PNAS* 118(39):e2109237118

