Author's response to reviews

Title: Geminate consonant grapheme-colour synaesthesia (ideaesthesia)

Authors:

Cassandra L A Hawco (chawco@uhnresearch.ca)
Donald F Weaver (dweaver@uhnres.utoronto.ca)

Version: 3 Date: 26 June 2015

Author's response to reviews: see over
June 26, 2015

Editor

BMC Neurology

Dear editor,

Please find enclosed a revised version of manuscript MS: 8017661831332720, Geminate consonant grapheme-colour synaesthesia (ideaesthesia), for BMC Neurology. Thank you for the opportunity to revise this manuscript for consideration for publication in your journal.

We have responded specifically to each suggestion below.

Reviewer 1

1. In general, there is very little detail on methods. For example, how did the patient report his colour experiences? I assume using some kind of computerized colour picker, but this needs to be made clear. With the arrays of words, how long were they presented, how often did responses need to be made, etc? How did the rotation and morphing trials work, exactly, and how did you determine that the change from blue to black was abrupt?

We included the following paragraph and accompanying references to expand upon the methodology used in this case study:

“Synaesthetic experiences were evaluated using a computerized test adapted from Simner and co-workers [9,10]; 36 graphemes (i.e. 26 letters and digits 0-9) were presented using an electronic palette of 13 colours based on Berlin and Kay’s colour terms (black, dark blue, brown, dark green, gray, pink, purple, orange, red, white, light blue, light green and yellow) [11]. Graphemes were displayed in Ariel font against a white background. The subject was seated comfortably at a blank table; the subject sat 85 cm from a LCD monitor with a 60 Hz refresh rate.”
2. You describe the experiences in some detail, but you do not go into any detail about the perceived location of the blue colour - i.e. is it in "the mind's eye" or does he see it physically on the page? Cf. Dixon, Smilek, & Merikle, 2004, and Ward, Li, Salih & Sagiv, 2007.

The patient reported seeing the blue colour physically on the page, this has been included in the manuscript.

“when a word contains two “l” letters separated by another letter (e.g. lily), neither “l” is seen as blue. He describes the colour blue as being on the page, rather than existing “in his mind’s eye”. No other letters or numerals are seen in colour.”

3. There is a description of fonts affecting the quality of synaesthetic experience in Ramachandran & Hubbard, 2001 (your second reference), footnote 8.

The previous description of the affect of font on synaesthetic experience by Ramachandran and Hubbard was referenced within the study:

“The patient reports a font-specific influence upon his synaesthesia, as has been previously described by Ramachandran and Hubbard [2].”

4. Your last paragraph is accurate, but I am not sure of its connection to your case study. It is true that your patient's synaesthesia has some conceptual aspects to its inducing (since the identical stimulus both does and does not produce a synaesthetic experience depending on context), but you need to make this connection clearer.

We have clarified the connection between our study and ideasthesia within the conclusion.

“In synaesthesia, both the inducer and the concurrent are sensory, whereas in ideaesthesia the inducer is semantic while the concurrent is sensory. The context-dependent nature of this patient’s synaesthesia, for
example its relation to font, demonstrates an inducer as being a concept, rather than sensory input. Therefore, within this definitional context, grapheme-colour synaesthesia would be an ideaesthesia.

We look forward to hearing from you in due time regarding our submission and to respond to any further questions and comments you may have.

Thank you for your consideration,

Don Weaver and Cassandra Hawco