

# Text Analysis Reveals that Behavioral Neuroscientists Reach Chiefly to Australia, France, and Britain in Selecting Research Methodologies

Pamela Flattau, Executive Director, The PsySiP Project, Washington DC USA

Is There Evidence of Research Collaboration in Behavioral Neuroscience?

Figure 1: Number of single-author versus multi-author journal articles in 5 English-language journals in behavioral neuroscience, 2007-2012

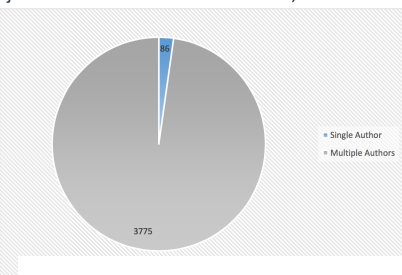
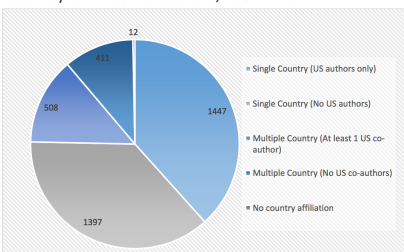


Figure 2: Number of multi-author articles in 5 English-language journals in behavioral neuroscience by country affiliation of authors, 2007 – 2012



Most Frequent Country Affiliation of Authors in 5 English-Language Journals in Behavioral Neuroscience, 2007 - 2012

### Single-Author Papers

- USA
- England
- Canada
- Japan
- Taiwan
- Wales
- Germany
- Mexico

### Multi-Author, Same Country

- USA
- Canada
- Germany
- England
- Brazil
- Japan
- China
- France
- Netherlands
- Australia

### Multi-Author, Multi-Country Pairings

- Canada/USA
- Germany/USA
- France/USA
- England/USA
- Italy/USA
- Israel/USA
- Germany/Netherlands
- India/USA
- England/Germany
- Netherlands/USA
- Switzerland/USA
- Japan/USA
- Austria/Germany
- Belgium/France
- England/Netherlands

Paxinos, G (Australia)
Friston, KJ (UK)
McGaugh, JL (USA)
Dehaene, S (France)
Frye, CA (USA)
Corbetta, M (USA)
Kutas, M (USA)
Talairach, J (France)
Roosendaal, B (Netherlands)
Maren, S (USA)
Friederici, AD (Germany)
Bouton, ME (USA)
Swerdlow, NR (USA)
Squire, LR (USA)
Davis, M (USA)
Koob, GF (USA)
Fanselow, MS (USA)
Naatanen, R (Finland)
Oldfield, RC (UK)
Grill-Spector, K (USA)

★  
"First occurrence" in this section does not preclude the possibility that certain of these authors also appear in the Methodological section of the same papers.

**Question:** How is the work of these highly cited researchers utilized in the design and communication of behavioral neuroscience research by the world's scientists working in this area?

## Approach

**Sample:** Random selection of 200 out of 3,800 journal articles (5%) in the international data set

**Text Preparation:** Introduction [text appearing "before" methodology section]; Methodology; Findings/Discussion [text appearing "after" methodology section]

**Coding Procedure:** First occurrence of work by any of the top 20 highly cited authors using the partitioned text categories

## Findings

- 128 out 200 papers included reference to at least one of the top 20 authors (64%)
- Four authors first appeared in the **Methodology** section of 62 of the 128 papers (48%)
  - Paxinos (28/62 or 45%)
  - Talairach (16/62 or 26%)
  - Friston (11/62 or 18%)
  - Oldfield (7/62 or 11%)
- Three authors first appeared in the **Introduction**★ of 34 of the 128 papers (27%)
  - McGaugh (13/34 or 54%)
  - Squire (12/34 or 35%)
  - Dehaene (9/34 or 26%)
- Three authors first appeared in **Results/Discussion** of 33 of the 128 papers (26%)
  - McGaugh; Maren; Fanselow: Each in 11 of the 33 papers

## Discussion

Text analysis provides useful insights into the role of leading researchers in the design and communication of behavioral neuroscience research.