

ESCOP Journal's 'Best Paper' Shows How Collaboration Influences Memory

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A study led by **Hae-Yoon Choi**, a PhD candidate from Stony Brook University in the United States, is being recognized with the 2014 *Journal of Cognitive Psychology* Best Paper Award. The award, conferred on the basis of scientific excellence and broad interest, includes a prize of €250 courtesy of the European Society of Cognitive Psychology (ESCOP).

How Collaboration Influences Memory

Choi and her research mentor APS Board Member **Suparna Rajaram**, also from Stony Brook, collaborated with **Helena M. Blumen** of Albert Einstein College of Medicine in New York and **Adam R. Congleton** of Macquarie University, Australia, (now at Aarhus University, Denmark) on “The Role of Group Configuration in the Social Transmission of Memory: Evidence From Identical and Reconfigured Groups.” The article focuses on how collaboration influences memory. Participants studied a group of words and were then given three opportunities to recall those words. Control participants worked individually across all three recall attempts. A second group of participants collaborated with the same team during their first two recall sessions and worked individually during the third recall session. Still another group collaborated with different teams during the first and second recall attempts and worked individually during the third attempt.

The researchers discovered that the configuration of study participants’ teams had “powerful consequences on the amount, the similarity, and the variety of memory representations.” For example, during the first attempt to recall the words, individuals working in teams tended to *contribute* fewer words than individuals working alone. During the second recall attempt, this “collaborative inhibition” disappeared in those individuals working in reconfigured teams but not in those individuals who continued working with the same team from their first recall session. Individuals who worked in reconfigured teams also ended up with relatively distinct, and better, memories of the words they were trying to recall compared with individuals staying on the same team, whose memories of the words tended to overlap with the memories of their collaborators. Finally, when individuals worked in reconfigured teams across recall attempts, their eventual memories were influenced not only by the partners with whom they had collaborated but also by their partners’ previous partners, people with whom they had never directly collaborated.

Questions About the ‘Bilingual Advantage’

Also receiving the Best Paper Award is an article by **Kenneth R. Paap** and **Hunter A. Johnson** of San Francisco State University and **Oliver Sawi** of the University of Connecticut. “Are Bilingual Advantages Dependent Upon Specific Tasks or Specific Bilingual Experiences?” addressed bilingualism’s possible influence on executive processing, specifically recent questions about whether

bilingual advantages “may be restricted to certain types of bilinguals,” such as those who acquire their second language at a young age or those who are highly proficient in their second language. Using Bayesian statistical methods, as well as null hypothesis statistical testing, Paap and his colleagues challenged current trends in research on bilingualism.

The team analyzed data from 168 bilingual individuals and 216 monolingual individuals. The scientists relied on several measures of executive control. For example, the “flanker task” required participants to identify the direction in which a specific arrow was pointing without regard to “flanker arrows,” which were sometimes congruent and sometime incongruent to the center arrow. In another task, either a “Z” or “/” was displayed in locations that were either compatible or incompatible with the corresponding key press.

Paap, Johnson, and Sawi concluded that “across 12 different measures of executive function, derived from 4 different nonverbal tasks, there was no consistent evidence supporting the hypothesis that either early bilingualism, highly fluent balanced bilingualism, or trilingualism enhances inhibitory control, monitoring or switching.” This article dovetails with a recent article led by Angela de Bruin in *Psychological Science* showing evidence of a publication bias favoring positive results, raising the possibility that bilingual advantages in cognitive control may simply not exist.