ELSEVIER

Acta Psychologica 109 (2002) 315–329

acta psychologica

www.elsevier.com/locate/actpsy

# Mediators of age-related differences in recollective experience in recognition memory

David Clarys *, Michel Isingrini, Kamel Gana

*UPRES 2114, "Vieillissement et Développement adulte", Université de Tours, 3 rue des Tanneurs, BP 4103, 37041 Tours Cedex, France*

Received 31 January 2001; received in revised form 1 July 2001; accepted 11 July 2001

**Abstract**

This study examined states of awareness with the Remember/Know paradigm during verbal recognition memory in young and old adults. Following the presentation of a word list, subjects undertook a recognition test and indicated whether they could consciously recollect its prior occurrence (R) or recognize it on some other basis, without conscious recollection (K). In this individual-difference approach we also incorporated various processing-speed and working-memory measures to study the link between aging, states of awareness and processing resources. The results revealed that, compared to younger adults, older adults exhibited a decline in the amount of R responses during the recognition test whereas the amount of K responses did not change. Structural equation modeling indicated that a slower processing speed associated with a limited working-memory capacity is a key to explaining age-related variance in conscious recollection. The findings offer further support for the distinction between remembering and knowing and for the processing-resources hypothesis of aging. © 2002 Elsevier Science B.V. All rights reserved.

*PsycINFO classification:* 2343; 2380; 2860
*Keywords:* Recognition memory; States of awareness; Aging; Processing resources

## 1. Introduction

There has recently been a revival of interest in the study of consciousness and its relation to memory. Previous studies indicated that, in recognition memory, subjects

* Corresponding author. Tel.: +33-2-47368121.
*E-mail address:* clarys@univ-tours.fr (D. Clarys).

0001-6918/02/$ - see front matter © 2002 Elsevier Science B.V. All rights reserved.
PII: S0001-6918(01)00064-6

experience at least two quite distinct states of awareness. One state, that of remembering, involves bringing back to mind contextual details of previous events and experiences that include an awareness of one's self, usually at a particular time, and in a particular place. The other state, that of knowing, involves no such remembering, but is more of an abstract awareness of knowledge. This knowledge includes not only general knowledge, but also knowledge of previous events and experiences that one cannot remember. In the theory of Tulving (1983, 1985), these two states of awareness respectively reflect autonoetic and noetic consciousness, two types of consciousness which in turn reflect two mind/brain systems, i.e. episodic and semantic memory (see also Wheeler, Stuss, & Tulving, 1997).

Subjective reports of these states of awareness are assumed to be measured by Remember and Know responses (Tulving, 1985), indicating at the time of retrieval from memory which of the two mental states is experienced. In this paradigm, subjects have to give either "Remember" responses (R) if recognition is accompanied by the recollection of the mental representation built at encoding time, or "Know" responses (K) if recognition is achieved without access to information from the learning context. The authors assumed that type-R recognition requires autonoetic awareness whereas type-K responses are based on noetic awareness. A large number of studies using this method found that manipulating certain experimental variables had different effects on the proportions of type-R and type-K responses (for reviews, see Gardiner & Java, 1993; Gardiner & Richardson-Klavehn, 2000; Rajaram, 1999). A large number of variables influence R but not K responses. Such variables include the level of processing and generating versus reading at study time (Gardiner, 1988; Rajaram, 1993), retention interval (Gardiner, 1988; Gardiner & Java, 1991), word frequency (Gardiner & Java, 1990; Kinoshita, 1995), and divided versus full attention (Gardiner & Parkin, 1990; Mäntylä & Raudsepp, 1996). Some other variables have opposite effects on R and K responses. These include nonwords versus words (Gardiner & Java, 1990), word versus picture manipulations (Rajaram, 1993), massed versus spaced repetition (Parkin & Russo, 1993), and maintenance versus elaborate rehearsal (Gardiner, Gawlik, & Richardson-Klavehn, 1994). Other variables have been shown to influence K but not R responses, such as study-test modality (Gregg & Gardiner, 1994) and masked repetition (Rajaram, 1993).

Several studies have assessed the effects of aging using the R/K paradigm. As a whole, they have shown that age affects Remember responses (Fell, 1992; Parkin & Walter, 1992; Perfect & Dasgupta, 1997; Perfect, Williams, & Anderton-Brown, 1995, exp 1 & 2b). In some of these studies, Know responses improve with age (Parkin & Walter, 1992; Perfect et al., 1995, exp. 1 & 2b) which did not appear in another studie (Perfect & Dasgupta, 1997). Thus, the age-related effects sometimes observed on overall recognition performance (Erber, 1974; Gordon & Clark, 1974; White & Cunningham, 1982) may be essentially due to the decrease in Remember responses. On the other hand, the age-related increase in Know responses (Parkin & Walter, 1992; Perfect et al., 1995, exp. 1 & 2b) seems to indicate that memory retrieval in older groups is based more on direct access to memory traces and noetic consciousness. In this case, age-related impairment in Remember responses would be offset by direct access to memory traces based on familiarity. This pattern could also account

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات