

## Recent trends in the research on visuo-spatial working memory

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**Abstract** When studying visuo-spatial working memory a typical procedure that is used is asking subjects to recall serially presented spatial locations. However, when looking at this type of task a number of questions arise. The first aspect that will be discussed is that tasks which are normally used to measure spatial span, like the Corsi Block task, might not solely depend upon visuo-spatial processes. Thompson et al. show that a group of patients who are disadvantaged on the Corsi Blocks task are also disadvantaged on tasks involving executive processes, while their visual task processes are spared, thus suggesting the Corsi task to be dependent on executive processes. Pearson also focuses on short-term memory for serially presented locations, and explores the active rehearsal mechanism for that type of material. He will discuss experiments that suggest that visuo-spatial rehearsal processes involve modality-specific oculomotor processes as well as processes more closely associated with central executive component. The next question to be discussed is what kind of frame of reference is used when memorising and recalling a sequence of locations.

The reference frame could be egocentric, screen-based, or a frame-centred allocentric description, or a combination. Avons discusses data which show that location sequences appear to be encoded in an intrinsic frame of reference. Movement of the template during encoding impairs this process, possibly because concurrent attention shifts prevent the encoding of locations. A further aspect that has been investigated in the serial recall of location regards how location is represented. Boduroglu shows that location information is remembered as part of a configuration above and beyond absolute positional information is maintained. One final aspect that will be addressed in the symposium, both by Boduroglu and by Zoelch and Schumann-Hengsteler, analyses the influence of sequence length and complexity on accuracy and resolution in the recall of positional information.

**Keywords** Spatial span • Visuo-spatial rehearsal process • Spatial reference frame • Interference • Configural representations • Complexity • Strategy

