



Trends in Cognitive Sciences is publishing a [special issue](#) on space, time and number with articles by Brian Butterworth, Manuela Piazza, Daniel B.M. Haun and collaborators, and Dori Derdikman and Edvard I. Moser. As Manuella Piazza explains in her [article](#), the field is reaping a very interesting "cognition and culture" debate since there are now several detailed theories about the way number symbols recycle old evolutionary capacities :

"Attaching meaning to arbitrary symbols (i.e. words) is a complex and lengthy process. In the case of numbers, it was previously suggested that this process is grounded on two early pre-verbal systems for numerical quantification: the approximate number system (ANS or 'analogue magnitude'), and the object tracking system (OTS or 'parallel individuation'), which children are equipped with before symbolic learning. Each system is based on dedicated neural circuits, characterized by specific computational limits, and each undergoes a separate developmental trajectory. Here, I review the available cognitive and neuroscientific data and argue that the available evidence is more consistent with a crucial role for the ANS, rather than for the OTS, in the acquisition of abstract numerical concepts that are uniquely human."

The same topic is of course discussed at length in Susan Carey's recent major book [The origin of concepts](#).