

**International Workshop on Mental Imagery,  
Spatial Cognition, and Language (MICL 2009)**

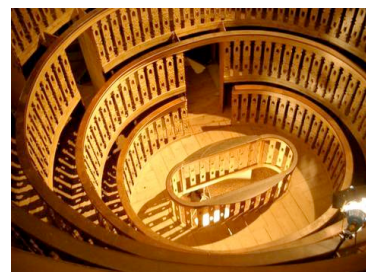
Padua/Venice  
12-13 June 2009

Here, I am happy to say "thank you" to all the friends who gathered in Padua and Venice on 12-13 June 2009 to help me get through my first year as an emeritus scholar.



The four kind organizers of the international workshop MICL 2009:  
Rossana De Beni, Cesare Cornoldi, Francesca Pazzaglia, and Valérie Gyselinck.

Very special thanks to the Franco-Italian quartet who were behind this project and splendidly organized these two days of work and friendship in Padua, in the impressive Palazzo del Bo, the historic heart of the University, and then on the Venetian Lagoon.



The Palazzo del Bo, Galileo's rostrum, and the Anatomy Theatre.



Image, language and spatial cognition,  
in the footsteps of Galileo, Copernicus, and Pico della Mirandola.

From left to right: Marios Avraamides, Andria Shimi, Felicia Fiore, Angelica Moè, Chiara Meneghetti, Jean-Marc Edeline, Demis Basso, Maria Jose Rodrigo, Francesco Del Prete, Marios Theodorou, Manuel de Vega, Grégoire Borst, Marie-Paule Daniel, Francesca Pazzaglia, John Richardson, Hubert Zimmer, Michel Denis, Bob Logie, Cesare Cornoldi, Maryvonne Carfantan, Gerry Quinn, Barbara Tversky, Rossana De Beni, Chiara Renzi, David Pearson, Tomaso Vecchi, Marijn Struiksma, Mijke Hartendorp, Jo Brooks, Albert Postma. Absent: Valérie Gyselinck (she took the picture!).



### A bit of applied spatial cognition

Map reading by  
Valérie, Barbara,  
et Francesca...



... and route planning  
by Cesare.

Looking  
at Venice...



APPLIED COGNITIVE PSYCHOLOGY  
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# **Spatial Discourse and Navigation: An Analysis of Route Directions in the City of Venice**

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## **SUMMARY**

We report four studies in which we investigated the production of spatial discourse designed to help people move around in unfamiliar environments. In Study 1, descriptions of three routes were collected from residents of the city of Venice. Analysis of the descriptions revealed the variety of ways used to describe each route. Typical features of route directions were found, in particular the uneven distribution of the landmarks mentioned, which tended to concentrate at critical points where an orientation problem had to be solved. Study 2 used individual protocols to construct more abstract ('skeletal') descriptions, reflecting the essentials needed for navigation. New subjects selected those units of information they judged necessary and sufficient to guide a person travelling along the routes. The contents of the skeletal descriptions were very similar, whether they were established by people familiar with Venice or complete strangers, suggesting that people can judge the relevance of information in route directions, regardless of their knowledge of the environment described. Study 3 showed that the ratings of the communicative value of the original individual protocols also resulted in very similar responses from familiar and unfamiliar judges. Finally, Study 4 assessed the value of individual descriptions for assisting navigation by testing the navigational performance elicited by these descriptions. Subjects unfamiliar with the city of Venice were given skeletal descriptions or descriptions which had been rated 'good' or 'poor' in the previous study. Navigation with good descriptions gave significantly lower error scores than navigation with poor descriptions, and skeletal descriptions gave scores similar to those of good descriptions. Poor descriptions also resulted in more errors from subjects who tended to use a survey perspective than from subjects expressing a preference for visual memories of landmarks. We suggest that the efficiency of route directions as navigational aids depends not only on their intrinsic characteristics but also on the mode of processing adopted by the users. Copyright © 1999 John Wiley & Sons, Ltd.

## **INTRODUCTION**

The processes involved in the mental representation of space have been a major concern of cognitive psychologists even before the emergence of the research domain

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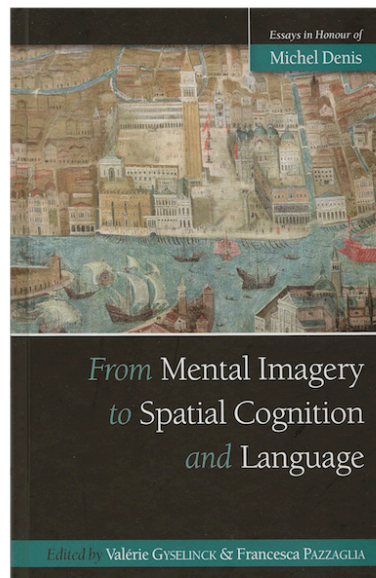
CCC 0888-4080/99/020145-30 \$17.50  
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The Serenissima is also the  
main character in one of my  
favorite scientific papers.

I am pleased that this is the second most cited  
of all the papers I have ever published in psychology journals.





Click on the link below to learn more about the volume  
edited by Valérie Gyselinck and Francesca Pazzaglia  
after the Padua/Venice workshop

*From Mental Imagery to Spatial Cognition and Language:  
Essays in Honour of Michel Denis*  
(Psychology Press, 2012)

<http://www.micheldenis.fr/wp-content/uploads/2013/12/2012-Gyselinck-Pazzaglia-txt.pdf>