



ONLINE SEMINAR BY PROF. MARIO BONATO

(Dipartimento di Psicologia Generale-DPG)

May 14th, 2020 at 3:00 p.m.

<https://unipd.zoom.us/j/99315750486>; Meeting ID: 993 1575 0486

Title of the Seminar: Multitasking reveals impaired spatial awareness after stroke

Abstract: In everyday life contexts sometimes we manage to attend multiple sources of information without particular effort. Sometimes, however, performing two or more tasks together becomes very difficult, like for instance if we have to drive a car in a foggy day while paying attention to a debate on the radio. In these conditions our attention is loaded and we perform what is called “multitasking”.

Brain damage (e.g. a stroke) often dramatically increase the difficulty of performing two or more tasks in parallel. I will focus on the sensitivity of multitasking, computer-based, assessment for detecting impairments in spatial processing (e.g. hemispatial neglect and extinction) but also for understanding their interaction with non-lateralized impairments.

The computer-based tasks we use require to simultaneously process multiple sources of information. They are very sensitive and detect contralesional omissions even in those stroke patients who are seemingly spared at standard, paper and pencil, testing. Our findings deeply question a number of neuropsychological milestones including the right hemisphere dominance for spatial processes and the lack of spontaneous recovery in chronic phases. They highlight the crucial role of unspecific attentional resources in spatial awareness and suggest a key role for compensatory strategies in performance.

Clinical implications go beyond the increased sensitivity, and are related to the analogy between the methods we use and everyday attentional demands, with particular reference to those complex contexts where patients cannot compensate for their deficits and often fail.

The impact of multitasking/divided attention in healthy participants will be also discussed with reference to experiments using pupil dilation as an index of effort. This evidence suggests the presence of limited and unspecific attentional resources which are allocated across tasks.

Web: <https://pnc.unipd.it/bonato-mario/>
https://www.researchgate.net/profile/Mario_Bonato