**Supplementary material 1.**

To identify extra-personal and personal neglect the Standard Battery for the Evaluation of Hemineglect (Pizzamiglio, Judica, Razzano, & Zoccolotti, 1989; Guariglia, Palermo, Piccardi, Iaria, & Incoccia, 2013) and the Use of Common Objects test (Zoccolotti, Antonucci, & Judica, 1992) were administered to patients with right brain damage.

The Standard Battery for the Evaluation of Hemineglect includes: (i) the Line Cancellation test, that consists of twenty-one line segments arranged on a stimulus page, participant is requested to cross each segment without leaving any out. The number of uncrossed segments in each half of the stimulus page are computed and two or more omissions on the side contralateral to the lesion was considered pathological; (ii) the Letter Cancellation test, that consists of 6-letter rows, each containing 52 capital letters on a stimulus page, participant is requested to cross the target letter “H” interspersed 104 times randomly. Errors in each half of the stimulus page are computed and a difference of four or more omissions on the side contralateral to the lesion is considered pathological; (iii) the Wundt-Jastrow Area Illusion, that consists of 40 stimulus pages where are showed two circular fans of identical shape and size and participant is required to indicate which fan is larger. Responses are classified in two categories; “expected responses” that are consistent with the illusory effect in healthy subjects, and “unexpected responses” that are in the opposite direction. The number of “unexpected responses” when the two fans are oriented toward the left or the right are computed and a difference of two or more between “unexpected responses” given for left oriented compared to right oriented stimuli is considered pathological; (iv) the Sentence Reading tests, that consists of three sentences of different length written on a stimulus page, participant is requested to read them aloud. Errors in the reading of the sentences on the side contralateral to the lesion are considered pathological. According to the normative rules, a diagnosis of extra-personal neglect was made if patients performed below the cut-off on at least two out of the four tests of the Standard Battery for the Evaluation of Hemineglect.

The Use of Common Objects test (Zoccolotti, Antonucci, & Judica, 1992) requires patients to show the use of three objects (eyeglasses, a razor or face powder according to the patient’s gender, and a comb) on their body. The patient’s behaviour is analysed and quantified according to his/her ability to perform the requested actions across the entire space. A diagnosis of personal neglect was made if the total score on the Use of Common Objects test was greater than or equal to two (Zoccolotti et al., 1992).