Visuospatial neglekt

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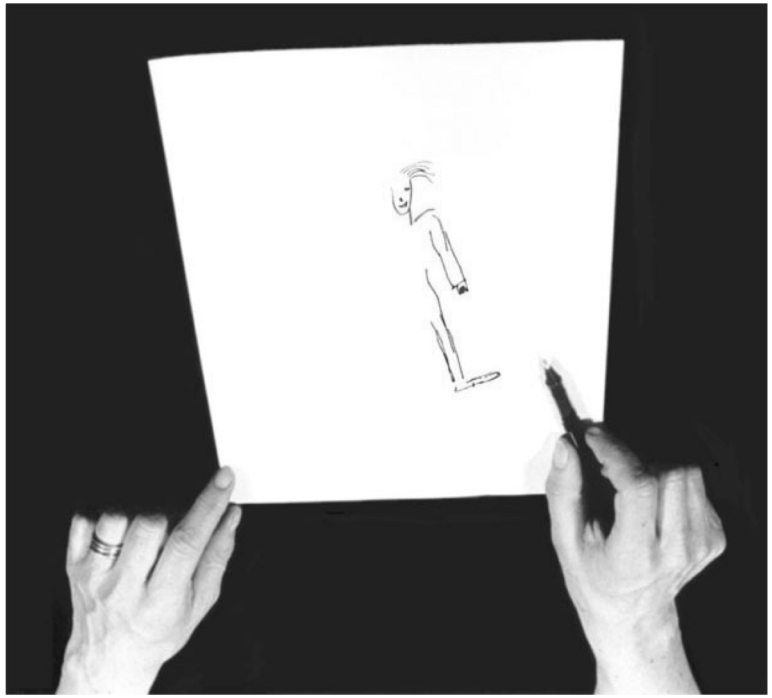
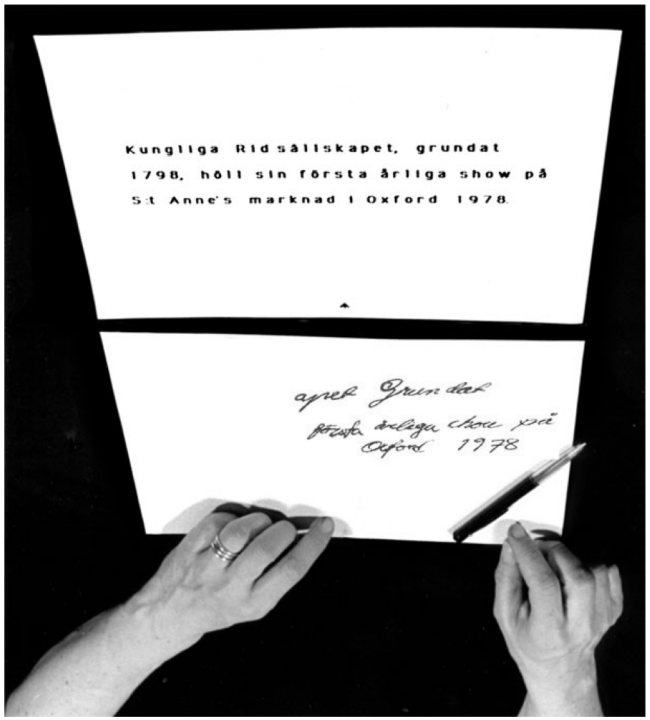
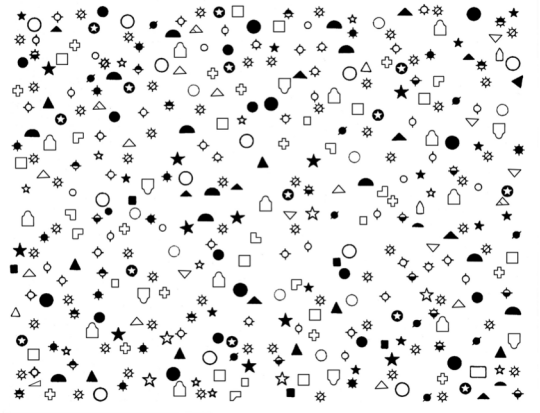


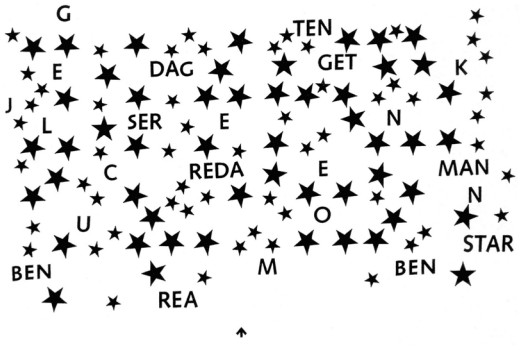


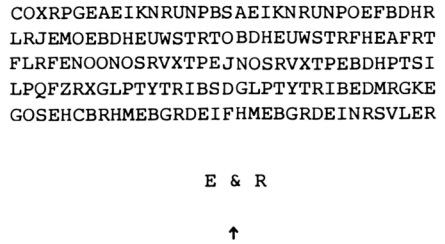
Mesulam's test



The Random Shape Cancellation Test (Weintraub & Mesulam, 1988)

Test ur BIT





Behavioural Inattention Test

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What are the characteristic key symptoms of neglect?

1) Initial ipsilesional bias
2) Inattention
3) An asymmetric inattention
4) Unawareness of the inattention

Viken, J., Jood, K., Jern, C., Blomstrand, C., & Samuelsson, H. (2014). Ipsilesional bias and processing speed in visual search are important predictors of functional dependency following a right hemisphere stroke. The Clinical Neuropsychologist. 28(6), 974-993.

Samuelsson, H., Hjelmquist, E., Naver, H., & Blomstrand, C.. Visuospatial neglect and an ipsilesional bias during the start of performance in conventional tests of neglect. Clinical Neuropsychologist, 10(1), 15-24.

Samuelsson, H., Hjelmquist, E. K. E., Jensen, C., & Blomstrand, C. (2002). Search pattern in a verbally reported visual scanning test in patients showing spatial neglect. *Journal of the International Neuropsychological Society, 8(3),* 382-394.

Broeren, J., Samuelsson, H., Stibrant-Sunnerhagen, K., Blomstrand, C., & Rydmark, M. (2007). Neglect assessment as an application of virtual reality. Acta Neurologica Scandinavica, 116(3), 157-163.

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Film Patient

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Visuospatial neglect

After a stroke: 20-23%
After a right hemisphere stroke: 32-44%
After a left hemisphere stroke: 8-20%

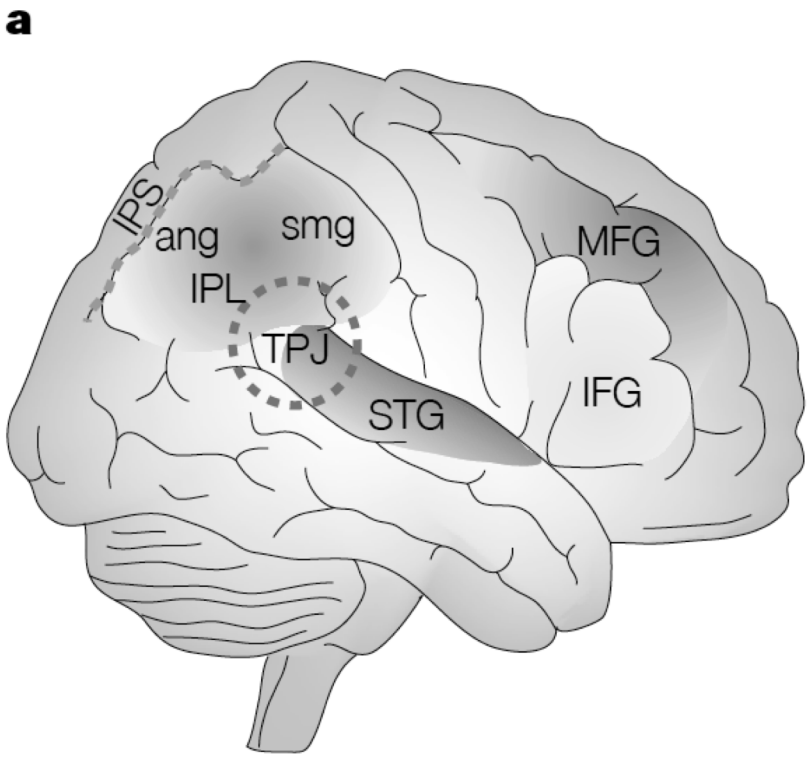
Samuelsson, H, Hjelmquist, EKE, et al. (1997;)
Pedersen, PM; Jørgensen, HS, et al. (1997);
Ringman, JM, Saver, JL, et al. (2004);
Appelros, P; Karlsson, GM, et al (2002)

Högt samband med lägre grad av självständighet i dagliga aktiviteter ADL

Bosman et al. Annals of Physical and Rehabilitation Medicine 63 (2020) 344–358

Skadelokalisation vid neglekt

The superior longitudinal fasciculus (SLF)



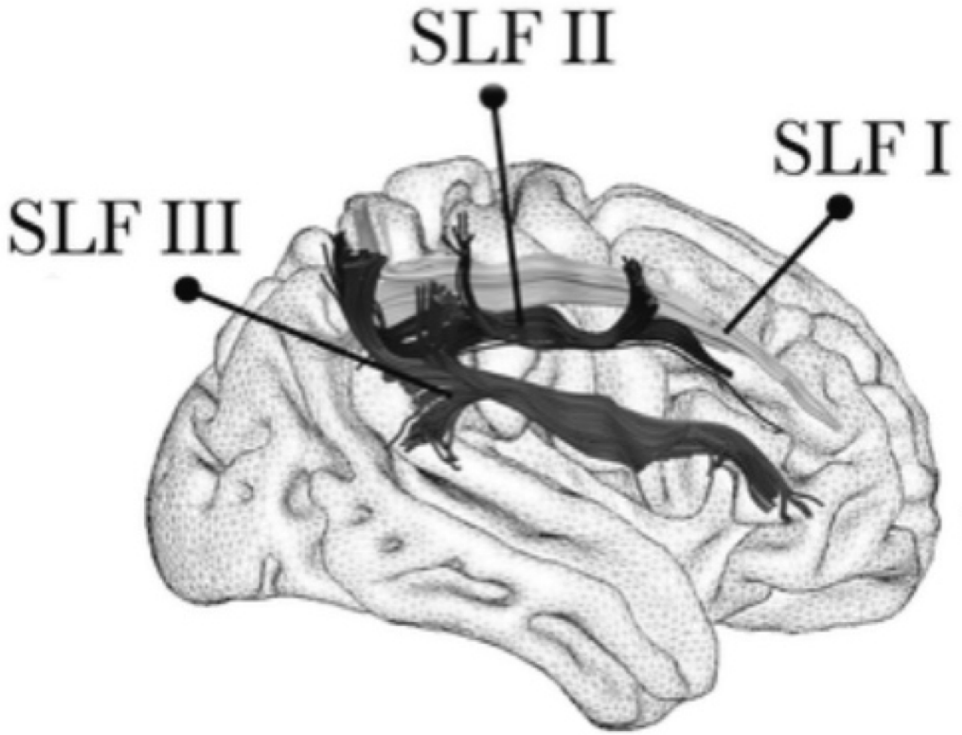


Figure 1 | **Neuroanatomy of neglect. a** | Cor

Husain and Rorden, Nature reviews, Neuroscience, volume 4 jan 2003

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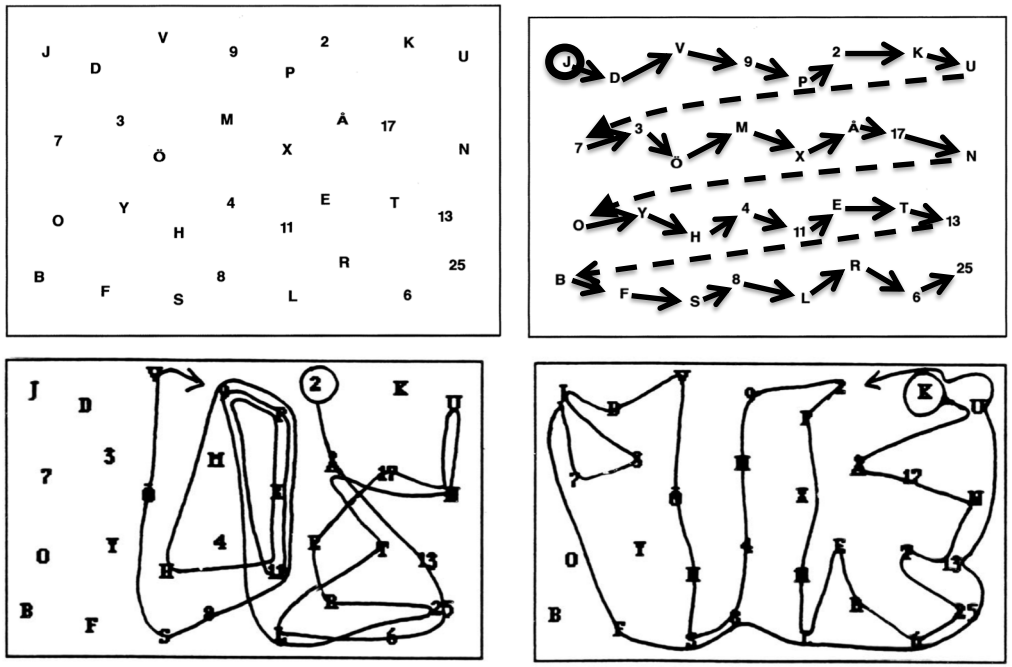
Additional phenomenon that we have identified as important clinical symptoms following neglect

1) A general decrease in processing speed / reaction time (sustained alertness?)
2) An unsystematic visual search-pattern



Samuelsson, H., Hjelmquist, E. K. E., Jensen, C., & Blomstrand, C. (2002). Search pattern in a verbally reported visual scanning test in patients showing spatial neglect. *Journal of the International Neuropsychological Society, 8(3),* 382-394.

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Exempel på avvikelser i sökmönstret:

Avsökningen inleds på ipsilaterala sidan

Antal missar: fler åt kontralaterala sidan

Hela avsökningsmönstret förskjutet åt ipsilaterala sidan

Avsökningen tar längre tid

Kortare saccader

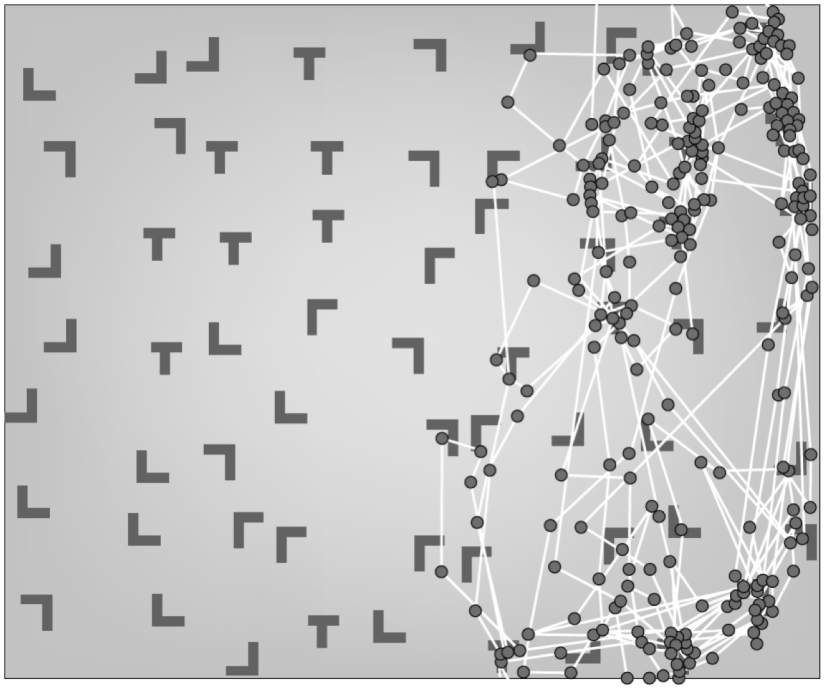
Mer krävande uppgift ger mer sådana här symtom

Om målstimuli o distraktorer tas bort på ipsilaterala sidan avsöks mer av kontralaterala sidan

Keeping an eye on visual search patterns in visuospatial neglect:
A systematic review
Jolene A. Cox, Neuropsychologia 146 (2020)

Kontralateral sida

Ipsilateral sida



Återvänder till samma plats (ff a. åt ipsilateral sida)*

Upprepade markering av ”targets” (ff a. på ipsilateral sida)*

Osystematiskt avsökningsmönster*

***Impaired spatial updating across saccades/ spatial working memory/ spatial remapping during saccades**

Non-spatially Lateralized Mechanisms In Hemispatial Neglect
Nature Reviews, Neuroscience Vol 4, Jan 2003
Masud Husain and Chris Rorden

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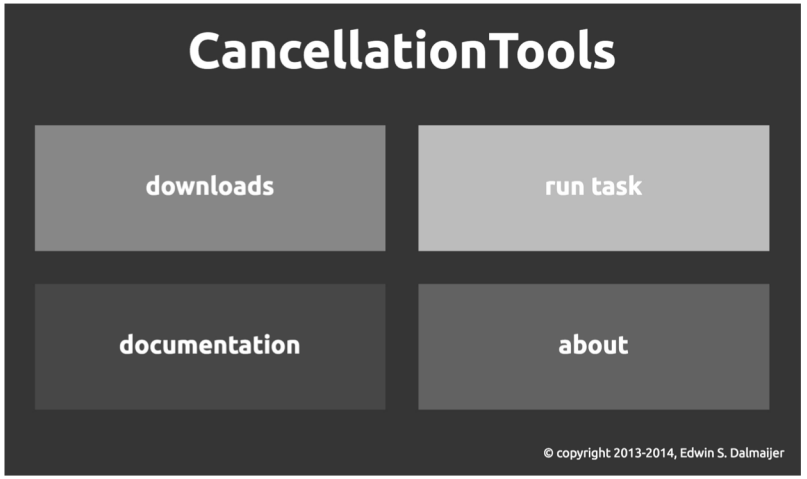
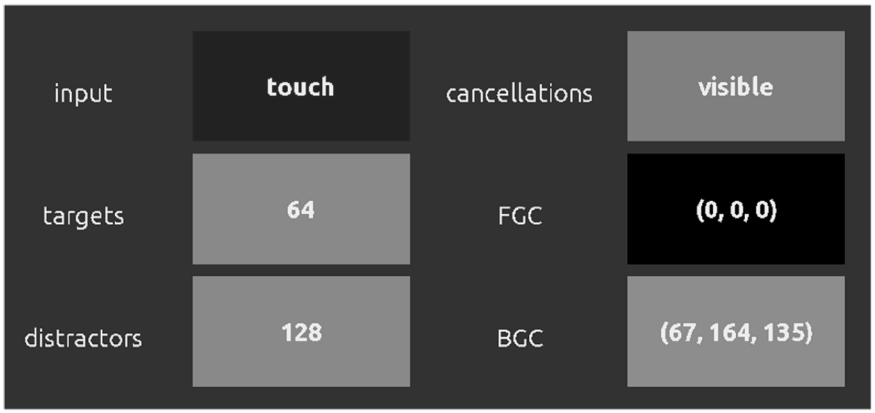
CancellationTools: All-in-one software for administration and analysis of cancellation tasks.
Edwin S. Dalmaijer et al.
Behav Res (2015) 47:1065–1075

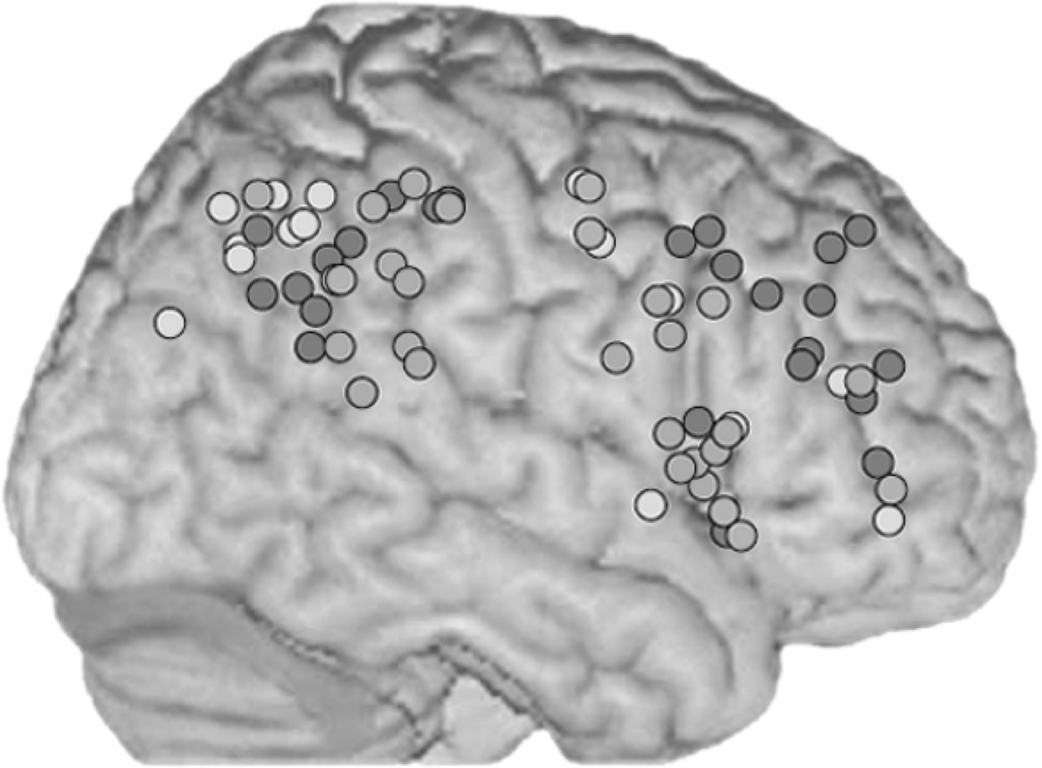
A new, open-source software that is freely available to all. It allows researchers and clinicians to flexibly administer computerized cancellation tasks using stimuli of their choice, and to directly analyze the data in a convenient manner.

http://www.pygaze.org/cancellation/





Cropped screenshot of CancellationTools' GUI, showing typical buttons and input fields from the task settings screen



Non-spatial tasks.
Regions activated in:

- Sustained attention (red)
- Spatial updating across saccades (green)
- Salience (blue)

These areas, activated in non-spatial tasks, are also the regions commonly damaged in neglect patients.

Husain and Rorden, Nature reviews, Neuroscience, volume 4 jan 2003