Masking, conscious access, and the blind spot of introspection

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For many years, introspection and consciousness were rejected from scientific psychology. In my talk, I will show that introspection is often a valid source of information that, combined with neuroimaging methods, can provide a window into the architecture underlying conscious processing. A first series of masking experiments probed introspective reports of target visibility. Visibility reports provided an accurate picture of the objective threshold for perceiving masked stimuli, and correlated with electrophysiological markers of late cortical activation (P300). I argue that conscious perception corresponds to a state of ignition of the conscious workspace, a distributed set of neurons with long axons capable of distributing incoming information to many processors and therefore making it reportable. A second series of experiments probed introspection of reaction time (RT). After each trial of an RT task, subjects reported how long they thought it took them to take their decision. In a single-task setting, this subjective RT was highly correlated with objective RT, but in a dual-task setting, introspection was strikingly blind to the psychological refractory period (PRP) cost – a massive delay of the second task. My colleagues and I suggest that introspection is only accurate for mental objects that are currently active in the workspace – and that both masking and dual-task limitations can prevent or delay workspace access.