RESEARCH BRIEF · THE EVIDENCE, PLAINLY

Your Head Holds Four Things

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Your working memory, the mental workbench you actually think on, holds only about four items at once. Most productivity advice ignores that limit, which is why your focus scatters when you try to keep the whole day in your head.

WHAT WAS ACTUALLY STUDIED

01 **Cowan (2010), Current Directions in Psychological Science** — TIER I

Nelson Cowan's account of working memory capacity, showing that once you strip away rehearsal and grouping tricks, the focus of attention holds about four chunks in adults, not the famous seven.

02 **Gilbert (2015), Quarterly Journal of Experimental Psychology** — TIER I

A set of experiments with nearly 1,200 people testing whether writing an intention down, instead of holding it in mind, improves follow-through, and when the benefit is largest.

03 **Risko and Gilbert (2016), Trends in Cognitive Sciences** — TIER I

A review of cognitive offloading: how using external aids to hold information reduces internal memory load and changes performance across tasks.

WHAT THEY FOUND

For decades the quoted number was seven, from George Miller's 1956 paper. That figure did not hold up. Strip away the rehearsal and grouping tricks people use to inflate it, and the real capacity of the focus of attention is closer to four chunks in adults (Cowan), an estimate that has held across hundreds of studies since.

> **4** the rough number of items your focus of attention holds at once in adults, once rehearsal and grouping tricks are stripped away. Not seven.

The useful part: you do not have to hold it in your head at all. Gilbert ran experiments with nearly 1,200 people and found that writing an intention down instead of remembering it raised follow-through, and the gain was largest exactly when the memory load was high.

That is cognitive offloading, and the broader review (Risko and Gilbert) shows the same pattern across tasks: move information out of the head and onto a reliable external surface, and the limited workbench is freed for the work that actually needs it.

WHERE THE EVIDENCE STANDS

One limit, and the move that gets around it.

Cowan sets the ceiling: about four chunks, well replicated. Gilbert's experiments and the offloading review show what to do about it. Stop using the workbench as a filing cabinet. Hold less, write more, and follow-through climbs, most of all when you are loaded.

The two halves fit cleanly. One tells you the constraint is real and small. The other tells you the constraint is escapable, as long as you stop trying to win by remembering harder.

WHAT THIS DOES NOT PROVE

The four-chunk figure is an estimate of a real limit, but capacity varies between people and with the kind of material, and researchers still debate exactly how to count a chunk. Treat the number as a useful design constraint, not a fixed dial.

The offloading studies are strong on follow-through and task performance. They are not a claim that writing things down fixes attention disorders or replaces clinical support. This is education, not medical advice.

WHAT IT MEANS FOR YOU

If your focus scatters under a full day, the problem is probably not discipline. It is that you are asking a four-item workbench to also be storage. Put the loops, the intentions, and the half-thoughts onto one

reliable external surface and let the bench stay clear for thinking. A daily place to do this beats remembering harder every time.

GO TO THE SOURCE

TIER 1 Cowan, N. (2010). Current Directions in Psychological Science. pubmed.ncbi.nlm.nih.gov/20445769

TIER 1 Gilbert, S. J. (2015). Quarterly Journal of Experimental Psychology. pubmed.ncbi.nlm.nih.gov/25404057

TIER 1 Risko, E. F., & Gilbert, S. J. (2016). Trends in Cognitive Sciences. pubmed.ncbi.nlm.nih.gov/27542527

Tier 1 means peer-reviewed primary research or meta-analysis, the strongest evidence. Tier 2 means an expert framework or smaller study that traces to peer-reviewed work. We grade every source so you can see the weight behind each claim.

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Education, not medical advice.