

(U) The SIGINT Philosopher: Cognitive Overflow?

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(U) There's a computer sitting atop your shoulders. Granted, real computers can apparently best human brains on [Jeopardy](#) with ease, but all the same... Since Noam Chomsky and his cohorts at MIT opened the floodgates to the study of how we think, cognitive psychology has come a long way. Although the ensuing decades of research have highlighted the astounding capabilities of our gray matter, the field has also exposed the limitations our brains are subject to. It may be worth considering the implications these limitations have for our work in SID.

(U) "Channel capacity" is the term some cognitive psychologists have begun to apply to the brain's limits on the amount of certain information it can retain. For instance, research shows that the average person can only differentiate between 5-9 different tones, shapes, or textures at a given time. Any more, and our capacity to categorize becomes overtaxed, and we begin to make mistakes. In other words, the servers overload. It is yet another example of how unprepared humans are, in evolutionary terms, for the information age. Evolutionary biologist Sherwood Washburn once wrote:

(U) "Most of human evolution took place before the advent of agriculture, when we lived in small groups, face-to-face. Man evolved to feel strongly about few people, short distances, and relatively brief intervals."

(U) The question then becomes: If an individual brain has finite "channel capacity," does the vast collective of SID, comprised of thousands of brilliant, yet limited, brains also have a definite "channel capacity"? If so, what is it? How do we know when we've reached it? What if we've already exceeded it? In essence, could SID's reach exceed its grasp? Can the combined cognitive power of SID connect all the necessary dots to avoid, predict, or advise when the improbable, complex, or unthinkable happens?

(U) Take for example the number of tools, clearances, systems, compliances, and administrative requirements we encounter before we even **begin** to engage in the work of the mission itself. The mission then involves an ever-expanding set of complex issues, targets, accesses, and capabilities. The "cognitive burden," so to speak, must at times feel overwhelming to some of us. The SID is an organism with many moving parts. So how do we ensure our **SIGINT potential** is in line with, and doesn't overwhelm our collective **cognitive capacity**? Can we count on our overarching SID mechanism to self-regulate, to organically cull, sort, and retain? Or is there perhaps something extra we ought to be doing to ensure we operate at full exploitative and analytic force?

(U) Surely someone will point out that the burgeoning amalgam of **technological advances** will aid us in shouldering the burden. However, historically, this scenario doesn't seem to completely bear out. The onslaught of more computing power--often intended to automate some processes--has in many respects demanded an expansion of our combined "channel capacity," rather than curbing the flow of the information that's necessary to retain.

(U) It's an issue worth thinking about and discussing. In the meantime, I'll be working on my [14-character](#) password...

(U) Editor's note: See a [Tapioca Pebble](#) on this topic.