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DART 449 – the language of the Web
January 16th, 2023

Vannevar Bush's '*As we May Think'* (1945)

In his '*As we May Think'* article, Vannevar Bush projected technologies decades forward while writing about post-war technologies and what we would come to know today as the computer. From his 1945 article, Bush recalls what the second world war brought the scientific community; almost all spheres of science got to experience their greatest innovation curve, ever. Indeed, WWII brought experts in proximity with the pressing challenge to counter their enemies. He predicted these systems, especially in physics and computer science, to get radically optimized and complexified. One of the main benefit Bush saw in these networked systems was that scientists would be able to share their findings in more efficient and connected ways, leading to more and faster scientific discoveries and avoiding the "significant attainments" to "become lost in the mass of the inconsequential".

What he called the 'memex' was a staggeringly accurate prediction of a desktop computer, working through indexation rather than the human mind's preferred associative memory system. While a machine indexes using logical listing, subclasses and unique paths, the brain fetches information by going from one memory to an associated one, with the ones less thought of fading and being forgotten with time.

Though Bush could have hardly been able to predict it, his explanations of associative memory can easily be paralleled with neural networks and today's algorithms. Indeed, algorithms do not have logical listed indexed; instead, they are systems that learn by recognition of patterns, thus by association. Bush even foreshadows the foundations of hyperlinks and algorithmic dataset by imagining a simplified version of getting items "permanently joined" by a "code

space" appearing in both files when someone tagged the objects as such. In a way, the use of Captcha and other tagging AI systems is very similar to what Bush is describing.

Bush concludes by explaining how humans have little choice but to optimize these indexing systems if they want to push their "experiment to its logical conclusion and not merely become bogged down part way there by overtaxing [their] limited memory". That being said, the limitless nature of the networked associated systems of today have come to 'bog us down' in the way that algorithmic calculations are being used to make internet users fixate on their platforms where a "mass of […] inconsequential" misinformation lays; the very problem Bush wanted to avoid by creating indexing systems. We came full circle to a point where the technologies we use are arguably less productive by the sheer quantity of data that reside on them.