A Math Function Describes How Whole Societies Remember—and Forget

A Neruda masterpiece—and a bi-exponential curve—define the dynamics of the fast then slow fade of our greatest collective sorrows and joys

By Gary Stix on December 13, 2018

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In a paper that deftly bridges the divide between the humanities and the sciences—C. P. Snow's much-vaunted two cultures—researchers from the MIT Media Lab document the underlying dynamics of collective attention and memory, traced as a bi-exponential curve (a steep drop followed by a slow decline over time).

The paper published on December 10 in *Nature Human Behavior* begins with a quotation from one of Pablo Neruda's most famous poems, "Poema 20," contrasting the vivid but often short-lived emotion of intense romantic love and its gradual fading from memory as the years pass: "Love is so short, forgetting is so long." The dynamics of this process, the researchers contend, parallel precisely the attention a society devotes to its most memorable events (whether the Watson–Crick paper on the structure of DNA or Michael Jackson's *Thriller* video). Watch this video and you'll see what Neruda—and the MIT researchers—mean.

[Note to students: please check out this video that goes with the article – this is posted on our website.]