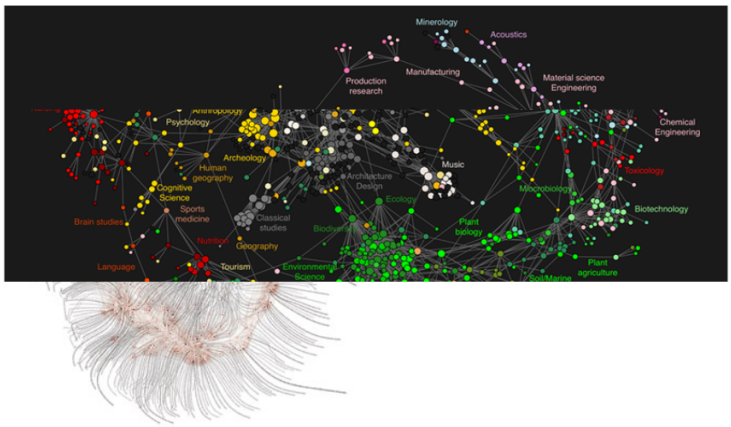
BRANDON KEIM SCIENCE 03.11.2009 03:00 PM

Map of Science Looks Like Milky Way

The pursuit of human knowledge has a shape. By crunching data from more than a billion user interactions on scholarly databases, Los Alamos National Laboratory researchers produced a high-resolution map of the relationships between different fields of science. They're not the first to map science, though they insist that their map is best. Other topographers [...]



(Maybe that's why the Los Alamos map, published in *Public Library of Science ONE*, looks a bit like the Milky Way, while this lovely scientific paradigm map — a favorite of *Nature* and *Seed* magazine — looks like an amoeba.)

The Los Alamos team analyzed click streams from 23 databases — Thomson Scientific, Elsevier, Jstor, Ingenta and multiple campuses of the University of Texas and California State University — and mapped patterns of interest and cross-journal citations. (For anyone concerned about anonymity, no worries: queries weren't user-identifiable. Your search for "Termination of Intractable Hiccups with Digital Rectal Massage" is still a secret.)

Mapmakers say that visualizations of knowledge help researchers frame discipline-hopping questions and identify neglected cooperative opportunities. I'm not entirely convinced — though the gap between organic chemistry and plant genetics *is* pretty surprising — but then again, one person's frivolous distraction is another's breakthrough-in-waiting.

And that's what science is all about.

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Citation: Clickstream Data Yields High-Resolution Maps of Science. By Johan Bollen, Herbert Van de Sompel, Aric Hagberg, Luis Bettencourt, Ryan Chute, Marko A. Rodriguez, Lyudmila Balakireva. Public Library of Science ONE, March 11, 2009.

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Source: Wired
https://www.wired.com/2009/03/mapofscience/