



2020 CSSI Research Talks:

"Improving data access democratizes and diversifies science"

Abstract: The foundation of the scientific method rests on access to data, and yet such access is often restricted or costly. We investigate how improved data access shifts the quantity, quality, and diversity of scientific research. We examine the impact of reductions in cost and sharing restrictions for satellite imagery data from NASA's Landsat program (the longest record of remote-sensing observations of the Earth) on academic science using a sample of about 24,000 Landsat publications by over 34,000 authors matched to almost 3,000 unique study locations. Analyses show that improved access had a substantial and positive effect on the quantity and quality of Landsat-enabled science. Improved data access also democratizes science by disproportionately helping scientists from the developing world and lower-ranked institutions to publish using Landsat data. This democratization in turn increases the geographic and topical diversity of Landsat-enabled research. Scientists who start using Landsat data after access is improved tend to focus on previously understudied regions close to their home location and introduce novel research topics. These findings suggest that policies that improve access to valuable scientific data may promote scientific progress, reduce inequality among scientists, and increase the diversity of scientific research.

<https://www.pnas.org/content/117/38/23490>



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Friday October, 23 @12:15 pm



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