

Our GIS is (still) too small

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The Geographers who led the Quantitative Revolution did not have a GIS to help them. They learned the skills and built the tools they needed to address their problems of choice, and they did not expect anyone else to build the tools for them. In the meantime, GIS have been successfully applied over the last 30 years to many geographical problems. But technologies and associated theory can become limiting if they end up defining how we see the world and what we believe are worthy and tractable research problems. This talk explores some of the limitations currently impacting GISystems and GIScience from the perspective of technology and community, contrasting GIScience with other informatics communities and their practices. It explores several themes: (i) GIScience and the informatics revolution, (ii) the lack of a community-owned innovation platform for GIScience research, (iii) the computational limitations imposed by desktop computing and the inability to scale up analysis (iv) the continued failure to support the temporal dimension, and especially dynamic processes and models with feedbacks, (v) the challenge of embracing a wider and more heterogeneous view of geographical representation and analysis and (vi) the urgent need to foster an active software development community to redress some of these shortcomings. Geocomputation, too, suffers from the lack of a shared, community platform for software development, evaluation and use. How can we change this?

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