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Wonkblog

This computer programmer solved gerrymandering in his spare time

By Christopher Ingraham
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Yesterday, I asked readers how they felt about setting up independent commissions to handle redistricting in each state. Commenter Mitch Beales wrote: "It seems to me that an 'independent panel' is about as likely as politicians redistricting themselves out of office. This is the twenty-first century. How hard can it be to create an algorithm to draw legislative districts after each census?" Reader "BobMunck" agreed: "Why do people need to be involved in mapping the districts?"

They're right. These programs and algorithms already exist. Brian Olson is a software engineer in Massachusetts who wrote a program to draw "optimally compact" equal-population congressional districts in each state, based on 2010 census data. Olson's algorithm draws districts that respect the boundaries of census blocks, which are the smallest geographic units used by the Census Bureau. This ensures that the district boundaries reflect actual neighborhoods and don't, say, cut an arbitrary line through somebody's house.

You can see for yourself how his boundaries look. Here's a comparison of Pennsylvania's current congressional districts (top) and Olson's algorithmically-drawn ones (bottom).

Here's Maryland, currently the least-compact state in the nation:

And here's North Carolina, the second-least compact:

Huge differences, yes? The algorithm-based districts make a lot of intuitive sense. You can see how all the other states would look at Olson's site.

Now, some argue that compactness isn't a very good measure of district quality. Districts should also respect "communities of interest" — that is, there should be some common denominator among a district's residents. But defining a "community of interest" is another problem altogether. As Jonathan Bernstein wrote last year, a community of interest could be defined based on rural/urban divides, shared cultural background, economic interest, ethnic background, demographic similarity, political boundaries, geographic boundaries and on and on.

And therein lies the problem: You can define a "community of interest" pretty much however you want. If you're a politician in search of a figleaf justification for putting voters from disparate corners of the state into the same congressional district, you can always find one. Communities of interest are a great ideal, but in practice they're so fuzzy that they open the door to all manner of redistricting shenanigans, as we've seen.

A word, also, about the Voting Rights Act. In some instances, the act requires that states draw majority-minority districts. The idea to ensure that minority voters get appropriate representation in Congress, particularly in areas where they've historically been discriminated against.

But here's the thing: Packing a state's minority voters into a small number of districts has the effect of diminishing their clout everywhere else. What you get, in effect, is district-level segregation: minority districts for minority voters.

North Carolina's 12th district, the country's most gerrymandered, is a perfect example of this. The district was originally drawn by Democrats. But when the GOP redrew the state in 2010, they found it convenient to leave the 12th mostly untouched. Concentrating African American voters here gave them more leeway to finagle the surrounding districts to their liking.

These considerations of race and communities of interest are meaningful and should not be dismissed lightly. As I said above, they're driven by the highest ideals. But they turn out to be really difficult to put into practice, leaving the door open to all manner of lopsided representation. At worst they can be twisted into tools for disenfranchisement.

Brian Olson's algorithm bypasses these issues completely in favor of straightforward geographic compactness. It would be a huge lift to actually put programmatic redistricting into practice — among other things, we'd need to retool major portions of the Voting Rights Act. But given what's at stake — the very idea of representative democracy — it's worth considering.

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Christopher Ingraham writes about all things data. He previously worked at the Brookings Institution and the Pew Research Center. Follow

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