

rules, tips, tricks, ethics

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outline

tips and tricks

rules

ethics

research design again: important from now on

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have a big screen

- again, i cannot overemphasize, that
- a big screen is key for gis work
- it's \$100
-
- and get a mouse

useful tools

- zoom to layer extent
- use identify features tool
- explore plugins

workflow

- save the whole project (with many layers); next time just open; remember: don't move shapefiles around on hd! it
- can move layer around
- can have many layers with say different symbology of the same shapefile

misbehaving not working qgis

- email listserv!
- do what you are doing in a different way-eg try different dataset; different var; different approach etc (usually can do same thing in many ways)
- shut it down and fire it up again
- install different version or reinstall (last resort)

google for maps

- depressing, but whatever you are mapping, someone has already done it
- google and see images, say: 'nj counties contamination sites' <https://www.google.com/search?q=nj+counties+contamination+sites&tbm=isch>
- or “Philadelphia healthy stores map” (sometimes need word 'map' otherwise get pics of healthy food)
- <https://www.google.com/search?q=philadelphia+healthy+stores+map&tbm=isch>
- get ideas, inspiration, make your map better

google for shapefiles

- cant overestimate usefulness of goog for finding dat
- eg “what you are looking for, shapefile”
- eg “new jersey public schools, shapefile”
- tips:
 - may need to look for a higher level; eg NJ schools instead of Depford Twshp schools
 - if you cant find it, contact govt; eg city of Camden, state of NJ, etc—they’ll be happy you’re using their data
 - again, may find only traditional data and need to join

join data

- the real value comes from joining data!
- again, a map about any single var was already made
 - but 2 given vars in a map or set of 2 maps: rare
- there are so many data and variables out there
- use your creativity and imagination
- and you'll easily come up with something that no one did

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quality; be critical

- GIGO: Garbage In, Garbage Out
 - double, triple check
 - ask yourself if it makes sense...
 - (Camden richer than Cherry Hill?)
 - use several datasources and or several variables to measure the same thing (triangulation)

unknowns by Rumsfeld (be humble in your findings)

- There are known unknowns.
- There are things that we now know we don't know.
 - (these are benign, but be explicit about them)
- But there are also unknown unknowns: things we do not know we don't know.
 - (these are tricky: you can't do anything about unknown unknowns other than acknowledge that they exist; and never say you "proved" something)
 - (your statements are valid until disproved: all Swans are white, only until you see one day a black Swan)

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integrity/honesty

- be explicit about problems in your data
 - eg non-joins, missing data, miscodings
- be explicit about problems in your models:
 - eg don't hide maps bc they contradict your story
 - discuss it: how, why; ask audience to comment/criticize
- instead of forcing data to tell your story, listen carefully; let data tell you her story!
- if you work for somebody: eg a bank or NGO: they will ask you to find something; use a disclaimer saying that

ethics

- everybody wants to sell something
- we academics or thinkers or students, too!
- we try to sell some idea or point of view
- nobody 100% objective
- always try to present alternative/opposite points of view
- present the whole picture
- force yourself to be objective, because humans aren't
- see fascinating <https://righteousmind.com/>

ethics: bad examples

- cherry picking of vars or samples or timeframes, etc
- eg using only vars/operationalizations that fit your story
- eg using year in which you find what you wanted to find
- classification: playing with bins to fit your story

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error of measurement

- keep in mind that measurement is always imprecise...and ask yourself how imprecise
- be explicit about it; see literature
- eg happiness: cross-validated with PET scans and others' opinions
- sometimes, like with ACS data we know err of measurement

think about incentives

- who is producing that data?
- again, you can measure a concept in many different ways
- people have an incentive to measure it in a way that benefits them
- the point is to always think about quality of data and get alternative measures
- eg here triangulate with some intl data, say satellite images

construct validity

- are you measuring what you say you are measuring?
- say you want measure ability, or IQ, but you only have data about education
- <http://www.socialresearchmethods.net/kb/constval.php>
- seven sins map

http://2.bp.blogspot.com/_R3SXJVojagU/SwLzZJL1E2I/AAAAAAAAAIE/7GbMzcZPDDk/s1600/sevendeadlysins.bmp

triangulate

- triangulation=use different measures for the same concept
- eg education:
 - years of schooling
 - highest degree obtained
 - avg SAT score
 - avg ranking of schools in the area
 - etc etc

external validity

- are your data representative ?
- how big is the sample ?
- eg I was geocoding WVS at province level only to find out it was unrepresentative

time matters, too

- we are exploring spatial variation
- but there is also time variation
- usually it is nice to show time changes in your maps
- eg can display a variable as a difference say
 - $POP_{10} - POP_{00}$ —which county gained most population (let's do it with `nj_counties`)
- other time issue is that things fluctuate over time, say due to business cycle
 - if you want to show a more reliable estimate take an average
 - say avg. 5-yr unemployment rate

go places

- when you make maps and find things, go and visit that place—i drove through MI from TX to NJ