

Building a Grammar of Graphics for **Stata**

(Advanced Data Visualizations with Stata: Part VII)

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Leland Wilkinson's influential *The Grammar of Graphics* (1999; 2nd ed. 2005) proposes a unified framework for constructing statistical graphics:

- Graphics are built from a small set of basic components
- Every plot separates **data**, **aesthetic mappings**, and **geometric objects**
- Complex visualizations are created by **layering** simple elements

This grammar has shaped modern visualization libraries across languages, such as **ggplot2** in R, **plotnine** and **altair** in Python, and grammar-inspired JavaScript frameworks such as **Vega/Vega-Lite** and **D3**.

Stata package: `graphfunctions`

The following plot types are currently available:

- Square
- Circle (small n can be used to produce other shapes)
- Pie (can also produce arcs)
- Radial scatter (points in a circle for labels)

Github: <https://github.com/asjadnaqvi/stata-graphfunctions> (v1.6)

SSC: `ssc install graphfunctions, replace` (v1.52 currently)

Stata package: `graphfunctions`

The following transformations are available:

- Translate (displace a shape)
- Stretch (on x- and/or y-axis)
- Rotate (on the origin or another point)
- Dilate (increase or reduce the shape based on rays from the original).
- Round (round the edges of shapes)

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Thank you!

More Stataviz:

-  [The Stata Guide on Medium](#)
-  [The Stata Gallery on Medium](#)
-  [StataViz portfolio](#)

Connect with me:

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