Lyra Scale Inference and Production Rules

Scale and/or field dropped on a property

Lyra System-Wide Production Rules

Was a scale dropped?
— Yes → Add scale and field to property definition
— No ↓

Was a field dropped?
— No → Dropped over drop zone?
— Yes → Run any mark-specific production rules to determine a scale based off the field and property.

Do we have a scale?
— Yes → Add scale and field to property definition
— No ↓

Find an existing scale in the data pipeline with domain == field and a range type that matches the property.

Do we have a scale?
— No ↓

Instantiate a new scale. Set domain to field, range type and default range depending on the property.

Dropped over drop zone?
— Yes → Is it a spatial scale?
— No → End

Is it a spatial scale?
— Yes → Add an appropriate axis to the layer.
— No → Add an appropriate legend to the layer.

Mark	Property	Production Rules
Arc	innerRadius, outerRadius	Find an existing "radius" scale. Or instantiate a new one.
Rect	x, width, x2	Check other properties of this dimension. If they have a scale definition, reuse it.
Rect	y, height, y2	Check other properties of this dimension. If they have a scale definition, reuse it.
Symbol	size	Find an existing "size" scale. Or instantiate a new one.
Text	fontSize, fontWeight, fontStyle	Find an existing scale for the corresponding property. Or instantiate a new one.

End