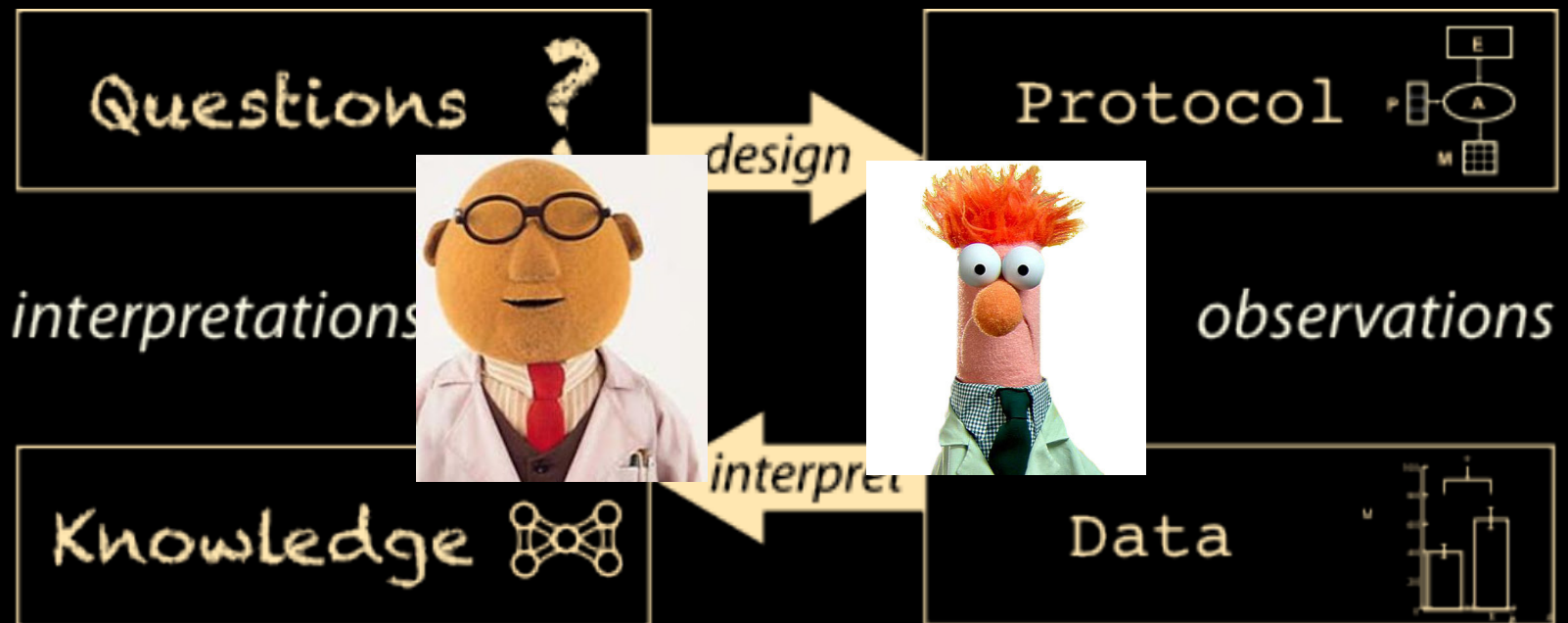


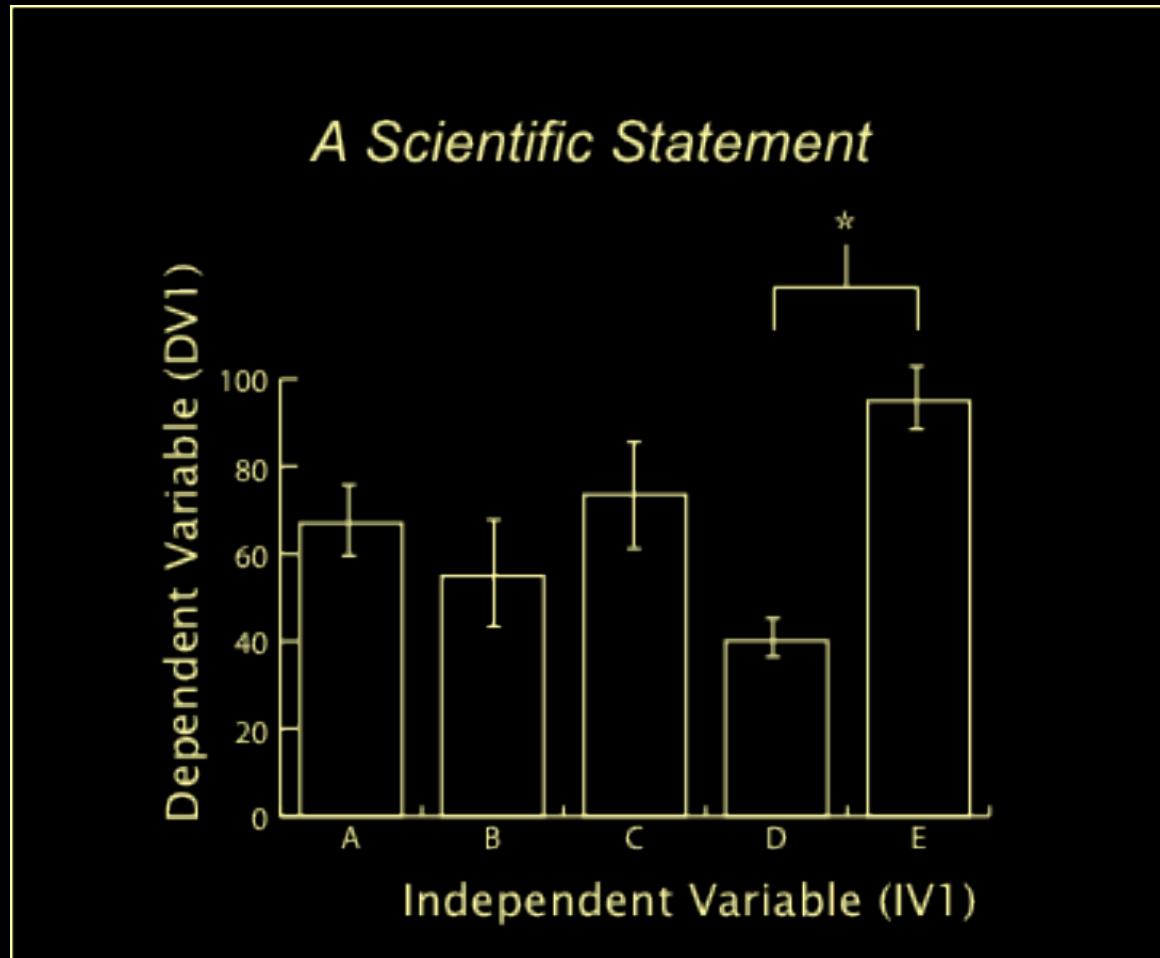
Computing within the Cycle of Scientific Investigation

Gully APC Burns

Science is Cyclic



The way science is typically presented



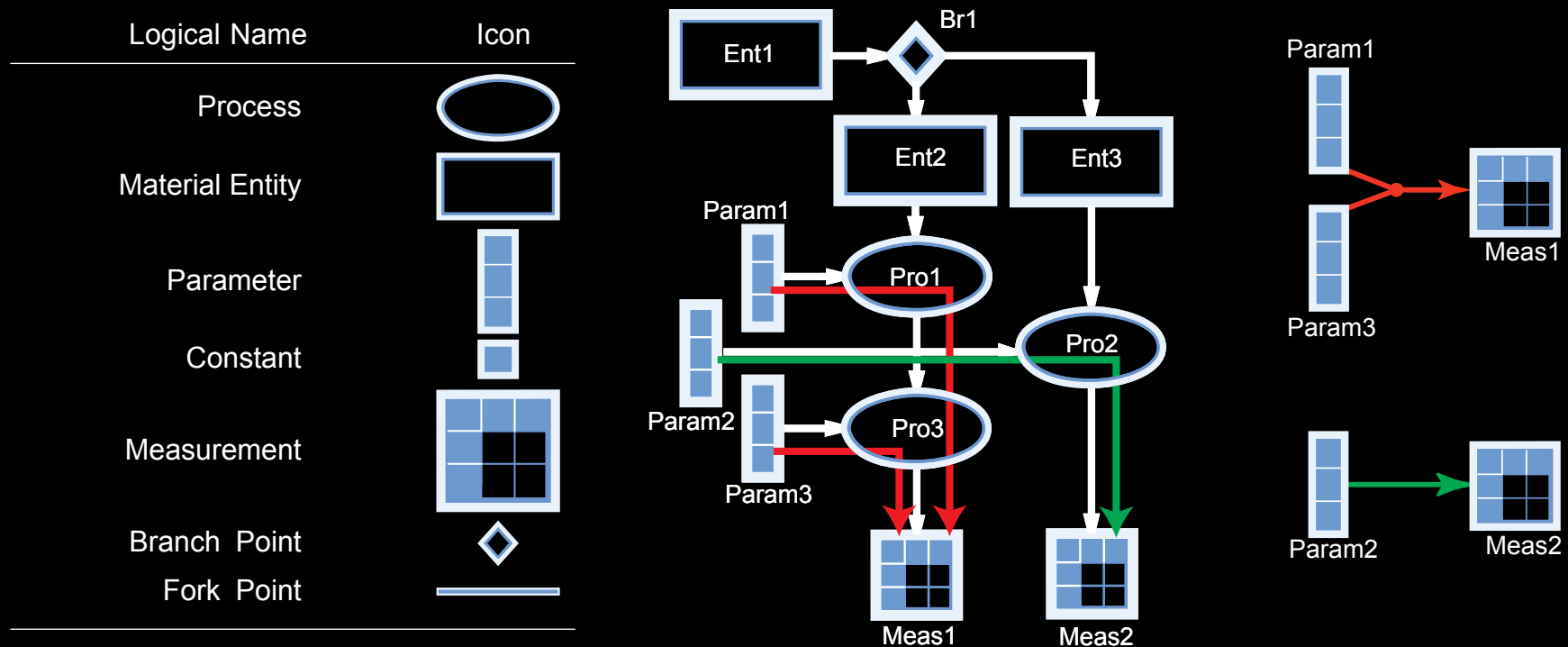
Interpretation

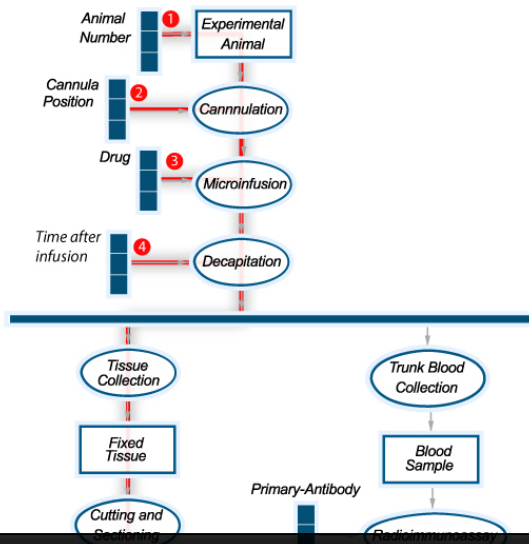


Observations



Knowledge Engineering from Experimental Design (KEfED)





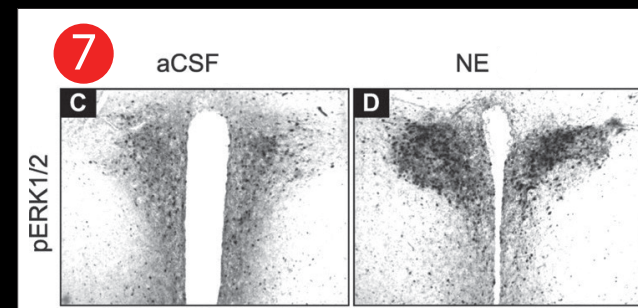
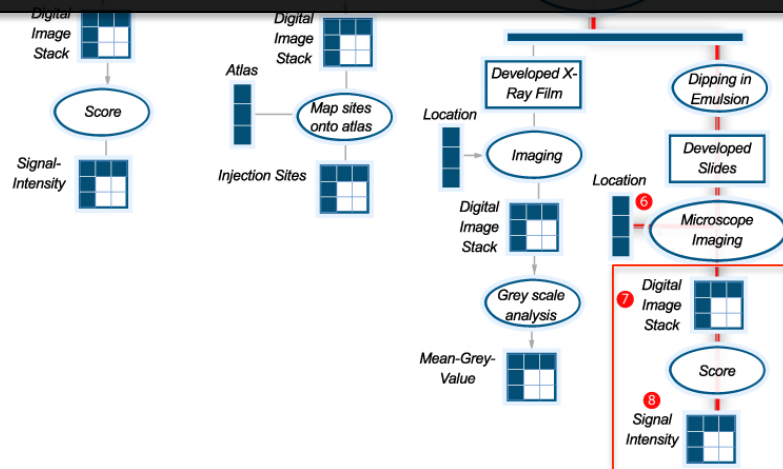
KEfED 'in the wild'

Khan et al. (2007), J. Neurosci. 27:7344-60 [expt 2]

Indexing Parameters
(‘Independent Variables’)

Measurements
(‘Dependent Variables’)

1	2	3	4	5	6	8
subject-id	Cannula Position	Drug	Time after infusion	probe	Location	Signal Intensity
RO2-164	PVH proximity	NE2	10 mins	pERK1/2	PVHmpd	high
RO2-175	PVH proximity	aCSF	10 mins	pERK1/2	PVHmpd	low



Links

- Main group page: <http://bmkeg.isi.edu>
- KEfED project page: <http://www.bioscholar.org>
- Paper:

Software Highly accessed Open Access

Knowledge engineering tools for reasoning with scientific observations and interpretations: a neural connectivity use case

Thomas A Russ¹, Cartic Ramakrishnan¹, Eduard H Hovy¹, Mihail Bota² and Gully APC Burns^{1*}

BMC Bioinformatics 2011, **12**:351 doi:10.1186/1471-2105-12-351
- Source: <https://code.google.com/p/bioscholar/>