

Research Interests

Dr. Robert J. Crutcher
rcutcher1@udayton.edu
SJ 309
229-1346

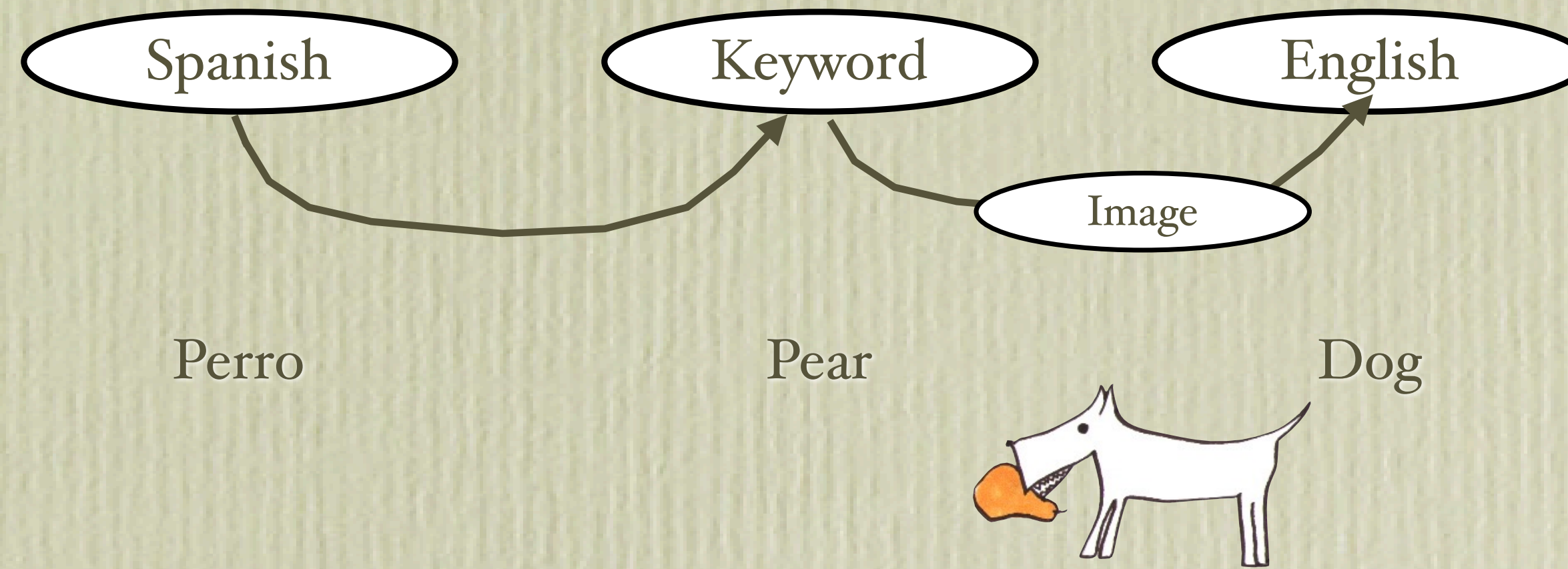
Interests

- Cognitive Psychology
- Memory and Learning
- Language Processes
- Verbal Reports
- Cognitive Neuroscience - Mind & Brain
- Computer-Aided Learning & Instruction

Current Research

- Improving Memory Skills & Learning
- Role of Prior Knowledge in Memory Processes
- Keyword Mnemonic
- Auditory Picture Superiority Effect
- Computer-Aided Encoding of Verbal Reports

Keyword Mnemonic

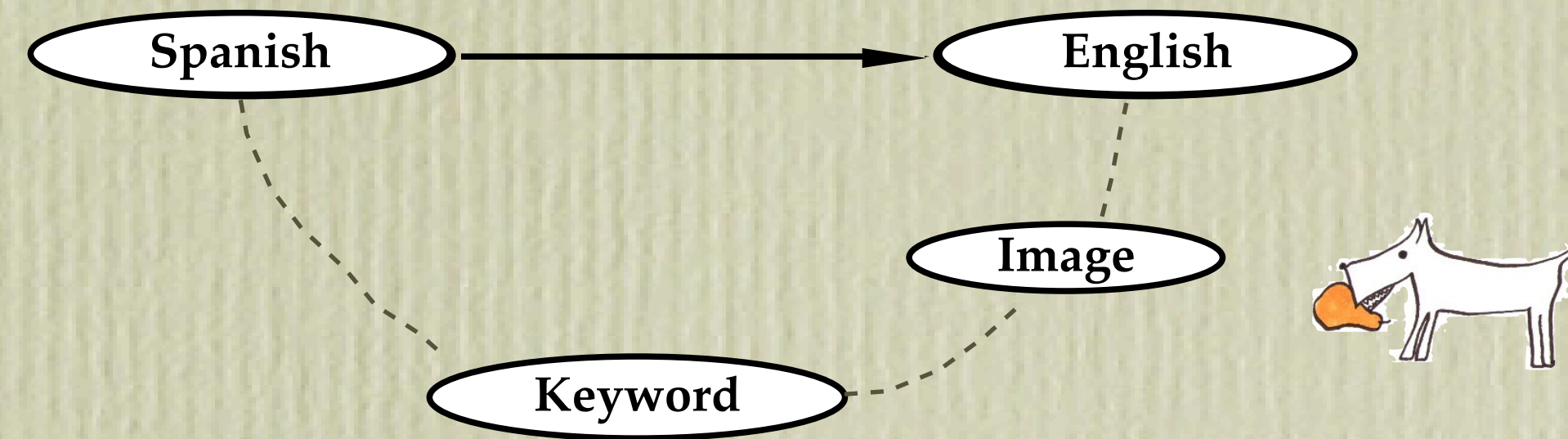


Imagine a dog eating a pear

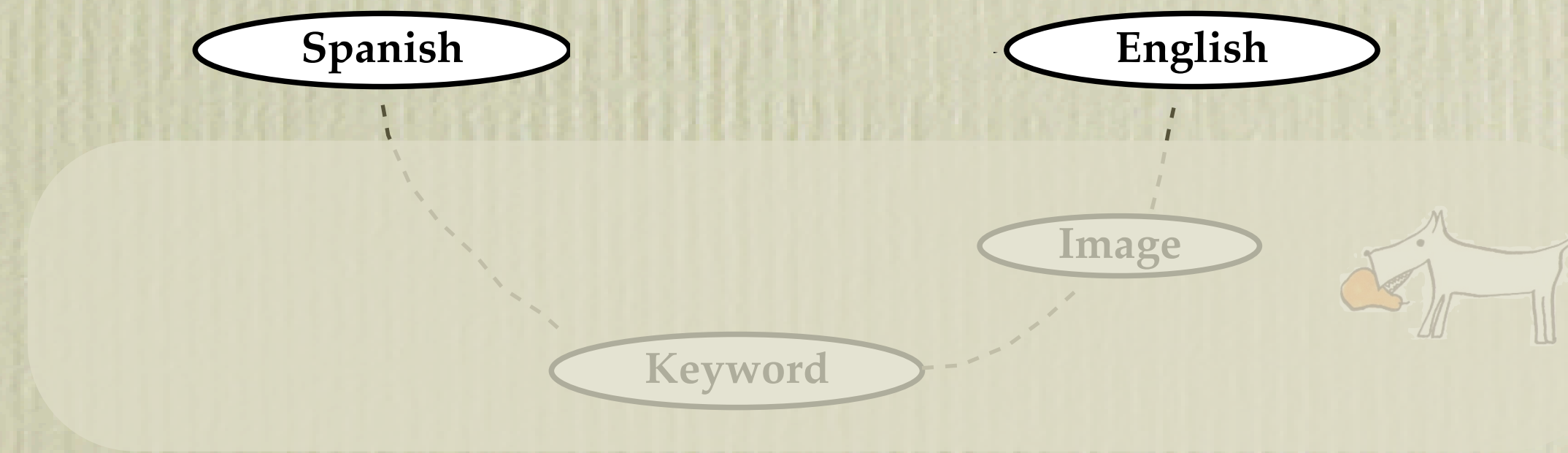
The keyword method is a mediational technique that involves first relating a Spanish word (*perro*) to a similar-sounding English word called the keyword (*pear*) and then relating the keyword to the English definition (*dog*) by generating an interactive visual image involving the two referents.

After Extended Practice?

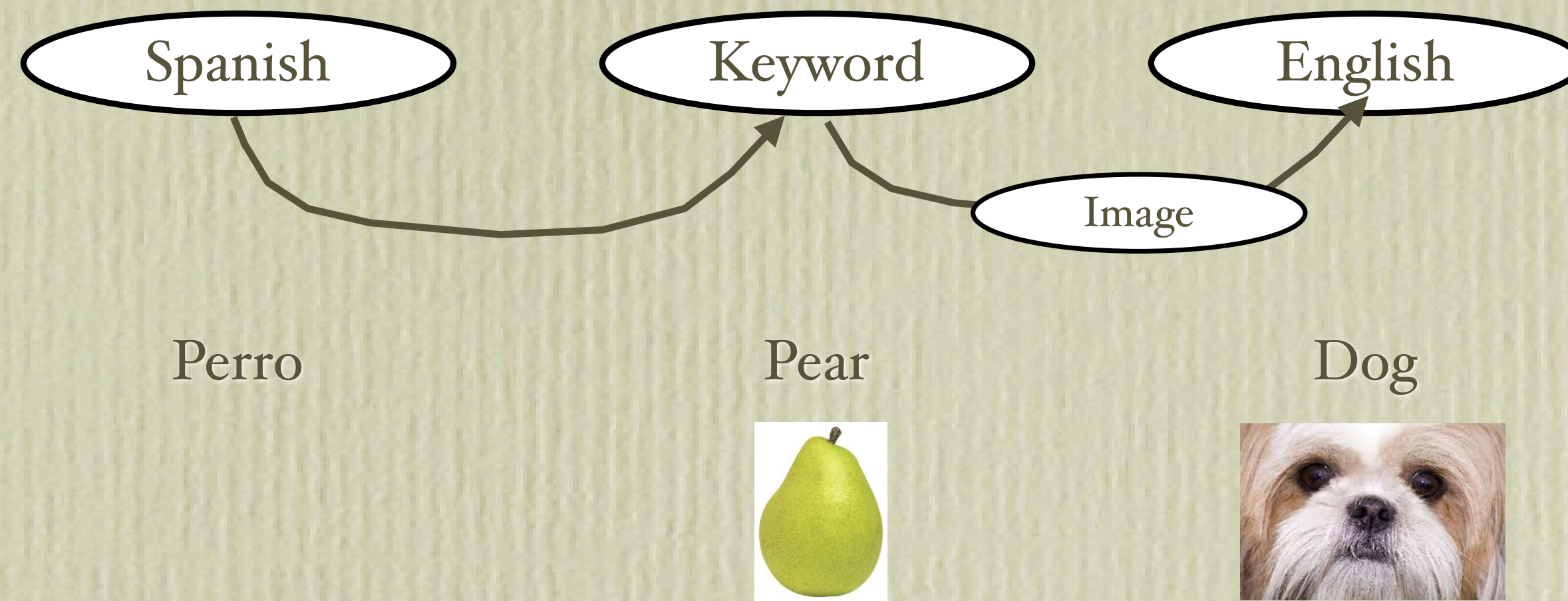
Mediation no longer necessary - Direct Retrieval



Continued Mediation - Implicit/Unconscious



What makes visual imagery so effective?



Static Visual Image

vs.

Interactive Visual Image

Imagine a dog and a pear

Imagine a dog eating a pear



Auditory Superiority Effect

Picture Superiority Effect

Picture



Verbal Label

Elephant

Auditory Picture Superiority Effect

Sound Condition



Spoken Verbal Label

laughing

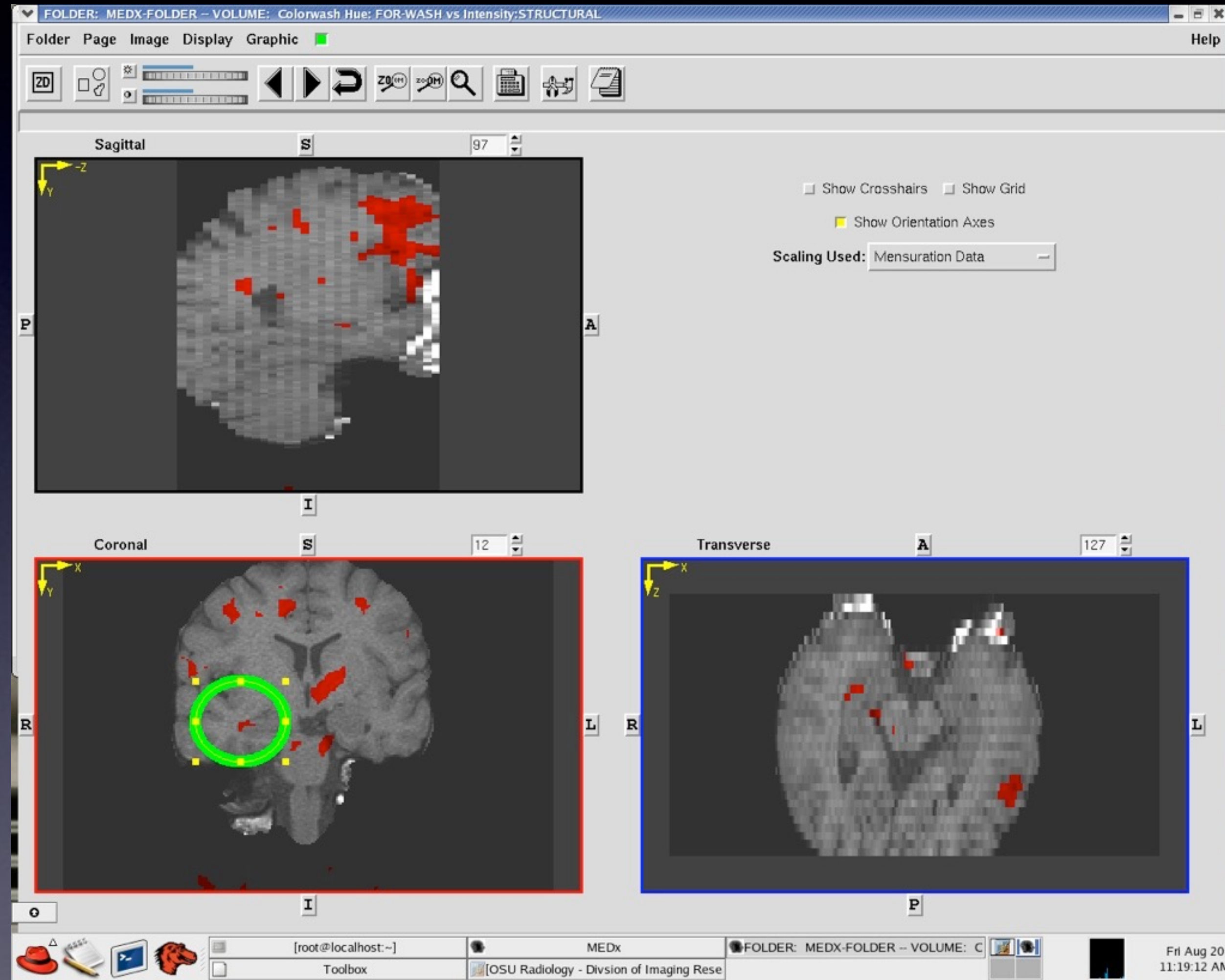
Verbal Reports

- Protocol Analysis - Verbal Reports in Psychological Research
- Issues: Validity/Reliability; Think-alouds vs. Retrospective Reports
- Improving Collecting, Coding, & Analyzing Verbal Reports - **CAPAS (Computer-Aided Protocol Analysis System)**

Neuro-Correlates of Memory

- Hippocampus - e.g. Novel Encoding
- Alzheimer's Research at WKNI
- Neuroimaging - fMRI

fMRI Images



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- Using computers to improve thinking, learning, & instruction
- Computer tools in data analysis and experiment authoring

Contact Info

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