

E-Prime Tutorial for fMRI

- Orientation & Preliminaries
 - Who am I, & why me? System Designer, E-Prime Master
 - Who are you? Name, study program, programming languages
 - Systems: (1) scanner, (2) image analysis, (3) task presentation
 - Want image of brain while it's doing something, so must give it something to do => task presentation system => E-Prime
 - Need not use E-Prime, e.g., PowerPoint, Windows Media Player, web browser, C/C++/C#, MATLAB, Visual Basic, Python; but sync to scanner, get responses
 - Something to do = see stuff, hear stuff, move stuff (touch/feel, smell, taste, speak?)
 - Suite: E-Studio, -Run, -DataAid, -Merge, -Recovery
 - Documentation & Help
 - Getting Started, User's, Reference (printed & .pdf)
 - Critical timing issues: Ch. 3 of User's Guide
 - Online E-Basic Help
 - www.pstnet.com, groups.google.com/group/e-prime, listserv.linguistlist.org/archives/eprime.html
- Tutorial session
 - Blank expt, environment, tools: Menus, Toolbox, Structure, [Properties, Output,] Workspace, [Browser, Attributes,] Script
 - TextDisplay object, Run => OK
 - View Script, User vs. Full
 - Categorization (singular vs plural) task: HelloText, FixText, StimText, MaskText, GoodbyeText (duration, input)
 - Devices: Display **1024 x 768**
 - Run => OK
 - List: Weight, Nested, Procedure (TrialProc); attributes, levels
 - Run => OK
 - E-DataAid: Data files in expt. directory
 - Logging data
 - Run => E-DataAid error, OK
 - E-DataAid
 - Event vs. **cumulative** timing mode, Onset Sync, ClearAfter
 - E-Basic, E-Run
 - Randomize List (Sequential, Random, w/ Replace, ... (special forms of Seq)); Embed, script, file loading
 - Use **Sequential** to avoid multicollinearity problem in fMRI deconvolution analysis
 - Scanner-specific use
 - **Button box**
 - Experiment Add Device: SRBox, BRU Unique, emulate keyboard
 - Display objects: Use keyboard for input mask, keys 1-5, 6-A
 - Do not use Allowable {ANY} lest scanner pulses supercede responses!
 - **Scanner sync**: Input key ^ (<SHIFT>6)

- InLine: e.g., MsgBox, Clock.Scale, GetUserBreakState(), extra logging (c.SetAttrib()), Read/WritePort, computations (e.g., categorization duration staircase)
- ImageDisplay: .bmp, width/height/color bit depth (*EP2: also .jpg, .gif, .png, .tif, *.emf, *.wmf*); filename, stretch/mirror/align, size/position
- SoundOut: .wav, channels/samples/bits per sample (*EP2: also .mp3, .wma; variable settings*); filename, duration, max length
- Slide: States, sub-objects
- FeedbackDisplay, Run => error, fix
- Wait
- PackageCall: Add to expt, package/routine/parameters/description
- Advanced (if time)
 - Nested lists (e.g., randomized list across blocks, interleaved trial types/conditions)
 - Alternative I/O