

1 Background

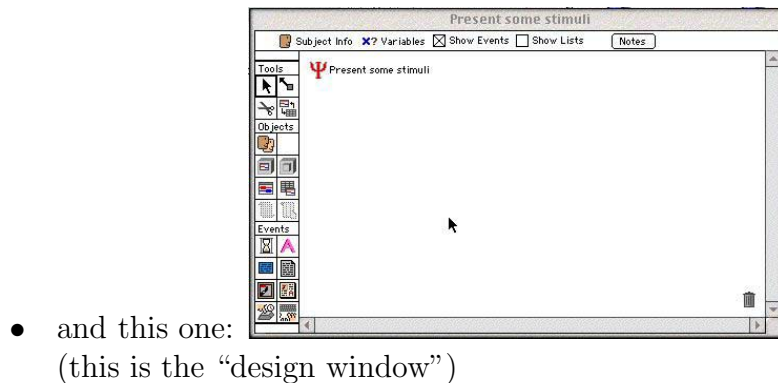
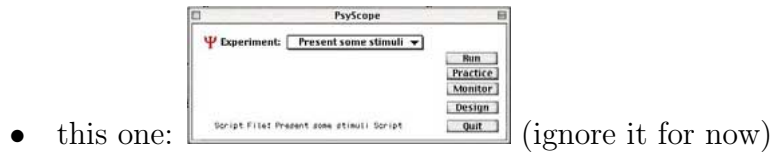
- (1) *What is PsyScope (a.k.a. Ψ scope) ?*

“PsyScope is an interactive graphic system for experimental design and control on the Macintosh.”
- (2) *That’s too vague. I meant, what can I do with PsyScope?*
 - Ordinary things you can already probably do other ways
 - “teleprompter”: present stimuli for consultants to read aloud
 - collect ratings of stuff (naturalness, well-formedness, familiarity, grammaticality, prototypicality, etc.)
 - More interesting things you might not have done otherwise:
 - interactive, multi-modal prompting for elicitation tasks
 - collecting response times (pressing a button, voice key, etc.)
 - ???
 - Things you have only read about and will likely never do:
 - cross-modal priming experiments
 - perceptual acuity tasks
 - and many other things. . .
- (3) *Topics for this introduction:*
 - Where to get PsyScope
 - Opening PsyScope and creating a new experiment
 - A simple experiment
 - presenting stimuli on the screen
 - using keystrokes to go to the next item
 - using lists to read prompts from a file
 - randomizing things

2 Getting started

- (4) *Step 1: Acquire PsyScope*
 - download it from <http://psyscope.psy.cmu.edu/versions/index.html>
 - it’s also on Linus, Isis, Kelly, and possibly other computers in the lab
- (5) *Step 2: Launch PsyScope*
- (6) *Select “New Experiment” to create a new script file for a new experiment*
 - it helps to make a separate folder for each experiment, because they typically require a number of different files: the script file, some list files, some sound files, etc.


- a group of related scripts can be stored in a “project” file
- (7) You get two new windows:





3 A simple script: present stimuli for a speaker to read

- (8) Think like a psychologist: blocks and trials
- (9) What will happen over and over?
- something will appear on the screen
 - the speaker will say it
 - the speaker will press a button/key to get the next one

One loop through these events = one *trial*

(10) Events in a trial are added to a *trial template*: 

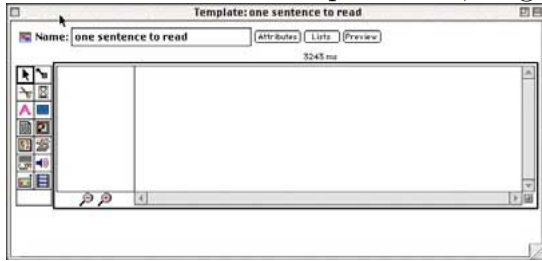
(11) Create a trial template for the experiment:

- Click on the trial template icon ()
- Click anywhere within the design window to create a new template
- Give the new template a name
- The cursor automatically becomes the linking tool () – click on the new template, drag to the experiment icon. The template is “linked” to the experiment (*see demo*)

3.1 Displaying some text

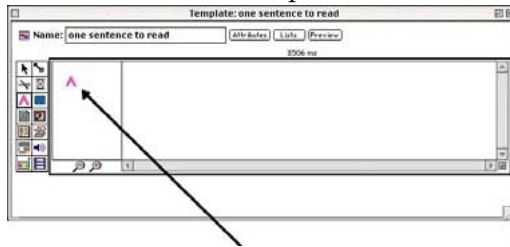
(12) Now specify what will happen in the trial, by adding an event:

- double-click on the template icon, to get a template window:

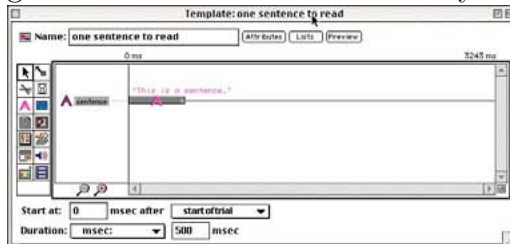



- first, we will add a text event to show the sentence:

- click on the text event icon (A)
- now click in the left panel of the template window:



- give the new event a name. now you have a text event:



- modify the text event by double-clicking on the A or the 
 - There are 2 kinds of attributes: stimulus and event
 - Under “stimulus events”, click the “stimulus” pop-up menu and choose “Set to:”
 - type something – this will be the text that is displayed on the screen
 - you can also change the type size, style, font, etc.

(13) Try running the experiment to see what happens. It’s too short, and too hard to read

(14) Fixing the hard to read part:

- change the type style (see above)
- reverse the video – under “experiment menu”

(15) Now fix the too short part – we want it to end with a keypress, not after 500 msec

- click on “event properties” in the attributes dialog for the text event
- under the “duration” pop-up menu, select “set to:”


- in the duration dialog, select “Key”
- double-click “•Any” to change which keys should end the event

3.2 Displaying more than one sentence, using lists

(16) Usually, you need the content of an event to change from trial to trial (show different sentences, play different sounds, etc.)

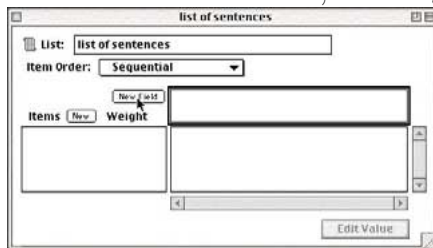
- you could make a separate trial template for each one, manually specifying the content for each one. . . (very tedious very fast!)
- or, you could keep all the possible values in a *list*

(17) Go to the experiment design window and add a list

- the list icon looks like: 
- if the list icon is grayed out, make sure “show lists” is selected at the top of the design window

(18) Now add some values to the list:

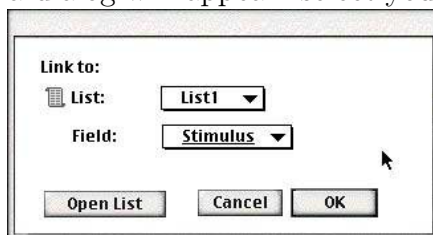
- double-click on the list, to bring up the list dialog:




- add new fields using the “new field” button – in this case, a field for a text stimulus
- add new records (items) using the “add” button



(19) Finally, tell PsyScope to get values for the text event from that list

- double-click on the text event, and under “stimulus”, choose “vary by: list”
- a dialog will appear: select your list, and the field you want to use:



(20) Now run the experiment and see what happens

- it uses the list, but only one item from it!
- to add more trials, double click on the experiment icon () and change the “trials in block” value

- (21) Cool. but isn't there a more convenient way to manipulate lists?
- why yes, there is: keep the values in a list file
 - a list file is just a delimited text file, which you can create in any text editor (SimpleText, Alpha, Word, Excel, even PsyScope)
 - fields are separated by white space (spaces, tabs, etc.)
 - to add a list file, use the list file icon () instead of the regular list icon
 - (see demo)
- (22) One tricky thing about list files: if your fields contain white space (spaces, tabs, etc.), you must enclose them in quotes: “*This sentence is all contained within a single field.*”
- (23) For long sentences, you will probably want to use a “Paragraph” event () instead of a text event – it wraps the text so it will all fit on the screens
- (24) One last thing with lists: randomizing
- under the list dialog, the default item order is sequential.
 - change this to “random” to randomize the order
 - there are zillions of different types of randomization in PsyScope – usually you will want to use blocks when you're randomizing (not covered here)

4 Etc...

- (25) Other possible topics for future weeks:
- Playing sounds, and preparing sound files for use in PsyScope
 - Recording responses, measuring reaction times, etc.
 - The button box
 - events and actions: making things more interactive
 - things I'd like to know but haven't figured out yet: factors, fancy experimental designs with tables and weights, group assignment and subject info, etc.
- (26) For more information:
- The PsyScope homepage: <http://psyscope.psy.cmu.edu/>
 - The PsyScope manual: currently lives above Gretel, in the cool room. A more recent version can be downloaded in PDF format from the PsyScope homepage
 - The PsyScope mailing list (info on home page)

Some commonly used tools in the design window palette:

