Visual Manual only for printing purposes, links are not live

Def Gateway Live at: http://socscigate.oit.uci.edu users go through these stages: -(1) simply load the page and press Execute -(2) modify some variables and Execute. Always choose DEF2 LOCAL DEF2, fill in the blanks with model variables, check carefully against this template and press EXECUTE. You may want to print this page in horizontal orientation at (Mac: scale 90) to save a paper copy. You will need to consult one of the SCCS, EA, LRB, or WNAI R codebooks to find your variables or the original SCCS Codebook that has topical and Levinson CCR Encyclopedia indices. The topical index is very useful in finding variables for study.

This Galaxy page has three things wrong and one right: (1) Model 39-40 activates EAF1c at the UCI Virtual Machine: but the "Shaman" variable (sccsA$v2003==1)*1 was not added to the dataset until
DEf2 LOCAL DEF2’ was implemented, as used in model 35-36. (2) Clicking 36 would give the list of societies; 35 has been clicked and shows the Model and its variables. There we see the dependent variable name "Shaman" in the white box: when the diskette image is clicked, a Galaxy....csv is saved to your laptop (in a Mac it "flies" to the upper right of your screen which will acquire a down-arrow that, when clicked, will hold your downloads, here: Galaxy.csv files. These *.csv files may be saved to *.xls format that may be edited. (3) The error here is that it is (sccsASv2013==1)*1 that indexes the Shamanic societies in the classificatory scheme of A.F.C. Wallace, coded by (Stephen K. Sanderson), not v2003, the variable for amount of rain. It is important to note that the dependent variable chosen must have roughly 55 or more coded societies. DEf2 has 11 sections of output in its *.csv. Note that researchers can rely on the CoSSci interface for their work but those researchers using the DEf2 laptop R GUI scripts (at .Dow-Eff_Functions_-_DEF) can view their output on the GUI after a completed run simply by typing any of the functions h[1] through h[11]: http://intersci.ss.uci.edu/wiki/index.php/.Dow-Eff_Functions_-_DEF. These functions will print the following information about the completed DEf model: (view in a new page)

h[1] DependVarb  Description of dependent variable
h[2] URmodel  Coefficient estimates from the unrestricted model (includes standardized coefficients and VIFs). Two pvalues are given for H0: β=0. One is the usual pvalue, the other (hcpval) is heteroskedasticity consistent. If stepkept=TRUE, the table will also include the proportion of times a variable is retained in the model using stepwise regression.

h[3] Rmodel  Coefficient estimates from the restricted model. If relaimp=TRUE, the R2 assigned to each independent variable is shown here.

h[4] EndogeneityTests  Hausman tests (H0: variable is exogneous), with F-statistic for weak instruments (a rule of thumb is that the instrument is weak if the F-stat is below 10), and Sargan test (H0: instrument is uncorrelated with second-stage 2SLS residuals).

h[5] Diagnostics  Regression diagnostics for the restricted model: RESET test (H0: model has correct functional form); Wald test (H0: appropriate variables dropped); Breusch-Pagan test (H0: residuals homoskedastic; Shapiro-Wilkes test (H0: residuals normal); Hausman test (H0: Wy is exogenous); Sargan test (H0: residuals uncorrelated with instruments for Wy). If slmtests=TRUE, the LaGrange multiplier tests (H0: spatial lag term not needed) are reported here.

h[6] OtherStats  Other statistics: Composite weight matrix weights (see details); R2 for restricted model and unrestriced model; number of imputations; number of observations; Fstat for weak instruments for Wy.


h[8] totry  Character string of variables that were most significant in the unrestricted model as well as additional variables that proved significant using the add1 function on the restricted model.

h[9] didwell  Character string of variables that were most significant in the unrestricted model.

h[10] dfbetas  Influential observations for dfbetas (see details)

h[11] data  Data as used in the estimations: Wy xW, aa (imputed variables), etc. These can be used in Bayesian, Path analysis, and Pearl's causal graph adjustments.

The last two items in the list are large, but the first nine provide a nice overview. If you use EAP1c LOCAL there is no equivalent to h[11], h[4] onward are renumbered h[5] through h[11], the data in h[5] has to be checked as to whether the Breusch-Pagan test (H0: residuals homoskedastic)
has less than a p-value < 0.10, in which case consult h[3] for the corrected model, and ignore h[4]. If the p-value > 0.10 (H0 true), consult h[4] for the corrected model, and ignore h[5]. There are other advantages to DEAF2 LOCAL DEF2.

Models 31-32 represent a DEF2 model that did not work: some variable was repeated twice, a definition was wrongly stated, etc.

More: (4) If you are a contributor view the Invitation letter (5) A model may be repeated with the same variable entries by pressing the round green circle with a white check inside. For model 35 you would only have to change v2003 to v2013. The new model is executed by pressing the blue "Execute" bar at the bottom of the page which is not visible here.

(6) If the request for the new model works you will now have 42: DEF2 and 41: DEF2 at the top and you can click X to erase the mistaken models 35: DEF2 and 36: DEF2. It's obviously best to check that the variables are specified correctly before clicking the diskette image to open .csv file for results. (7) In your attempt at a new run, two new horizontal green bars will appear, turn gray as execution starts, then turn yellow as execution runs, and will finally turn green again when you're done. At that point clicking the lower (odd-numbered) of the two bars will either show "no peek" or new results. In some cases the white circle with an (i) may show properties of a model that has failed. Three vertical columns below show the vertical strip turning YELLOW, then RED because of an error by someone updating the program. Below that I have clicked the RED VERTICAL BAR again to see what was the trouble. This is a rare event. (8) The problem with using the tools not marked LOCAL is that the Trestles supercomputer will take between 10-15 minutes before results are returned. For most models this needs to be done repeatedly, which is why DEF has a 2-minute Virtual Machine at UCI. (8) Clicking the Blue "Unnamed history" will allow the name of the history bar to be changed. ONCE IT IS CHANGED pressing the round cog-star to the upper right will allow you to save your work to "Shared Data" in the middle of the top bar, and you may select whether the new list of saved models is public or private. The URL of a saved list of models may be shared with others.

On the right below the program has crashed, a very rare event but reported in advance by the programmer. Below that the red link X has been clicked to reveal the problem.
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Note on Saving Results

If you have a csv save problem, just open a fresh *.xls and copy the *.csv into it

Corrected pages

This is the corrected model showing the (i) pages ("View drafts" white print in black bar) after the program has be fixed by Tom Uram, Argonne Labs. The underlined links can be clicked to see workflow for output and for errors if applicable.

File: Screen Shot 2013-06-17 at 5.27.08 PM.png
What the *.csv output looks like for **Shaman**

In this simple model the Rsq=0.26. Text cut off at "one or more Co-Wife." Results make sense: No written language, monogamy, almost significant tendency towards gathering. The interaction term v149:Wy was not been tried (Wy is the autocorrelation variable for the dependent variable Shaman=dx$v2013, SCCS) as new variables dx$v149*dx$Wy but this did not work..

![Screenshot of What's in stderr](image-url)
Part I: Visual Manual: above ; comments below

The CoSSci screen for DEF1 and DEF2 (above), Anthon: Looks fine to me Doug. Not likely to ever use the web interface you and Tom are working on (much more flexible to use an R GUI) -- so you are really the expert on how all this works.

To Anthon: I'd still like to know what the variables with colons represent when returned by h[9] ToTry ot h[10] (Doug) The interface of course is to make it easier for the average research, student, teacher or Wiley contributor to use your and Malcolm's code with sccs, ea, binford's rlb or jorgensen's wnai
without having to learn R. But there's a lot you can do with R that goes well beyond the standard model. Wiley contributor Eleanor Wynn and I are doing a reincarnation model that was below the minimum number of cases for CoSSci until we beefed it up with cases from Obeyesekere and Mills and Slobodin. Others should be able to do that too... where new supplementary data are available.

Anthon: Variables with colons are interaction terms: variable1 times variable2. These should only be used in a model when there is a really good reason to do so (i.e., they test a hypothesis one is trying to test).

```javascript
var WAX = function () {
  var _arrInputs;
  window.addEventListener('waxSetArr', function(evt) {
    _arrInputs = evt.detail;
  });
  return { getElement: function (i) { return _arrInputs[i]; } }();
  function waxGetElement(i) { return WAX.getElement(i); }
}
```

Doug: the SCCS Shaman v2013 variable has a v149:Wy variable with the interaction colon. Will try it out.

II: To Date (under construction)

Networks of Variables
See draft of Wiley Chapter 5:
http://intersci.ss.uci.edu/wiki/pdf/WileyCh5CCRNetsOfVarsModels2blackDRW.pdf

III: Advanced

Advanced Options: Systemfit package and Path Analysis
Panel Data for Time Series

IV: Sundry other

Powerpoint

(There will be a powerpoint link here but the images will be posted here as well)