The two programs here correspond to:

1. Simulation 6: Frank et al. (2010), Exp. 1, effect on learning of sentence length
2. Simulation 7: Frank et al. (2010), Exp. 3, effect on learning of word length

There are two programs that, respectively, correspond to these simulations:

1. run\_TRACX\_Frank\_exp1.m
2. run\_TRACX\_Frank\_exp3.m

For the simulation of Frank et al. (2010), exp. 1:

There are 8 different languages: L1, L2, L3, L4, L6, L8, L12, L24.

They are made up of sentences with 1, 2, 3, 4, 6, 8, 12 and 24 words, respectively.

To run a particular language, at the Matlab prompt (>>), type:

run\_TRACX\_Frank\_exp1('L1 ') or

run\_TRACX\_Frank\_exp1('L2 ') or

run\_TRACX\_Frank\_exp1('L3 ') etc.

(Don’t forget the single quotes around the language name.)

The results are sent to an Excel file called:

Frank\_Expt\_1.xls

The results for each language are printed in a separate Worksheet, the name of which corresponds to the language (e.g., L3, L12, etc.)

% correct is calculated by averaging pairwise comparisons between word errors and partword errors on words/partwords of corresponding length.

If you wish to run all of the languages, a script does this:

>> run\_all\_TRACX\_Frank\_exp1

For each language (L1, L2, etc.) the program (set for 25 runs, each with 12 subjects) takes approximately 3 minutes to run on a PC with the followings specs:

Intel® Xeon® CPU,

X5365 @ 3.00 GHz,

2.99 GHz, 3.99 GB of RAM

All parameters are indicated in set\_params.m

For the simulation of Frank et al. (2010), exp. 3:

There are 5 different languages: L3, L4, L5, L6, L9

Each language is made up of 4-word sentences drawn from a vocabulary of 3, 4, 5, 6 and 9 words, respectively. Words have either 2, 3 or 4 syllables.

To run a particular language, at the Matlab prompt (>>), type:

run\_TRACX\_Frank\_exp3('L3 ') or

run\_TRACX\_Frank\_exp3('L4 ') or

run\_TRACX\_Frank\_exp3('L5 ') etc.

The results are sent to an Excel file called:

Frank\_Expt\_3.xls

The results for each language are printed in a separate Worksheet, the name of which corresponds to the language (i.e., L3, L4, L5, L6, L9)

% correct is calculated by averaging pairwise comparisons between word errors and partword errors on words/partwords of corresponding length.

If you wish to run all of the languages, a script does this:

>> run\_all\_TRACX\_Frank\_exp1

For each language (L3, L4, etc.) the program (set for 25 runs, each with 12 subjects) takes approximately 6 minutes to run on a PC with the followings specs:

Intel® Xeon® CPU,

X5365 @ 3.00 GHz,

2.99 GHz, 3.99 GB of RAM

All parameters are indicated in set\_params.m