Replication data for Profiling dynamic decision-makers

Konrad Grabiszewski and Alex Horenstein

The dataset contains the variables necessary to replicate the results in Grabiszewski and Horenstein (2022). These variables are:

Player: a unique numerical value assigned to the different subjects that played Blues and Reds.

Task: a unique numerical value assigned to the different tasks the subjects completed. The codification is shown in the table below.

Task	
1	2.2.2
2	2.2.2.2
3	2.2.2.2.2
4	3.3.2
5	2.2.2.4
6	3.3.3
7	4.2.2.2
8	2.3.3
9	3.2.3
10	3.2.2.2
11	2.3.2
12	2.3.2.2
13	3.2.2
14	2.2.2.3
15	2.2.3
16	2.2.3.2
17	2.2.2.2.2.2
18	2.4.2.2
19	3.2.2.2.2
20	4.2.2
21	2.2.4.2
22	4.2.2.2.2

Win: a binary variable that equals 1 if the subject correctly solved the Task and 0 otherwise.

Time1: time spent thinking (in seconds) at the first node where a subject must decide a move in a task.
Time2: time spent thinking (in seconds) at the second node where a subject must decide a move in a task.
Time3: time spent thinking (in seconds) at the third node where a subject must decide a move in a task.

TT: Time1+Time2+Time3

RRT1: Time1/TT

Seq: a numerical value from 1 to 22 corresponding to the order in which a task appeared in a subject's sequence of tasks.

Profile: a numerical value from 1 to 6 corresponding to the subjects' profile according to their RRT1 and TT metrics in each Task.

First, the subjects are divided into terciles according to their RRT1. Second, for each RRT1-tercile, the subjects are further split into upper-TT and lower-TT halves with the median TT as a threshold value. Therefore, we use the 3-RRT1 by 2-TT division to partition subjects into six profiles.

Profile 1 corresponds to the lowest RRT1-tercile and upper TT-half – this is the most naive and the slowest profile. Profile 2 corresponds to the lowest RRT1-tercile and lower TT-half. The profile keeps increasing until we reach Profile 6, which corresponds to the subjects in the highest RRT1-tercile and lower TT-half – this is the savviest and the fastest profile.

Complex: complexity measure introduced in Grabiszewski and Horenstein (2020) and defined as the average response time at the first node calculated from all subjects who played a given task.

Profile_g1: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first task a subject played.
Profile_g2: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first two consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g3: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first three consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g4: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first four consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g5: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first five consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g6: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first six consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.

Profile_g7: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first seven consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g8: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first eight consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.
Profile_g9: numerical value from 1 to 6 corresponding to the subjects' profile constructed from the first nine consecutive tasks a subject played. Section 4.3 of Grabiszewski and Horenstein (2022) explains the exact formulas to build these profiles.

References:

Grabiszewski and Horenstein (2020), Measuring tree complexity with response times, *working paper.* Available at https://dx.doi.org/10.2139/ssrn.3463988.

Grabiszewski and Horenstein (2022), Profiling dynamic decision-makers, *forthcoming at PLOS One.*