Dictionary of z-Tree variables

This document gives a description of the variables generated by the z-Tree program for this experiment. The program for Section C and after is entitled "**main_program.ztt**", while the program for the 2-min practice on the attention task (Section B of the instructions) is entitled "**practice_task.ztt**". The raw data for each session is available in the folder "raw_data".

N.b.: Below I do not describe the variables automatically generated by z-Tree (general payoff variables, response times, OK buttons...); a description of these variables can be found in the z-Tree manual (`http://www.ztree.uzh.ch/en/support.html`).

List of variables

The 3 menus are identified through a specific category number:
1 = menu $\{0\}$ called "Pre-Select No Learning"
2 = menu $\{1\}$ called "Pre-Select Learning"
3 = menu $\{0, 1\}$ called "Decide in Period 2"

`menuChoice[1]`: rank assigned to menu $\{0\}$
`menuChoice[2]`: rank assigned to menu $\{1\}$
`menuChoice[3]`: rank assigned to menu $\{0, 1\}$

`diemenuAB`: number in $[0, 100]$ s.t. a subject receives $\{0, 1\}$ if `diemenuAB` ≤ 50 and receives a menu according to his/her ranking if `diemenuAB` > 50.

`dieranking`: number in $[0, 100]$ drawn in case the subject did not receive $\{0, 1\}$ automatically (`diemenuAB` > 50); otherwise, `dieranking` = -1. In this case, `dieranking` determines which menu is implemented. For instance, if the ranking is $(\{0\}, \{0, 1\}, \{1\}) = (1, 2, 3)$, then $\{0\}$ is implemented in case `dieranking` ≤ 50, $\{0, 1\}$ is implemented if `dieranking` is between 51 and 80, and $\{1\}$ is implemented if `dieranking` > 80.

`dierankOrder`: number equal to 1 if the subject saw list order $l_1 = (\{0, 1\}, \{1\}, \{0\})$ and equal to 2 if s/he saw list order $l_2 = (\{1\}, \{0\}, \{0, 1\})$ (see OA-A.1, p.3).

`dieTypeWTP`: number equal to 1 if the subject was assigned to the $\$ \ WTP$ condition and equal to 2 if s/he was assigned to the time WTP condition (see main text Sections 3.2 and 4.1.2).

`menuselection`: menu assigned in Period 2.

`topChoice`: menu designated top
`secondChoice`: menu designated second
`lastChoice`: menu designated last (see OA-A.1 page 6)

`WTP1_Choice[i]`: for subjects assigned to the $\$ \ WTP$ condition, `WTP1_Choice[i]` = 1 (= 0) if the subject was willing to pay the amount written on row $i \in \{1, 2, ..., 8\}$ of the Multiple Price List to replace his/her second choice with the top choice. For subjects in the time WTP condition, `WTP1_Choice[i]` is equal to 1000.

WTP2_Choice[i]: for subjects assigned to the $ WTP condition, WTP2_Choice[i] $= 1 (= 0)$ if the subject was willing to pay the amount written on row $i \in \{1, 2, ..., 8\}$ of the Multiple Price List to replace his/her last choice with the second best choice. For subjects in the time WTP condition, WTP2_Choice[i] is equal to 1000.

wtp[i]: amount of money written on row i of the MPL (in dollars)

pay: for subjects in the $ WTP condition, pay is the amount of money paid by the subject to replace the menu initially drawn. This amount corresponds to one row of the MPL selected at random ($= 0$ if the subject was not willing to pay for that row).

wtpChoice: for subjects in the time WTP condition, wtpChoice is the additional time spent on the attention task (in seconds) accepted by a subject to replace the menu initially drawn. This amount of time corresponds to one row of the MPL selected at random ($= 0$ if the subject was not willing to pay for that row).

TC1_Choice[i]: for subjects assigned to the time WTP condition, TC1_Choice[i] $= 1 (= 0)$ if the subject was willing to spend the amount of time written on row $i \in \{1, 2, ..., 8\}$ of the Multiple Price List to replace his/her second choice with the top choice. For subjects in the $ WTP condition, TC1_Choice[i] is equal to 1000.

TC2_Choice[i]: for subjects assigned to the time WTP condition, TC2_Choice[i] $= 1 (= 0)$ if the subject was willing to spend the amount of time written on row $i \in \{1, 2, ..., 8\}$ of the Multiple Price List to replace his/her last choice with the second best choice. For subjects in the $ WTP condition, TC2_Choice[i] is equal to 1000.

tc[i]: amount of time written on row i of the MPL (in seconds)

selectWTP: row of the Multiple Price List for which the WTP decision was implemented (except if the subject was automatically assigned $\{0, 1\}$ or already received his/her top option).

dieTask: task selected not to count for payment in case the subject chooses to read the story.

correctanswers: total number of correct answers paid in the attention task (out of 5); for subjects who read the story (or were assigned $\{1\}$), the unpaid prompt is deducted from the total.

answer[i]: answer entered by the subject for prompt i; equal to -1 if the subject did not answer that task because s/he read the story.

N.b.: If a subject read the story during the task, thereby skipping a prompt, an additional prompt was added at the end of the task. The prompt occurred n seconds after the fifth prompt, where n is the amount of time (in seconds) that was remaining on the task skipped by the subject. The answer given by the subject for that task is answer[6]. For subjects in the time WTP condition who spent n additional seconds on the task, a prompt occurred after the n seconds. The answer given by the subject for that task is answer[7].

learned: equal to 1 if (i) a subject was assigned either $\{0, 1\}$ or $\{1\}$ and (ii) read the story at some point during the task (equal to 0 otherwise).

`informed`: equal to 1 if (i) a subject was assigned $\{1\}$; or (ii) s/he was assigned $\{0, 1\}$ and read the story at some point during the task (equal to 0 otherwise). Subjects assigned $\{1\}$ could choose not to read the story during the task and wait for it to be displayed at the end.

`learned[i]`: equal to 1 if (i) a subject was assigned either $\{0, 1\}$ or $\{1\}$ and (ii) read the story before prompt i occurred (equal to 0 otherwise).

`remainingTime[i]`: time remaining until prompt i; for subjects who did not read the story before prompt i, `remainingTime[i]` $= 0$.

`correctanswer`i: equal to 1 if the subject correctly answered prompt i.

`time`i: counting variable updated every second until prompt i occurs; this 4-digit number was reinitialized after every prompt. The start number for `time`i ($i \in \{1, 2, 3, 4, 5\}$) was 2127, 5069, 1299, 9546 and 4231. The counter for `time`i ran either until prompt i occurred (i.e., stopped when `time`i = `endtime`i as defined below), or until the subject entered the code to read the story.

`endtime`i: end of the 4-digit counter for prompt $i \in \{1, 2, 3, 4, 5\}$; `endtime`i equal to 2247, 5849, 1293, 9546, 4231 (i.e., 2, 13, 19, 7 and 4 minutes after the initialization of `time`i).

`enterCode`: equal to 1999 if the subject entered the code to access the story and equal to 0 otherwise.

`addedtime`: if the subject read the story before prompt i occurred, `addedtime` corresponds to the time added at the end of the task to compensate for the time skipped on prompt i (equal to length of time before prompt 6).

`task`i: equal to 1 if the subject answered prompt i and equal to -1 otherwise.

`taskPayment`: total payment received for the counting task (between 0 and 10 dollars).

`sex`: equal to 1 if male, 2 if female.

`major`: categorical variable with response categories 1 = mathematics, 2 = computer science, 3 = physics/chemistry, 4 = economics, 5 = humanities, 6 = foreign language, 7 = other.

`gpa`: GPA score between 0 and 4; equal to -1 if the student is a freshman.

`surprise`: categorical variable with 5 response categories (see OA-F.4 p.53):
1 = I did not think about the selected story at all because I did not care about it.
2 = I did not think about the selected story at all because I was very concentrated on staring at the number.
3 = At first I was not thinking about the selected story, but as time passed, I got bored and thought more about it.
4 = I kept wondering what the story was about and felt really tempted to learn about it but I managed to stay focused on the task.
5 = I kept wondering about the story and this prevented me from staying focused on the task.

EC*i*: rating of the extent the subject agrees with statement $i \in \{1, 2, ..., 10\}$ on the Epistemic Curiosity scale (see OA-F.4, p.55), where: 1. I am interested in discovering how things work. 2. When I have a theory, I like to test it out. 3. I find it fascinating to learn new information. 4. I enjoy exploring new ideas. 5. If someone says something ambiguous to me, I want an explanation. 6. I am interested in how different people would react during a crisis. 7. If something unexpected happens, I like to figure out what caused it. 8. When there is a riddle, I am interested in trying to solve it. 9. When there is a word I don't know, I look up the meaning. 10. I like to imagine what people are thinking from their faces.

BF*i*: rating of the extent the subject agrees with statement $i \in \{1, 2, ..., 10\}$ on the Big Five Conscientiousness scale (see OA-F.4, p.54), where: 1. I usually carry out my plans. 2. I often waste my time. 3. I often can't put my mind on the task at hand. 4. I like to get things done quickly. 5. I tend to mess things up. 6. I always finish what I start. 7. I find it difficult to get down to work. 8. I often postpone decisions. 9. I always know what I am doing. 10. I am easily distracted.

CD*i*: rating of the extent the subject agrees with statement $i \in \{1, 2, ..., 10\}$ on the Curiosity as Deprivation scale (see OA-F.4, p.55), where: 1. When I meet someone I like, it bothers me not to know how she/he feels about me. 2. When there is a problem, I can't rest without knowing the answer. 3. I often can't put my mind on the task at hand. 4. It aggravates me if I can't remember a fact and will think about it until it comes to me. 5. It is important to me to feel knowledgeable. 6. I have hard time accepting mysteries that can't be solved. 7. Conceptual problems keep me awake thinking about solutions. 8. When I read something that does not make sense, I ignore it and keep reading. 9. It drives me crazy when a television program ends with a cliffhanger. 10. When a word is on the tip of my tongue, it bothers me until I find it.

menuType: category number associated with each of the 13 possible rankings of $\{0\}$, $\{1\}$ and $\{0, 1\}$. Letting $(r_{\{0\}}, r_{\{1\}}, r_{\{0,1\}})$ be the vector of ranks for ($\{0\}$, $\{1\}$, $\{0, 1\}$), the 13 types are:

$1 = \{0\} \succ_1 \{1\} \succ_1 \{0, 1\}$ (1,2,3)
$2 = \{0\} \succ_1 \{0, 1\} \succ_1 \{1\}$ (1,3,2)
$3 = \{1\} \succ_1 \{0\} \succ_1 \{0, 1\}$ (2,1,3)
$4 = \{1\} \succ_1 \{0, 1\} \succ_1 \{0\}$ (3,1,2)
$5 = \{0, 1\} \succ_1 \{0\} \succ_1 \{1\}$ (2,3,1)
$6 = \{0, 1\} \succ_1 \{1\} \succ_1 \{0\}$ (3,2,1)

$7 = \{0\} \sim_1 \{1\} \succ_1 \{0, 1\}$ (1,1,2)
$8 = \{0\} \sim_1 \{0, 1\} \succ_1 \{1\}$ (1,2,1)
$9 = \{1\} \sim_1 \{0, 1\} \succ_1 \{0\}$ (2,1,1)

$10 = \{0\} \succ_1 \{0, 1\} \sim_1 \{1\}$ (1,2,2)
$11 = \{1\} \succ_1 \{0, 1\} \sim_1 \{0\}$ (2,1,2)
$12 = \{0, 1\} \succ_1 \{0\} \sim_1 \{1\}$ (2,2,1)
$13 = \{0\} \sim_1 \{1\} \sim_1 \{0, 1\}$ (1,1,1)

partnerID: ID of one other subject in the room with the same rank ordering. Subjects received \$2 for correctly guessing the choice from $\{0, 1\}$ of **partnerID** (in case $\{0, 1\}$ was indeed assigned to **partnerID**); **partnerID** is equal to -1 if no other subject in the room had the same rank ordering.

beliefLearn: equal to 1 if the subject guessed that somebody with the same rank ordering would learn the story (choose Option 1) and equal to 0 otherwise.

ownInterest: response to the question "How likely are you to choose to learn the selected story in Period 2 if given the chance?" where 1 = very unlikely, 2 = quite unlikely, 3 = unsure, 4 = quite likely, 5 = very likely.

confidenceSelect: response to the question "How likely do you think your story was selected?" where 1 = very unlikely, 2 = quite unlikely, 3 = unsure, 4 = quite likely, 5 = very likely.

selectInterest: response to the question "How interested are you in learning whether the selected story was yours?" where 1 = completely indifferent, 2 = somewhat indifferent, 3 = somewhat interested, 4 = very interested, 5 = dying to learn.

storyInterest: response to the question "How interested are you in learning the most incredible story among the other participants in this room?" where 1 = completely indifferent, 2 = somewhat indifferent, 3 = somewhat interested, 4 = very interested, 5 = dying to learn.

wtp_exit: hypothetical amount of money the subject would be willing to take away from his $10 show-up fee to learn the story (see OA-F.4, Question 4 p.54).

beliefPayoff: equal to 2 if the subject received $2 for correctly guessing the choice from $\{0, 1\}$ of another subject with the same rank ordering, and 0 otherwise (i.e., if the guess was incorrect or no match could be found).

question1: answer to the question " Can you explain how you ranked the 3 menus? More precisely, we are interested in understanding why you ranked one menu strictly above another and/or why you were indifferent between two menus. Please explain in the box below. After you are finished typing, press OK."

question3: answer to the question "Did you find any of the instructions confusing? Please explain in the box below and press OK."

Running the zTree program

Below are a few comments about running the z-Tree program:

1. You will need at least the 3.4.2 version of z-Tree as the code will not run under older versions.

2. You need to specify the number of subjects in the **Background** under the global.do program starting with "TO MODIFY".

3. I think there is a slight mistake in the computation of the beliefPayoff variable; unfortunately, I was unable to spot the exact mistake.