**The Word Association Experiment**

**Specification**

**1.What is it ?**

It is a psychological test which identifies complexes. It is delivered by a specially trained psychoanalyst.

The Respondent‘s (R) reactions to words are recorded and indications of complexes are identified.

These are then discussed with R who is given a report.

Reports are kept for three years and referred to from time to time.

**2.How does it Work?**

The User fills in on screen in the data of the respondent and the User, and the date of the experiment and explains the experiment.

A list of 50 stimulus words is displayed on screen one word at a time.

There are 50 words in the list.

The word is read out by the User (U)

As soon as the word is read out, U starts a timer

The respondent (R) gives a reply to the word. U presses stop, and the timing of the response in recorded in fifths of a second is recorded.

U then types the word in a box next to the stimulus word

U then records any unusual responses, we call complex indicators (by clicking mouse) from a displayed checklist . Here is the checklist.

**3.List of complex indicators**

**PRT**: Prolonged reaction time (above the median)

**RE**: Incorrect or forgotten reproductions

**B**: Body reactions: (mimic, facial expressions, laughing, head or hand movements …)

**MS**: Mishearing or not understanding stimulus word

**RSW**: Repetition of stimulus word

**So**: Sound reactions, rhyming, interjections, exclamations, meaningless reactions

**MW**: Multiple word responses

**F**:Failures: No association before 200/5 seconds F

**S**:Stereotypes: Same reply to more than three stimulus words, including reproductions

**P:**Perseveration: Emotional reaction of stimulus word carried through to following reactions.

**3.1 Notes**

There are 10 complex indicators. Those in red are noted by the U form the dropdown checklist during the test on the first round

Additionally**,**

**PRT**s are measured automatically after the first round only. They are not measured for the second round.

When the 50 word list is completed a ‘first run completed’ display is shown

**RE**.s (Incorrect or forgotten reproductions) are noted during the second round.

**S**:Stereotypes and **P**erseverations are detected by U after looking at the report when both rounds have been completed. These are then entered by U clicking the item on the dropdown list.

**4. The second round**

U then calls up the next stimulus word by pressing the NEXT WORD button.

The process is repeated for the 50 words, but this **time no timings are recorded** and the only complex indicator recorded is whether or not the reproduction was accurate. As noted in para 3.1 above, this is done by U clicking RE on the drop down list.

U repeats the test as before, giving the stimulus word only this time the response is not timed. When the U reads out the stimulus word, the R tries to reproduce the initial response given. If the word is the same as that initially given, then nothing is recorded (or a symbol meaning ‘the same’

The test is complete once the second run has finished. Note that another complex indicator is recorded if the second time around response word is different to the first run. This is done by the U clicking RE on the complex indicator list.

The first part of the report is a copy of the template.

W**hat features are required ?**

If U makes an error, for example, misspelling a word, it must be possible for this to be corrected after the test has been given.

The all words must be editable.

Response Times are given in one fifth of a second.

The median is calculated

**5. The Template**

There are three main processes. These are data entry, recording on a template (database?) and data retrieval. This section deals with the template.

There are 2 design options and either are ok.

**Design option 1**

**When clicked from the drown list dropdown list the complex indicators go into one column. They are entered by the code letters, with each entry counted as one complex indicator. Here is an example.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N | Stimulus Word | Reac-tion Time 5ths | Reac-tion Time Sec. | Reaction | Repro | Complex indicators | Total | Type  F E | |
| 1 | play | 11 | 2.22 | joyful | Fun | RSW So | 2 | x |  |
| 2 | mouth | 19 | 3.76 | dentist |  | PRT RSW So MW | 4 |  | x |

This is taken from a 50 word list where the Calculated Median 17.5 fifths of a second, so a PRT is given. If



The PRTs should be entered automatically after the first round, when the median is calculated.

In the example given above the Type column is not relevant to complex indicators. It is only for the manual use of the U, after the test has been completed.

What is important is that the total number of CIs recorded horizontally is accurate and is updated every time that a CI is entered onto the template by theU.

**Design option 2**

In the example below, preformed category columns are given for each CI which are added horizontally in the same way as in Design option 1.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| N | Stimulus Word | Reac-tion Time 5ths | Reac-tion Time Sec. | Reaction | Repro | PRT | RE | B | MS | RSW | So | MW | F | S | P | Total | Type  F E | |
| 1 | play | 11 | 2.22 | joyful | Fun |  |  |  |  | 1 | 1 |  |  |  |  | 2 | x |  |
| 2 | mouth | 19 | 3.76 | dentist |  | 1 |  |  |  | 1 | 1 | 1 |  |  |  | 4 |  | x |

I prefer Deign option 1 because it is easier to read, but this option would work as well.

**6. The Report**

**The report comprises:**

**1.**The completed template

**2**. A bar chart with of response times with a line showing the median. The stimulus word and response words are displayed at the bottom of each bar.

**3.** A note on Stereoytpes and Perseverations which have been analysed by the U and noted. An example is given below. This cannot be generated from the template automatically. At the moment I do it by identifying a pattern, and showing that pattern by cutting and pasting. It could also be shown by the U manually highlighting the pattern on the template. The same goes for Perseverations.

**Stereotypes**

Field

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 17 | dance | 50 | 9.93 | Green fields, meadow | shoes |  | 1 | 1 |  | MW1` |  |  |  |
| 20 | plain | 100 | 20.01 | Which plain ?boring | field |  | 1 | 1 |  | MS 1, MW1 |  |  |  |
| 42 | flower | 13 | 2.50 |  |  |  |  |  |  |  |  |  | X |

**Similarly I separately show Words by number of C I s of 2 or more. As in the following example.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 15 | sad | 20 | 4.02 | A phase like a period of time | sometimes |  | 1 | 1 |  | MW1,P1 | 4 |  |  |
| 20 | plain | 100 | 20.01 | Which plain ?boring | field |  | 1 | 1 |  | MS 1, MW1 S1 | 4 |  |  |
| 17 | dance | 50 | 9.93 | Green fields, meadow | shoes |  | 1 | 1 |  | MW1`S1 | 4 |  |  |
| 3 | free | 21 | 4.13 | pleasure | joyful |  | 1 | 1 |  | P1 | 3 |  |  |
| 4 | car | 25 | 5.03 | movement | travel |  | 1 | 1 |  |  | 2 |  |  |
| 7 | stupid | 72 | 14.48 | learning |  | 1 | 1 |  |  |  | 2 |  |  |
| 9 | go | 20 | 3.54 | action | move |  | 1 | 1 |  |  | 2 |  |  |
| 16 | knife | 19 | 3,85 | pain | danger |  | 1 | 1 |  |  | 2 |  |  |
| 18 | choice | 18 | 3.68 | immediate | connection |  | 1 | 1 |  |  | 2 |  |  |
| 30 | wages | 19 | 3.81 | wealth | salary |  | 1 | 1 |  |  | 2 |  |  |
| 32 | fight | 18 | 3.58 | confusion | fear |  | 1 | 1 |  |  | 2 |  |  |
| 47 | clean | 21 | 4.20 | enjoyable | pleasant |  | 1 | 1 |  |  | 2 |  |  |
| 48 | try | 18 | 3.50 | focus | experiment |  | 1 | 1 |  |  | 2 |  |  |

I also note Egocentric and factual Responses manually. I add them up vertically These are not complex indicators anda separate display is not required, just a display underneath the template for example:

Factual responses 28

Egocentric responses 22