

# The relationship between extraversion and time perception: a correlational study

[Business](#)



## The Relationship Between Extraversion and Time Perception: A Correlational Study Abstract

Eysenck stated that extraverts need more stimulation (e. g. engaging, loud, exciting situations) for optimal performance, whereas introverts require minimal stimulation (e. g. quiet isolation). Does the extravert's reliance on constant activity mean that they will underestimate a period of time if they are not in a stimulating situation? Will introverts appreciate the lack of stimulation and overestimate that same period of time? H1 was that there would be a negative correlation between extraversion and time estimation (one-tailed test).

49 subjects were given an EPQ-R-s questionnaire to complete, to determine their EPQ-E (extraversion) score. They were then told to sit quietly, facing the wall to give minimal stimulation, raise their hand when they thought 7 minutes had passed and were timed until they gave their estimation. It was found that there was a weak negative correlation ( $r = -0.29$ ) between EPQ-E score and no. of seconds taken to raise one's hand, and a p value of 0.

019 made the results significant at the 5% level. H1 was accepted.

**Introduction** This research is primarily being carried out to verify a link between extraversion and time perception. Cambridge's online dictionary defines an extrovert as one who is lively, cheerful and enjoys the company of others. In contrast, it defines an introvert as " someone who is shy, quiet and unable to make friends easily". According to Lavery (1958, p.

0), extroverted behaviour is very unreserved; feelings and attitudes are expressed in a frank and impulsive fashion " in words, gestures and acts", unhindered by constraints of prior consideration or hesitancy. Pertaining to <https://assignbuster.com/the-relationship-between-extraversion-and-time-perception-a-correlational-study/>

introverted conduct, Lavery states that it is much the opposite. Impulsive outward expression is suppressed in favour of maintaining a “ reserved or even withdrawn” demeanour. Eysenck (1957, cited by Savage, 1964) suggested that those deemed as extraverts are thought to be cortically under-aroused, whilst introverts would be considered to have high cortical arousal. Indeed, Johnson et al. (1999, cited by Killgore et al, 2007) established a correlation between introversion and “ greater cerebral blood flow within the prefrontal cortex and anterior thalamus” by means of a PET scan, supporting Eysenck’s theory.

Additional support for Eysenck is illustrated by the findings of Kumari et al (2004) who found that extraverts at rest tended to have lower fMRI signal intensity within the cortex, “ suggesting lower levels of basal cortical arousal in this group” (cited in Killgore et al, 2007). According to Tan and Tiong (1999), extraverts tend to be impatient when it comes to slow and drawn out tasks, generally not minding interruptions. Introverts do not mind such tasks, preferring to work alone in quiet concentration, with no interruptions. Hence it is consistent with Eysenck’s 1967 allegation that extraverts need more cortical stimulation than introverts for optimal performance. To put it simply, introverts will work better in quiet isolation so as not to become over-aroused, whereas extraverts crave excitement to overcome their easily bored tendencies and under-arousal.

Furthermore, Danckert & Allman (2005) stated that those prone to boredom tended to underestimate a length of time, whereas those not easily bored overestimated the time period. Fielding et al (1992) indicated that time

perception can be influenced by motivational levels, although extraversion of subjects was not examined. Tranel (1962) found that extraverts tolerated isolated conditions better than introverts, and all but two extraverts stayed the full four hours. The results imply that the extraverts, although completely under-stimulated by their surroundings, saw the isolation as a challenge of endurance. One extraverted participant reported that it had felt like two hours as opposed to the actual four, but this testimony alone may not be enough to refute the findings of several studies finding a negative correlation between time estimation and extraversion, including Reed & Kenna (1964), Lynn (1961), Kirkcaldy (1984) and Buchwald & Blatt (1974). The introverts found the experience to be stressful and all but one of the introverts had quit before the time was up, questioning the allegation of Tan and Tiong (1999) that introverts thrive in quiet, uninterrupted conditions.

It is from these collected findings and theories that this study's hypotheses will be drawn from: H1: There will be a negative correlation between time perception and extroversion. H0: There will not be a negative correlation between time perception and extroversion. The results of this study may benefit the education system and workplace. For instance, if it is found that extraverts overestimate periods of time (i. e.

they are indeed easily bored), then the teaching of extraverted children could be altered to promote better learning in them by making their lessons more compelling and hands-on so as to keep their cortical arousal high, or perhaps giving them frequent short breaks so that they might re-stimulate themselves and be able to pay more attention. Petrides et al (2005)

attributes poor academic performance, truancy, expulsion and disruptive behaviour to extraversion. In the work place, extraverts could be given less taxing and repetitive duties, or be given frequent short breaks (as suggested to for school children) so they will maintain optimal arousal and be more productive. This will benefit the employee (a better performance may earn them a raise or promotion), their colleagues (who won't have to work overtime to meet a group target, for instance) and their employer (who will earn more money through his employee's increased productivity). Lysaker et al (1998) found that extraversion correlated negatively with quality of work.

**Method** This study is correlation, incorporating a survey, and as such is not deemed an experiment. The variables are as follows: 1. Extraversion, measured by the EPQ-E scale from 0 (very introvert) to 12 (very extrovert). 2. Time perception, measured in seconds.

A correlational design is applied, due to the fact that two variables (outlined above) are being compared.  $n = 49$  A sample of students of at least 18 years of age participated, with a significant proportion of mature students.

Participants (Ps) were selected by opportunity sampling of a first year undergraduate class at TVU. Materials required are Eysenck's (1985) short-scale revised personality questionnaire (EPQ-R-s) consisting of 48 yes/no questions to determine four dimensions of personality, extraversion being the trait of focus for this study. In addition, stopwatches will time Ps during assessment of their time perception. Procedure 1.

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retribution. 2. Once all Ps have completed their questionnaire, they are instructed to calculate their level of extraversion according to a scale of 0 to 12 devised by Eysenck (the EPQ-E score). 3. Ps will then be required to sit facing the wall in complete silence, and told to raise their hand when they believe seven minutes (420 seconds) has passed.

They will be observed and timed with stopwatches, and the number of seconds they take to raise their hand will be noted. . Once all Ps have raised their hands and their time has been recorded, their time will be given to them to write along with their EPQ-E score. These two figures are then given to the experimenter so that the raw data for the whole sample can be collated. 5. Ps are then debriefed in accordance with ethical guidelines as to the nature of the study, e.

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