

The validity of the polygraph in detecting deception



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This essay will discuss the evidence for and against the effectiveness of polygraph machines or 'lie detectors' in detecting deception.

The most common polygraph technique used is the Question Test (CQT; Reid, 1947) where the subject is hooked up to a machine that detects the body's physiological processes in regards to attention, emotion and many others that fluctuate when lying.[1] Some behaviours that have been linked to lying are bigger or smaller body movements, averting gaze, more pauses and increased or decreased length of pauses in speech, slower or faster speech and hesitations (DePaulo et al., 2003). In general though, there is no solid evidence for indicators of lying that can be generalised to a larger population due to the fact that not all indicators may be present when lying. Polygraphs have been reported useful in attaining new or undisclosed information from the subject. Although Grubin et al. (2004) believes that it's the intimidation of the lie detectors that leads to confessions, not the polygraphs accuracy at detecting lies. The polygraph test merely measures the subject's physiological responses, and a majority of the precision of the overall outcome depends on the skills of the polygrapher. An accurate scoring and interpretation of the subjects' answers and behaviours requires the examiner to be subjective and not allow their preconceptions influence their judgements. "Flawed outcomes of the CQT occur because the polygraph traces do not allow for distinguishing between an innocent's fear of false detection and a guilty's fear of detection". Also, spies are taught how to manage their body's unconscious and conscious responses such as remaining calm, regulate breathing and responses to pass lie detectors, thus making the polygraph machine useless. So although the polygraph has a

higher chance than a human at detecting deception, it is not perfectly accurate, thus not consistent at detecting lies.[2]

Introduction

Innocent or guilty? Truth or lies? The real question is, would you rely on the accuracy of a polygraph? Polygraphs have been around since the early twentieth century and have been used for many purposes such as to aid criminal investigation, screening of job applications and monitoring sex offenders (English, Jones, Patrick, & Pasini-Hill, 2003)(Krapohl, 2002).. Ever since their inception they have been the centre of controversial debate in regards to the notion that a machine can really detect deception (Sceptical Enquirer, 2005). A polygraph “ Refers only to the recording device that is used for registering different physiological parameters”. (Meijer & Verschuere, 2010). This topic is highly significant as polygraphs are used largely in the USA to determine the innocence of suspects and provide evidence against criminals, but what if due to a faulty the polygraph, someone innocent is locked up for a crime they didn't commit?. “ Several reports have suggested that the polygraph is highly successful in obtaining previously undisclosed information”, although Grubin et al. (2004) believes that it's the intimidation of the lie detectors that leads to confessions. However Ben-Shakhar (1991) has found that lie detectors are not as objective as they are made out to be (Raskin & Honts, 2002). Conversely it was stated that polygraph tests can distinguish deception from the truth, although at a rate that is better than chance, it is below 100 percent accurate (National Research Council [NRC], 2003). This essay will discuss the

effectiveness of polygraph machines or 'lie detectors' in detecting deception.

Body

The most common polygraph technique used is the Question Test (CQT; Reid, 1947). The subject is connected to the polygraph and is asked a series of questions, some relevant and some control questions. The relevant questions were constructed upon the crucial assumption that they will be most threatening for the guilty suspects and the control questions more threatening to the innocent subjects. This method's objective is to manipulate the suspect into answering no to the control questions by

“ suggesting that confessing illegal activities will negatively influence the test outcome. As a result, innocent examinees are assumed to show the strongest physiological responses to the control questions, fearing that their deceptive answer to this question will get them convicted for the crime under investigation.”(Meijer, E. H. & Verschuere, B. 2010)

To be able to detect these signals the subject must be hooked up to the machine using sensors. The sensors are placed on the thorax and abdomen, the two bands measure respiration. On the inside of the hand two electrodes are placed to determine electro-dermal activity, and a sphygmomanometer is used to measure blood pressure. These parameters reflect the bodies' physiological processes in regards to attention, emotion and many others that fluctuate when lying.[3]

In general people are not accurate lie detectors, the average person is

unable distinguish a liar from truth telling at a rate rarely above 60% in when <https://assignbuster.com/the-validity-of-the-polygraph-in-detecting-deception/>

in experimental settings.(Vrij, 2000). Scientists have conducted many studies in hope of identifying particular physiological and behavioural responses related with lying. However this only makes sense in the implied context in which it is assumed that liars will be experiencing more nervousness and anxiety than the people telling the truth. In this case it will be the liars' unconscious behaviours and responses that give them away.[4]Some behaviour that have been linked to lying are bigger or smaller body movement, averting gaze, more pauses and increased or decreased length of pauses in speech, slower or faster speech and hesitations (DePaulo et al., 2003). In general though, there is no solid evidence for indicators of lying that can be generalised to a larger population due to the fact that not all indicators may be present when lying.

Polygraphs have been reported useful in attaining new or undisclosed information from the subject. Although Grubin et al. (2004) believes that it's the intimidation of the lie detectors that leads to confessions, not the polygraphs accuracy at detecting lies. For instance Abrams and Abrams (1993) stated that there are three times when the subject can disclose new information: "(1) when they are told that they will face a test in the near future, (2) during the pre-test interview, and (3) during the confrontation with the test outcome. Note that the first two points are before the polygraph test is actually conducted". It was discovered by Grubin et al. That a majority of the information that was disclosed was during points one or two. This outcome is due to the intimidation effect the polygraph has, making the guilty subject anxious and almost certain the polygraph will detect the nervousness. Thus the confession of new information is not due to the

polygraphs accuracy at detecting physiological responses associated with deception, but probably the interrogators methods of questioning and the pressure caused by the intimidation of the polygraph (Meijer, Verschuere, Merckelbach, & Crombez, 2008).

The polygraph test merely measures the subject's physiological responses, and a majority of the precision of the overall outcome depends on the skills of the polygrapher.

“ A skilled polygrapher is capable of formulating control questions and creating an atmosphere in which an innocent examinee will be more worried about the control questions than about the relevant questions according to proponents of the CQT”. (Raskin & Honts, 2002).

However it is argued by CQT critics that this is merely a theory and has no foundation in regards to psychological or psycho-physiological research. (Ben-Shakhar, 2008).

As stated in the above proceedings, a large part of polygraphs accuracy is based on the polygraphers skills and ability to construct questions relevant to the case. It has been stated by Ben-Shakhar (1991) that lie detectors are “ not as objective as they are made out to be”. Part of a polygraph text involves a pre-test examination in which the examiner explores the background of the subject to help them form specific questions for when they take the test. However, an accurate scoring and interpretation of the subjects' answers and behaviours requires the examiner to be subjective and not allow their preconceptions influence their judgements. “ Flawed

outcomes of the CQT occur because the polygraph traces do not allow for
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distinguishing between an innocent's fear of false detection and a guilt's fear of detection". This cannot be fixed with more technology and complicated algorithms and as long as the CQT format stays the same, it will not have high accuracy. (National Research Council 335). In summary If the examiner does not abide by a specific format, that is when polygraph tests become biased and may "demean the innocent and free the guilty".

Another factor that adds to the validity of the consistency and effectiveness of lie detectors is espionages. Espionages are taught how to manage their body's unconscious and conscious responses such as remaining calm, regulate breathing and responses to pass lie detectors, thus making the polygraph machine useless. "[polygraphs] as a trap to catch moles randomly, he described it as "astrology," "magic," "wishful thinking" and "a lousy way of finding out if somebody is a double agent." (Stein, 1995) In 1983 David Lykken, a psychology professor and expert on polygraphs helped an Army intelligence officer pass a routine lie detector test after failing the last two, but had done nothing illegal. Lykken suggested altering his breathing rate and blood pressure at strategic times, the army intelligence officer passed the next test with ease. This shows that with the right knowledge and training people can learn how to slip under the radar so to speak, to get away with crime and thus rendering the polygraph machines useless when trying to detect physical signs associated with deception.

Conversely it was stated that polygraph tests can distinguish deception from the truth, although at a rate that is better than chance, it is below 100 percent accurate (National Research Council [NRC], 2003). In an experiment half of the subjects were told to do a 'fake crime', and half to not. All of the <https://assignbuster.com/the-validity-of-the-polygraph-in-detecting-deception/>

subjects were tested with a CQT. However there are several problems with this laboratory study as not of the 'fake criminals' did not face and serious consequences thus did not have natural validity. On the other hand studies that did have ecological validity did not have a 'ground truth', that is, the guilt and innocence condition. An accuracy index of .85 and .89 was calculated by a panel of 14 scientists who analysed the precision of the CQT, including all the field studies and laboratory studies. (National Research Council 2003)

"The preceding allows for three important conclusions. First, the CQT performs above chance level. Second, these figures highlight that the error rate of the CQT can be substantial. Third, with the cutoff points used in practice, the test is especially prone to false-positive outcomes". (Blackstone, 1882).

These findings supports the panels conclusion that polygraph tests can distinguish deception from the truth, although at a rate that is better than chance, it is below 100 percent accurate (National Research Council 2003).

Conclusion

In conclusion it is to be clarified that polygraph machine do not detect lies by distinguishing the truth from deception, however it merely measures a humans physiological responses that are assumedly linked to lying.[5]

It was stated that polygraph tests can distinguish deception from the truth, although at a rate that is better than chance, it is below 100 percent accurate (National Research Council [NRC], 2003). Given the following

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evidence, it is concluded that although the polygraph machine can detect physiological responses associated with deception, they do not distinguish between an innocent's anxiety of being tested and a guilty person's anxiety of being caught. Also polygraphs can be tricked, as spies have learnt how to manage the body's responses strategically so that the polygraph will not detect any signs associated with fear. However not all signs of deception may be present at the same time the deception takes place thus there may be false readings as the machine may not pick up a particular person's responses. So although the polygraph has a higher chance than a human at detecting deception, it is not perfectly accurate[6], thus not consistent at detecting lies.