

Good essay about monitoring of deception and instrumentation

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Theories of polygraph are essential in order to assure confidence that it works. A theory is a collection of interrelated concepts that seek to build the body of knowledge on a scientific subject. Strongly motivated people may try to learn about the polygraph and develop countermeasures, manipulate loopholes or find other ways to defeat the test. With well-documented theories, the workings of a polygraph would be better understood, enabling enhancements, refinement or further development of the polygraph to extend its functionality or improve its performance or efficiency. Theories would enable the creation of a robust, efficient and reliable tool. The polygraph would not be admissible in court without theories, and issues of its validity would always arise. The Federal Rules of Evidence require that the admissibility of evidence depends upon the validity of the underlying scientific methods. One cannot reasonably have confidence in the validity of physiological detection of deception without an adequate theoretical foundation.

The underlying scientific validity of the polygraph lies in the domain of three fields: physiology, psychology, and measurement. Contemporary theories of polygraph state that people who are lying and people who are telling the truth show different behavioral and physiological response patterns. There cannot be a universal standard of truth reactions because people have different physiological reactivity, functioning, and response hierarchies. Hence, the polygraph operators use comparison questions. Comparison questions are either relevant, irrelevant, ones with a small likelihood of eliciting a false answer or ones where lying is deliberately instructed. Conflict theory holds that two incompatible response tendencies occurring at the

same time produces a response bigger than either of the two. Conditioned response theory holds that relevant questions act as conditioned stimuli, eliciting in deceptive people an emotional response associated with lying. Psychological set theory states that the process of interrogation during a polygraph carries with it enough distress to alter the emotional state of the individual and hence evoke a response. Orienting theory holds that an orienting response occurs due to novel or personally significant stimulus; an orienting response is one which is reflexive and directed towards the stimulus.

With even a basic understanding of the underlying psychological and physiological assumptions on which polygraph is founded, it is possible to take conscious action that creates false readings. The only way to prevent this is by developing a more accurate method of measurement and developing polygraph theories further to enable the detection and countering of such techniques.

John Augustus Larson invented the polygraph in 1921. Larson was a police officer in Berkeley Police Department and a university student in University of California at Berkeley. Larson's polygraph owes most of its run-away success to Berkeley's renowned police August Vollmer, who used it to solve a few cases successfully, immediately giving the machine a reputation. In 1939, Leonard Keeler further enhanced the machine by making it portable and adding the galvanic skin response. The FBI then purchased Keeler's device. The polygraph gained a reputation for its use as a torturing device and has been the focus of many sensational court cases. It is not as extensively used elsewhere in the world as in the United States. The

polygraph is often criticized for not being objective; that is, its outcome can be interpreted differently by different operators, unlike other machines, for example, a calculator. Objectivity, as opposed to subjectivity, is the quality of not being affected or influenced by perspective, personal opinions, dispositions, beliefs or circumstance.

Works Cited

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