

# Computer Voice Stress Analyzer

## How It Works

---

Since ancient times, man has tried to determine if his fellow man is telling the truth. A medieval "truth by trial" technique called for sticking a suspected liar's hand into a fire; if it was not burned, a person was judged innocent. The ancient Chinese test required a suspected wrongdoer to chew rice powder while being questioned. If the powder stayed dry, the person was condemned on the theory that tension caused by lying blocked the salivary glands. During the time of the Pilgrims, suspected liars were often thrown fully-clothed into the middle of a lake; if they drowned they were innocent; if they floated, guilty.

Technology has brought us a long way from these ancient methods of detecting lies. Today many law enforcement agencies rely on the polygraph to determine lies from truth. A less intrusive truth verification device, the CVSA, is now also in use.

The CVSA was first used during the Vietnam War by U.S. soldiers in an attempt to determine if Vietnamese prisoners were Viet Cong guerrillas or civilians. During that time it was known as the PSE, or Psychological Stress Evaluator. After the war, private developers took over the technology, but it wasn't until the late 1980s that the CVSA became a tool widely used in police investigations.

The body has two nervous systems, the Central Nervous System and the Autonomic Nervous System. The Central system can be considered as concerning itself with those physical and sensory functions which occur at, or above the threshold of awareness. In other words, we have control over this system.

The Autonomic system is concerned primarily with those functions which occur below the threshold of awareness and operates on an automatic, self-regulating basis. The beating of the heart, the rise and fall of the lungs, the digestion of food, all complex processes of the body which must continue without any conscious effort are functions of the autonomic nervous system.

The heartbeat, for example, normally occurs at a rate kept within certain bounds. However, under the influence of physical stress such