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“Smart Interview,” Technology and Solving the Challenges in an Interview

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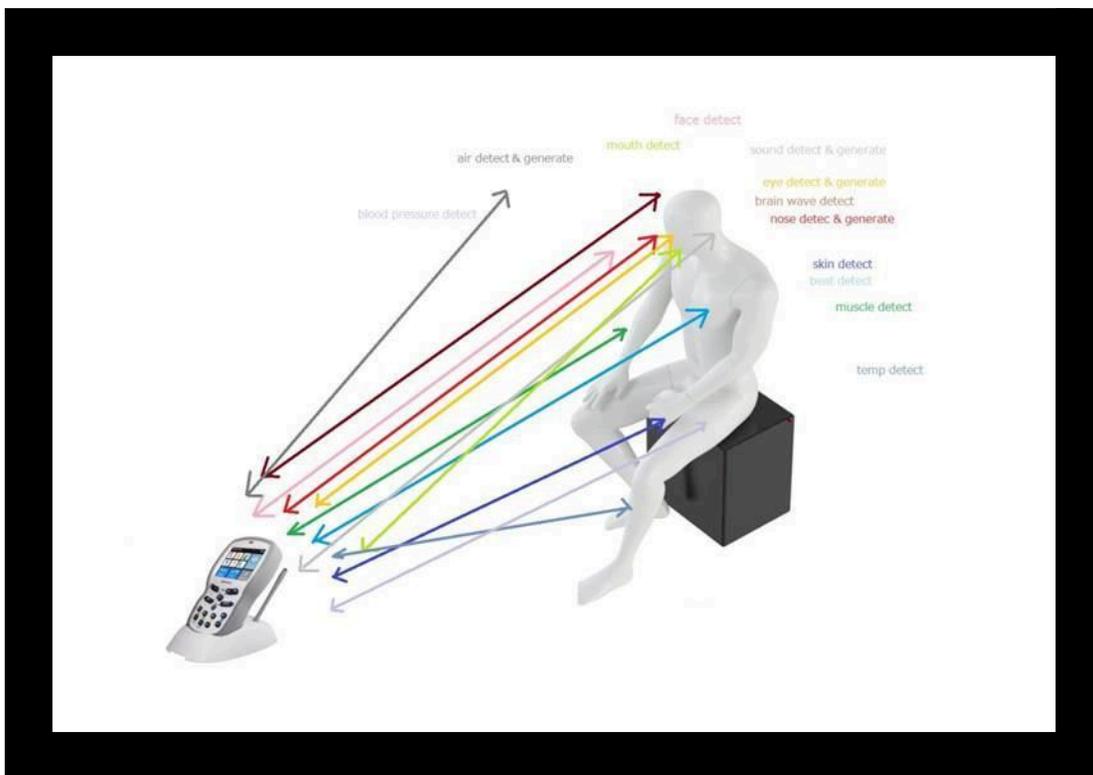
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“Smart Interview,” Technology and Solving the Challenges in an Interview¹
Samir Ketf & Saeideh Mahrami



Abstract

Humans confront different sweet and bitter events during life. Talking about past bitter events is difficult in oral history interviews about wars. The interviewers' trouble is reviewing and reminding the interviewee of all the memories of wars, fluent and without spiritual challenges for the interviewee. Iran experienced two great political, cultural and social changes during a short period of time: the Islamic revolution and the eight-year war with Iraq. Each single event can be a reason to create “shock and spiritual challenge” in people. The destructive effects of war

¹ Presented at the International Oral History Association conference “Harmony and Disharmony,” and provided here as a text from the original presentation.

remain in the human's mind more than other events. Anxiety caused by being reminded of past bitter events is called PTSD and interviewing people who suffer from PTSD (Post Traumatic Stress Disorder) or people who have bitter memories is not an easy case, because they resist these reminding memories unconsciously.

In this article after studying the effects of war on Iranian fighters and injured people's lives, we introduce a new method of interviewing which is called "Smart Interview." Using this method the oral historian can make better verbal communication with the narrator. In this method with recognizing oral history, psychology, electronics, the performance of mental frequencies, the five senses and their effect on memory, we have tried to reduce the effect of bitter memories especially in the field of war, without blemishing oral history interview principles; the method puts the narrator in the best and the most relaxed possible condition to have more fluent and more reliable interviews about war facts and related events.

In the beginning, oral history and interviewing started without any tools. We sat beside our fathers and mothers and listened to their stories about events. After a while, pen, paper, voice recorders and video recorders have been used by interviewers and using modern technology became common.

Now we introduce "Smart Interview" to facilitate the further entrance of technology to oral history science.



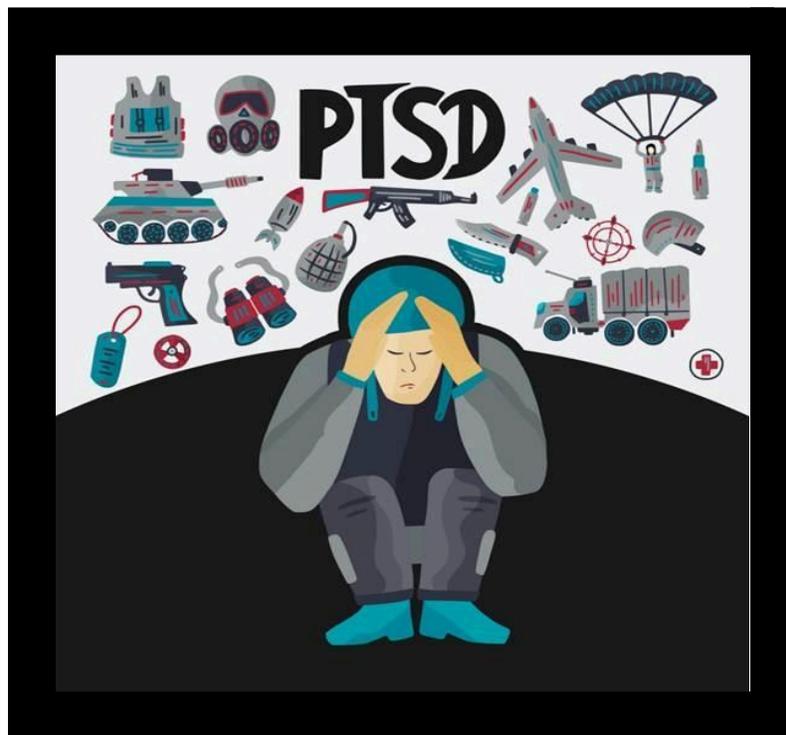
In Smart Interview, we don't intend to treat; our aim is to facilitate interviewing and help the interviewer and interviewee to have a better experience. There is no interference in the system and all sections and equipment can be set by the interviewer's and interviewee's taste.

By using a Smart Interview device and explaining the equipment, you can activate the items the interviewee agrees with, and deactivate the other items.

In this research, the interviewees are the people who suffer PTSD; we emphasize this group of interviewees because we've had our main experiences in oral history with the people who participated in war.

PTSD Disorder

PTSD stands for Post Traumatic Stress Disorder; this disorder is because of a person's encounter with bitter, stressful events. The symptoms of PTSD are the repetition of disasters in one's mind by flash-backs, so that the person avoids people or places or memories related to that event, and experiences social isolation and triggering.



Applications of a Smart Interview:

1-attention adjustment, increase focus

2-stress management, reduce stress

3-energy saving and fatigue avoidance

4-raise creativity.

5-fault deduction

6-Quick, internal calmness recovery in a stressful condition

7- to increase our weakness

8- to decrease anxiety

Here, we should emphasize that in this method, we don't use contact sensors, because we are interviewers and not doctors; and we don't have the possibility to install any special hardware on the interviewee.

Let's look at the brain to know how the brain works, how we should translate the brain language:

There are different methods to translate the brain's language: electric activities of the brain, the relationship between neurons (the brain neuro-connective bridges), which are called signal processing methods.

One of the methods is analyzing these brain activities to different frequencies, and then categorizing them based on the frequency, amplitude, symmetry coherence, and these categorized frequencies are called brain waves.

Generally, waves are produced in the main categories by their frequencies.

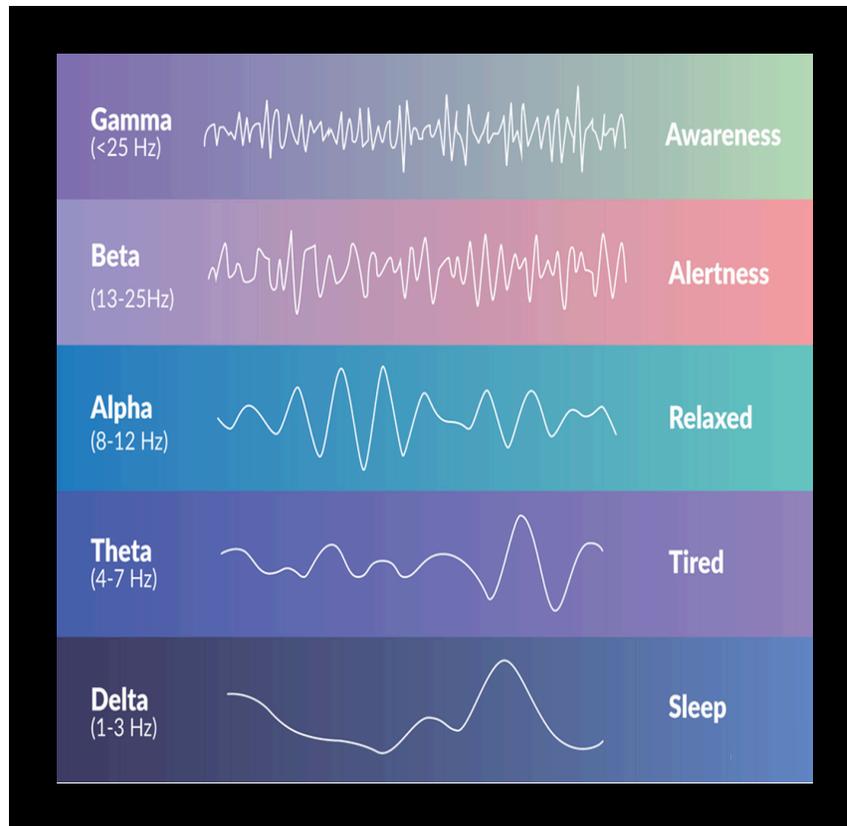
Here you can see the chart:

gamma waves

When an eye can recognize an image, gamma waves (30 to 70 Hertz) will spread in an extended part of the brain.

beta waves

are spread only when the person is awake (13-30 Hertz). Strong, and emotional feelings like fear, anger, or anxiety, are related to beta waves.



alpha waves

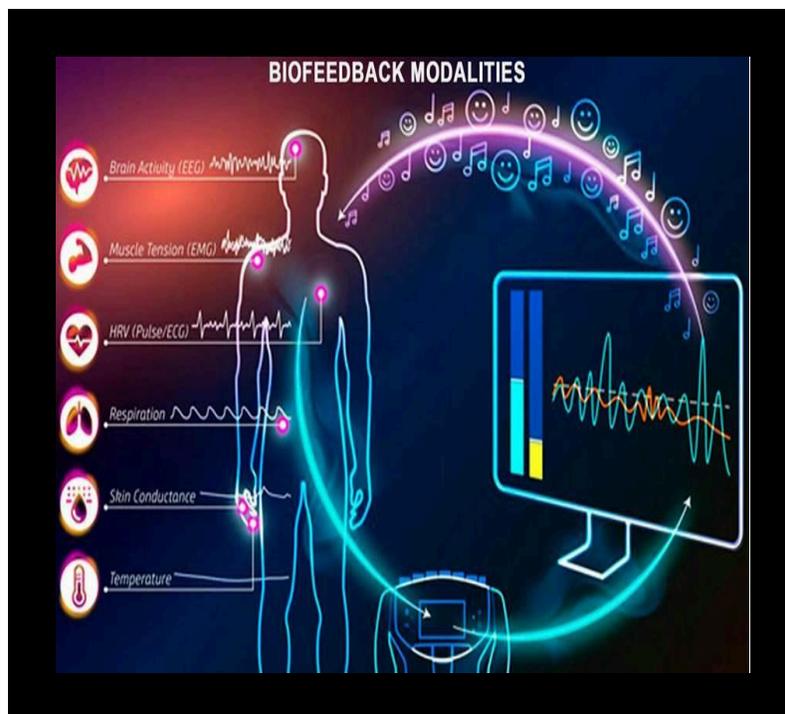
(8-13 Hertz) are widely related to work on consideration and attention conditions.

Theta waves, and delta waves

(1-7 Hertz) are also related to memories, feelings, and deep sleeping

There are some methods to use the body waves. One of the most famous methods is neurofeedback. What is neurofeedback? Neurofeedback is the other type of biofeedback, which aims to reach the mind's condition. This method trains the person to recognize his mental intentions by displaying the feedback of eyesight and audition, in that person's brain wave conditions.

In short, neurofeedback only uses the produced brain frequencies in the brain itself, and it has some defined reactions against them, but biofeedback uses all the items, including blood pressure, heartbeats, etc.



Sensors

When we encounter a person, we get a good or bad feeling, positive and negative types of energy are sent by an unknown signal. This signal is sent by the five sensors or possibly to other unknown senses, and they are received by the receiver's sensors for analysis.

We work with a lot of sensors, to manage the process of Smart Interview; different sensors, receivers, software and hardware have been used. The receivers and senders record the body actions, like brain frequency, body temperature and others.

And we also work with a collection of software and hardware which produces the necessary stimulus, and considers the result of the receiver's analysis, providing some stimulus, like music, light, appropriate frequency, temperature, and even scent. In short, all human senses can be used to help improve an interview.

Some characteristics of the sensors:

1- recording with low percentage fault. 2- quick software feedback. 3- displaying this signal as a diagram. 4- the usage of 2 record sensors at the same point (recording with high accuracy). 5- being wireless.

Bio-sensors have different types according to their application:

1-Calorimetric: says sensitive to temperature.

2-potentiometric: to measure the voltage.

3-amperometric: to measure the variation in the current.

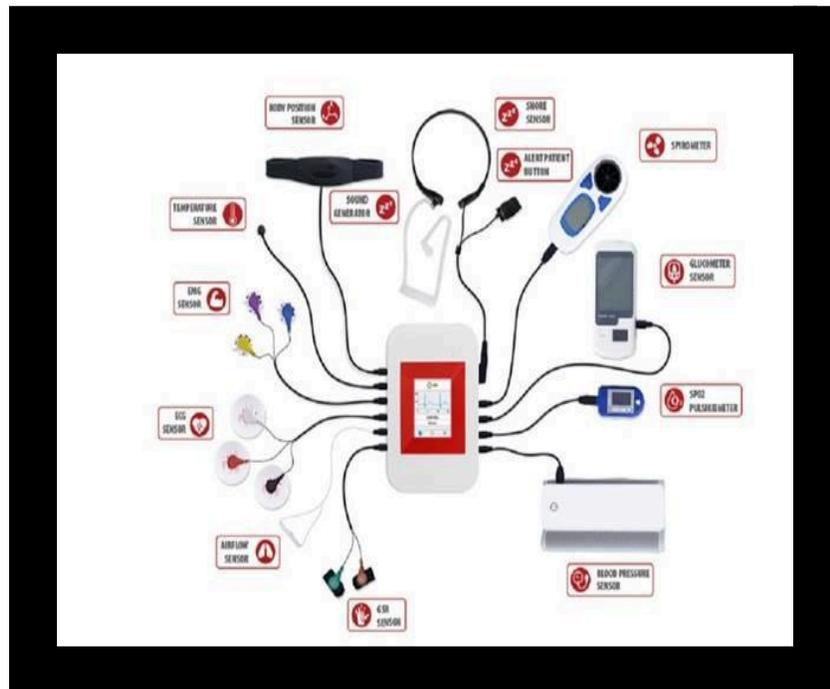
4-optical: to measure the variations in light absorption.

5-piezoelectric: to measure variation in frequency. And other types of sensors.

Artifacts

In this method of interview (Smart Interview), the artifacts are important. and artifacts are signals like the main-received signals, which are produced because of the person's movement, cough, sneeze, eye movement, and etc..

The relationship between electrical energy, which comes from the muscles and electrical energy, which comes from the brain is very important. The separation of the two types of energy is very difficult; it's possible by using combination sensors in Smart Interview. It's possible to design a special algorithm for a special event, and related interview. It's possible to do it for a special person, with special experiences. For example:



- 1- Find the effective stimulus.
- 2- Find effective visual stimuli.
- 3- Body scanning, without contact like electromagnetic frequency.
- 4- The distribution of the frequency band is related to the person's age, mental condition and others.
- 5- Recording the brain waves and programming them in software.
- 6- Talking about different experiences has a special effect on the narrator's blood pressure, and it's possible to record the feedback.
- 7- PRG: The heartbeat, rhythm, pulse is changed by anxiety.
- 8- A special scent can be effective on blood pressure or heartbeats. For example, damask rose may reduce blood pressure.
- 9- The body temperature is related to the periodical neural system.
- 10- Pneumography: the breathing function, the movement of the abdomen or breathing with an open mouth may affect the sensors.
- 11- Capnometer: to measure the level of oxygen and carbon dioxide.
- 12- GSR (galvanic skin response): To evaluate the variation of skin resistance.

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