CAPÍTULO V

ADVERTISING AND EVALUATION OF VOICE THROUGH DIGITAL MEDIA

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Abstract

In this article, the authors propose to apply an innovative methodology (quantitative and qualitative) to evaluate musical performances and telephone sales business techniques, creating commercial artificial speech or voice recognition, tools whose advertising and marketing use can be triggered by chatbots and artificial intelligence, within the Broadband Society and industry 4.0. We use a quantitative methodology, with a statistical sample (non probabilistic convenience sample), to find qualitative results in age and sex targeted people. We propose to apply an innovative methodology to evaluate musical performances, commercials, telephone sales techniques, creating commercial artificial speech or voice recognition. We perform a qualitative final results study based on a questionnaire survey by research staff to causal, through which investigated the impact can be seen through the phone. It tries to explain statistically according to this study see what impact emotionally than others across five variables by calling the questioning. We observe if new technologies and contemporary working practices bringing theatre and performance closer to music in terms of shrinking the separation between the act of performance and the document of performance. We conclude in all the groups after the voice has gone through a mechanical means (telephone), the voice with higher emotional impact is child voice, low male voice, female voice loud, high volumes and serious tones.

Keywords

Voice, technology, telephone, business, advertising

Resumen

En este artículo, los autores proponen aplicar una metodología innovadora (cuantitativa y cualitativa) para evaluar los desempeños musicales y las técnicas comerciales de ventas telefónicas, a partir de la voz artificial comercial o reconocimiento de voz, herramientas cuyo uso publicitario y de marketing se puede disparar mediante los chatbots y la inteligencia artificial, dentro de la Sociedad de la Banda Ancha y la industria 4.0. Utilizamos una metodología cuantitativa, mediante una muestra estadística (muestra de conveniencia no probabilística), para encontrar resultados cualitativos en personas de edad y sexo específicos. Proponemos aplicar una metodología innovadora para evaluar interpretaciones o ejecuciones musicales, comerciales, técnicas de venta telefónica, creación de voz artificial comercial o reconocimiento de voz. Realizamos un estudio cualitativo basado en una encuesta realizada previamente, a través de la cual investigamos el impacto que se puede observar a través de llamadas telefónicas. Se intenta explicar estadísticamente el posible impacto emocional en el usuario final a través de cinco variables creadas como indicadores. Observamos si las nuevas tecnologías y medios digitales y los nuevos yacimientos de ocupación contemporáneos surgidos de ello proporcionan a la música rendimiento en términos de reducción de la separación entre la conversación y el anuncio y la obtención de un retorno de la inversión, sea tangible o intangible. Se concluye que en todos los grupos analizados de la muestra, tras recibir el impacto comunicativo de voz a través de un medio mecánico (el teléfono, en este caso), la voz con mayor impacto emocional es la voz infantil, la voz masculina grave, la voz femenina aguda, los volúmenes altos y los tonos graves.

Palabras clave

Voz, tecnología, teléfono, negocios, publicidad

1. Introduction

From a biological point of view breathing is essential to the functioning of most body systems (McVan, 1989). The main function of respiration is to provide oxygen to the tissues and remove carbon dioxide (Guyton and Hall, 2006). This process is necessary to guarantee the existence of life in person. Finding the etymology of the word can be seen as the link has the word implies that the function necessity of life. Breathing has its origin in the Greek word *psyche* which is derived words *psyche* that has been used to define concepts such as soul, life or breath (Abram, 1996). Breathing has been associated with the existence of life as shown by the studies of Goodwin in 1903 and appears in the reference manual in Biology by Campbell and Reece (2005). There is literature that links the living and breathing. Lodes (1990: 14) makes a clear reference: breathing, as the psychologist wrote Kretshmer erns, is more than a simple exchange of gases. Ancient civilizations knew that proper breathing results in physical and mental balance, promotes blood flow to the brain cells and expands our capacity for knowledge.

Breathing must be located in the cells. The process that occurs in the cell when oxygen ignites and becomes carbon dioxide is what is known as internal respiration. What is popularly known as the process of respiration including pulmonary ventilation, which is what you can influence and manipulate consciously. With the complete process of respiration is known that the different stages for the air to reach the cell body and out again transformed into carbon dioxide. Cells, to function, need oxygen. The dry atmospheric air is composed of 78.08% nitrogen by 20.95% oxygen, 0.03% carbon dioxide and 0.93% argon (Hlastala and Berger, 2001). At the time of capture outside air introduced into the body all the gases that form, but only oxygen is necessary for the cells. Nitrogen is an inert gas that the body returns to the atmosphere without reaching the blood. A human adult does single day between 15 and 20 breaths per minute in a resting state (West, 1997). Each of these processes will only lead to respiratory energy expenditure in the body between 3% and 5% of the energy consumed. Even if in the midst of physical exercise can increase this percentage up to 50 times per minute and respirations increased to 40 or 50 (Guyton, 2006). The essential purpose of respiration is gas exchange between carbon dioxide and oxygen so that cells can function. To achieve this, according to Guyton and Hall (2006), there are four processes: lung ventilation; diffusion of oxygen and carbon dioxide between the alveoli and the blood; transport of oxygen and carbon dioxide to cells in two ways; regulation of ventilation.

There are other authors, such as medical professor John West (1997), which considers only three functions, as it understands that regulation is part of the ventilation pulmonary ventilation.

Lung ventilation is responsible for capturing oxygen from outside the body. Then, oxygen reaches the larynx and conductive pathways to the lungs where it is distributed through the bronchi and bronchioles to the alveoli. Within the alveoli is where the hematosi, which is gas exchange, ie the transformation of the venous blood and arterial blood begins the process of transporting oxygen to the cells. This process is known as external respiration.

Internal respiration is the respiration of cells. Within cells there is an oxygen combustion and waste transformation in the form of carbon dioxide. This phenomenon is linked to the fourth function of breathing Guyton and Hall (2006), the regulation of ventilation. This regulation is through the central nervous system and adjusts the alveolar breath at the same rate that the body needs. Thus the pressure of oxygen and carbon dioxide in the blood are not altered even though the demand is higher breathing body.

The fourth function of Guyton and Hall, regulation of ventilation, has a lot to do with the body's ability to adapt to different situations. If you are performing activities that require a high demand for respiratory, central nervous system will increase the rate of alveolar breath and therefore the rate of pulmonary ventilation. So according to the need of air muscles are more or less involved and work with more or less intensity.

1.1. Anatomy of breathing

This description also focuses on the physiological process of external respiration. Although the process is what Guyton and Hall (2006) called ventilation, to bring the investigation to other publications on the same subject as the thesis on the education of teachers of voice (Gassull, 2005), some scientific publications (Rodero, 2003; Da Costa et al., 2012; Jakson-Menaldi, 1992) and other general publications (Gimeno, 2010, Berry, 2006) used the word breath. Also articles related to this topic (Elgström, 2009) use the word breathing in the place of ventilation.

There are several authors, like Jefferies and Turley (2000), which divide the respiratory system in upper and lower airways. The upper tracks include the following organs: nose, mouth, larynx (consisting of the nasopharynx, and laryngopharyngeal bucopharinx) and larynx. The roads are divided into lower conductive pathways, which are the trachea, bronchi, and segmental lobulars the drills. And the region formed by the respiratory bronchioles and alveoli. The different bodies involved in respiratory physiology are as follows.

External circulatory pathways: Nose, mouth, pharynx (the pharynx is popularly known as throat and has three parts: nasopharynx, bucopharinx (or oropharynx) and laryngopharyngeal. It is a cylindrical structure about

12.5cm approximately extending from the skull base to the larynx). These three parts can be called also as rinofaringe, respectively mesofaringe and hypopharynx if the division is done through the exchange of mucus. Larynx (the larynx is the place of production's voice. Its main function is phonation. The larynx is a cartilaginous structure connects the pharynx and the trachea. The pleural cavities are between the chest and lungs. There are two pleura, the parietal and visceral reupholstered the inner surface of the chest and lung. Create a virtual space, the pressure which pushes and pulls the lungs to balance the pressure of the cavity. The role of the pleural space is essential.

1.2. Breathing physiology

"Respiratory mechanics includes all forces driving the lung and the chest wall and the resistance to be overcome" (West, 1977: 77). The motions of respiratory mechanics itself part of the process of pulmonary ventilation. However, following the example of West (1977), LeHuche (1993) and Gassull (2004) among others, it is common to use the concept of mechanical ventilation.

The mechanics of breathing itself is grouped into two movements: the inspiration and expiration. When breathing is considered standard inspiration and expiration active movement is passive. This means that the muscles have to work inspired and given strength issue. Expiratory muscles to return to their relaxed state (Otis, Fenn and Rahn, 1950).

To speak of respiratory mechanics is necessary to treat the muscles involved in breathing and are the cause of these two movements. According to Prometheus (Schunke, Schulte and Schumacher, 2007) we find the following muscles involved in breathing: diaphragm, external intercostal muscles, internal intercostal muscles, scalene muscles, and intercartilaginous serrated and straight abdominal muscle, the transverse the abdomen and thorax transverse.

It has a more important role in respiratory mechanics. The diaphragm is a thin muscle layer in the form of parachute. The diaphragm separates the heart and lungs from the abdomen. Have an excursion at rest approximately 1 cm but can reach up to 10cm in conscious moments of inspiration and expiration.

1.3. Phonation

Phonation is the physical act of sound production, due to the interaction of the vocal folds with the flow of air inspired and the resonant cavities supraglòtiques to be released in a range of audible frequencies. Throughout

history there have been different theories to explain the process of phonation and the role of the vocal folds, especially when your vibration. Improvements in the field of films in the process of vibration have validated the aerodynamic theory mioelàstica-formulated initially by Van der Berg in 1958 and enlarged in 1968 by Lieberman as the most widespread (Rivas Fiuza, 2006: 25). Mioelàstica-aerodynamic theory explains the vibration of the vocal folds due to two kinds of forces, aerodynamic and some other tissues. Upon expiration, the air is in contact with folds midline. Subglottal pressure, aerodynamic force produces a pressure on the vocal folds abducted and momentarily opens to let the air. Finally, the strength of the tissue with the same subglottal pressure that would then close the folds once the air has come for abduction (Arauz, 1992).

He later had other theories about the process of phonation. Husson in 1959 gave responsibility for the contraction of the vocal folds in the nervous system and formulated the theory neurocronàxica. Cuckold and Lafon, 1960 said that the vocal folds vibrate but are not a permanent oscillation. More recently, in 1984, Castellengo and other researchers have proposed that the operation of vocal folds could be similar to the trombone, meaning that each sheet had a certain independence from the other (Rivas and Fiuza, 2006).

The three parts necessary to produce phonation as Torres and Gimeno (2005) LeHuche and Allali (1993) and Bonet (1995) are the bellows, vibration and resonators. Anatomy, physiology Guyton and Hall (2006) states that in addition to the respiratory system because there are two mechanical functions needed speech phonation, held in the larynx and coordination, carried out the structures of the mouth. Therefore also be understood in separation towers and Gimeno (2008) and others.

There are some authors cite a previous quarter that is responsible for motor phonation, the nervous system (Rivas and Fiuza, 2006). A detailed study of the nervous system would be required in an investigation that would deepen the anatomical function of phonation and therefore as justifiable LeHuche and Allal (Le Huche and Allali, 2004) is not covered in this research.

Each of the sounds of a language has its own vibration. In most languages there are sounds that vibrate and are also audible. It sounds called Deaf, which are audible because the air passes through the resonator, but produces no vibration in the vocal folds.

1.4. Anatomy of the voice

The larynx is where the vibration generates sound (Campbell and Reece, 2005). As Torres and Gimeno event in their book on the anatomy of the

voice (2008), functions of the larynx in order of importance are three: protection, breathing and phonation.

The larynx is shaped and inverted triangular pyramid is composed of cartilage pieces that are attached to muscles and ligaments. Is covered in mucus and as has been mentioned in the description of respiratory elements, prevents the passage of foreign bodies into the lower respiratory pathways. The inner lining is made up of sheets of epithelial tissue that modifying depending on the area of the larynx.

Inside the larynx there are three areas (Schunke, Schulte and Schumacher, 2007) to mark their boundaries with the vocal folds (and Torres Gimeno, 2008): the supraglottic space starts at the beginning of the larynx, its input and runs to the beginning of the vestibular folds or ventricular; the glottic space (or transglottic), according Schunke, Schulte and Schumacher (2007), from the vestibular folds until the end of the vocal folds, through the laryngeal ventricle; the subglottal space: from the vocal folds to the end cricoides cartilage, which marks the end of the larynx.

1.5. Physiology of the voice

Phonation mechanics is needed to describe the mechanisms that produce phonation. It contains three action items: the respiratory system or the pump, the vibration and vocal organs or resonators.

Upon expiration of the passage of the air column to the glottis and the variation of the degree of tension and change in vocal folds produces the emission of vocal sound (Cornut, 1985). The muscles that are inside the larynx are responsible for varying the tension of vocal folds and thus ensure that the vocal folds are attached and tight. Due to the subglottal pressure breath separate the folds and internal mucosa vibrates and produces a fundamental tone called glottic wave (Scivetti, 2003: 46) or "fundamental frequency" (Jakson-Menaldi, 1992: 169). The variation of the tension and the length of the vocal folds will be responsible for determining the note you want to issue (Torres and Gimeno, 2008).

1.6. The voice

"The human voice is exclusively air" (Torres and Gimeno, 2008: 49). This sentence serves to give an idea of the importance of the air in the process of human phonation. The material of the voice is the air which is why it is very important knowledge and breath control. Rivas and Fiuza define voice as audible sound produced by phonation (2006: 25). Tulón, speech therapist and singer who began working operator, says it is the "vehicle of communication par excellence" (Tulón, 2006: 19) also states that it "has at its finest singing and beauty "(Tulón, 2005: 13).

Torres Gimeno defines human voice saying it "is produced by the breath, after a series of modifications becomes word and song" (Torres and Gimeno, 2008). Cicely Berry, voice director of the Royal Shakespeare Company, defined it as "the means that you use in everyday life to communicate with others" (Berry, 2006: 17). Defining the shares Serrano (2003) stating that the voice conveys not only information but also makes relationships. American speech therapist DeVore (DeVore and Cookman, 2009), a specialist in theater and media arts, says that the human voice has a great relationship with the body's energy to personality, emotions and the perception of the person.

Some of the definitions mentioned, people who work with voice, include the word communicate. Communicate therefore implies that there must be a receiver. There can be seen without having communication.

According to Wilfart sees both spoken and sung voice is the most authentic and inimitable each person (Wilfart, 1999). As Michael McCallion (1998: 31), "the voice can not be separated from you." Also Menaldi-Jackson (1992: 171) states that "the voice is the identity card of a person."

Different definitions help to have a complete definition of what the word means. Voice can be changed either voluntarily or involuntarily through the various elements of the system phonation, which influence sound output.

The three main features voice according to most authors (Bonet, 1995) is timbre, tone, and intensity. There are other authors (Rodero, 2003; Gassull, Godall and Martorell, 2004) speaking of a fourth feature length.

The term refers to the temporary nature of the sound. Occurs only while keeping the sound out of the air and vibration. So the length will depend on the amount of air that may have been stored in the lungs.

The intensity of a voice call is also possible volume. Sound intensity depends on the amount of energy you have that sound. That is the amount of air s'espiri during phonation. Do not confuse the phenomenon of increasing intensity and therefore speak with a higher volume of the call.

Another feature is the tone of voice and often marked by the extension that has the voice, also called tall. The ability to brand the vocal folds to deliver bass or treble. This ability is marked by the wave vibration, the vibration generated. The sharp tones have a greater vibrational frequency that is vibrating more times each second. The bass vibrate less times per second.

The situation explains Tulón (2005) is the set of sounds to suit most voice, the voice in which it is comfortable. The situation is not all shades that can produce a voice, as this is called extension.

Key is used to measure the unit Herz (Hz). The male voices are spoken between 65 Hz and 200 Hz, and women between 150 Hz and 350 Hz. This ability is influenced by the length of the vocal folds.

That is the male vocal folds typically have a length between 18 mm and 25 mm. The women are between 14 mm and 18 mm. The measures also influence the larynx, as the larynx in females is about 3.6 cm wide and 4.3 cm diameter 2.6 cm. While men usually about 4.9 cm high and 4.9 cm wide with a diameter of 3.5 cm.

The tone has been accepted as the boundary between the bass and treble is not clear what should be and as stated Perona and Huertas has been agreed in the 200 Hz (1999).

The last feature is the timbre. Timbre is the characteristic complex and as stated Wilfard (1999) is the only part of the voice that can not be imitated. Gassull, Godall and Martorell (2004) discuss how what makes different sound.

With the timbre can distinguish two sounds of the same intensity and height. The timbre is what makes a pleasant or unpleasant voice (Rodero, 2003).

The timbre is influencing the characteristics of the physical constitution: the face, jaw, teeth, palate, nose and alveoli. It is for this reason that people who have a very similar timbre similar. And so there are cases where within a family are similar timbres.

The timbre does not have two equal voices and therefore help to identify them. The timbre is based on the spectrum of a specific voice.

A voice with a wide tessitura, timbre and intensity need not influenced by external manipulators is well projected voice also can say well placed, colored or a intoned or studied voice.

1.7. Emotion

Emotions are represented psychophysiological reactions to certain stimuli ways of adaptation of man when he sees something or someone important to them. Psychologically, emotions alter attention, they rank up certain behaviors guide individual responses and activate relevant associative networks in memory.

Physiologically, emotions rapidly organize the responses of different biological systems, including facial expressions, muscles, voice, and autonomic nervous system activity of the endocrine system, in order to establish an optimal internal means for more effective behavior.

Behaviourally, emotions serve to establish our position in relation to our environment, and drive us toward certain people, objects, actions, ideas and other distance us. Emotions also act as a repository of influences innate and learned, and possess certain characteristics unchanged and others that

show some variation between individuals, groups and cultures (Levenson, 1994).

The study of emotion is known as Affective Neuroscience, a term described by (Panksepp, 1992), which is defined as "the field of scientific research that studies the neural basis of social and affective processes of humans and animals levels covering behavioral, moral and neural analysis.

We define the emotional impact that goes beyond the mind and gives us a positive emotion. The concept of emotional impact, involves, on the one hand, you have to immerse him in the world of emotions and, secondly, as a direct consequence, that person should be the sole focus. And emotions are the beginning and end of all decision-making mechanisms and this feeling, not knowing what emotions are and how they are managed, it is problematic to define.

In other definitions of the word appears as another factor is emotion. Human emotions can be transmitted in different ways, also a non-verbal (Davis, 2005), but through the voice which is reflected inner emotions.

The voice is changing and this emotion can change the voice, voice and emotion are tied. The voice and reacts emotion translates the voice but may also be seen as a tool to release the emotion. Emotion is a source of wealth for voice, can give life meaning and content.

Humanization of communication is a real trend that is present in the main current theoretical trends. This coincides with the explosion of new technologies that offer users the power necessary to exercise the right to reply. Tools such as the Internet and mobile phones have fostered relationships overcoming barriers such as distance and space. So establish two communication channels of emotion that can help or not the message that is done, the voice and breathing.

2. General and specific objectives

The general objective of this research is to apply an innovative methodology, combining quantitative and qualitative, to evaluate musical performances and telephone sales business techniques.

The specific objectives are creating commercial artificial speech or voice recognition; to find qualitative results in age and sex targeted people; to evaluate musical performances, commercials, telephone sales techniques, creating commercial artificial speech or voice recognition

3. Methodology

We propose to apply an innovative methodology to evaluate musical performances, commercials, telephone sales techniques, creating commercial

artificial speech or voice recognition in the Broadband Society (Fondevila Gascón, 2013) and cloud journalism background (2010) and with interactive options like HbbTV (Fondevila Gascón, 2012) in industry 4.0. We use a quantitative methodology, with a statistical sample (non probabilistic convenience sample), to find qualitative results. With this method we observe if new technologies and contemporary working practices bringing theatre and performance closer to music in terms of shrinking the separation between the act of performance and the document of performance.

We are at a key developmental stage for the management of the company and not because the technology is advancing by leaps and bounds, almost exponential rate, or because communication allows us to have real-time information and not because globalization is a fact palpable, no. This importance is given to the buyer in choosing supplier is no longer linear. When a company is chosen as a provider, it is not just because it has a best quality, but because it is perceived as someone who can be trusted. Today, the client moves sentiments. This client wants to stay forever with this provider. They need trusted partners that help to answer that demand, in turn, their customers and who better than their suppliers. That is, the customer trust and loyalty together, which results in one to one marketing. The customer broke linearity that existed between technologies, techniques and systems. The client moves feelings, so try to hit rational level is very difficult, if not impossible. This is why talk of stratospheric performance, soft loans, to call centers, points cards because it does not cause any impression. Does not reach the heart, the mind and remains today, the impact goes beyond the mental "I have no choice," meaning that it will not create any obligation to the supplier. This commitment will be realized only if the impact occurs in the heart, that is, if the impact is emotional (Acebes, 2006)

We must affirm that the reality of business today revolves around the customer decides on the basis of emotional perception, which means that the provider has developed professional emotionally. No wonder, therefore, that we are experiencing the dramatic paradox of having the highest levels of excellence, best customer service, most investment in R & D, the largest number of people in the street, and instead be having the greatest difficulty in getting customers to stay. Or bet on more of the same or create a professional able to emotionally impact. Hence the importance of the concept of emotional impact in this study.

We perform a qualitative final results study based on a questionnaire survey by research staff to causal, through which investigated the impact can be seen through the phone. Tries to explain statistically according to this study see what impact emotionally than others across five variables by calling the questioning.

Population characteristics of the study subject are the net. We have ten customers, one of each sex and five age groups: 10-15 (children), 16-19 (teen) 20-25 (young), 26-60 (adult), and 65-75 (grandaparents).

2.1. Characteristics of the population under study

As explained above, throughout the history of music have been outlined distinction and classification of different voices, with increasing detail and clearer, with parallels to the musical demands of the moment and the idea specialization. A first distinction that comes to natural reasons (diversity of the human voice) and then the historical development (schools, styles, how the taste characteristics of each composer, etc.) (Herrera, 2009).

Rating sexual response to this classification, we call four types of voices:

-Woman's voice: larynx and vocal folds smaller than men, thus resulting voice is 8th top.

-Male voice: higher larynx with which the sound is worse.

-White child's voice or see: shorter larynx in men and women, and so the sound is very sharp.

-Asexual voice: voice of child castrated before puberty. This castration prevents the growth and development of the larynx. In the sixteenth century, not being admitted women as sung in churches, are replaced by children or neutered. In the following centuries these voices, which usually are equipped with more size and power than the singers, they get a huge success in Italy in the audience of opera, either because women used to sing on stage. In 1770, Pope Clement XIV authorized the singing of women in the church and forbids castration. The castrated disappear in the early twentieth century. One of the most famous castrati of all time Farinelli was called "the singer of Kings" (Herrera, 2009).

The ten models voices are:

1. Voice, female voice, soprano, high tone and strong volume.
2. Voice, female voice, soprano, high tone and volume flow.
3. Voice, female voice, alto, serious tone and strong volume.
4. Voice, female voice, alto, serious tone and volume flow.
5. Voice, male voice, tenor, tone sharp and strong volume.
6. Voice, male voice, tenor, high tone and volume flow.
7. Voice, male voice, low, serious tone and strong volume.
8. Voice, male voice, low, serious tone and volume flow.
9. Voice, child voice, volume flow.
10. Voice, child voice, strong volume.

2.2. Parameters of the study subjects

Ranked tone, a voice can be sharp, dull, normal with respect to age and sex of the patient, although it is true that the trend may have serious or severe. We study the intensity of voice. We study the timbre as the proper way to have a voice rang. It attributed many qualities and can always depend on the hearing examiner that the timbre of a voice has certain characteristics or others; finally, we appreciate the impact that can have on the emotional questioned.

2.3. Text

We considered using text ad water, as it is considered the most evocative in the industry, always keeping in mind that advertising and brand excitement were always linked, it is therefore essential to analyze of emotion as a transversal concept of the brand, from product design to communication itself. To do this, we must know the origin of the importance of emotional values in the field communication and involvement with other disciplines such as neuroscience and engineering industry.

3. Results

The results were the next (Table 1). The inicitials mean the next:

-After the voice has gone through a mechanical means, telephone, the impact was this:

Child girl: A; Child boy: B; Teen girl: C; Teen boy: D; Youg girl: E; Young boy: F; Mister: G; Lady: H; Senior man: I; Senior female: J.

V1: Voice 1; V2: Voice 2; V3: Voice 3; V4: Voice 4;. V5: Voice 5; V6: Voice 6; V7: Voice 7; V8: Voice 8; V9: Voice 9; V10: Voice 10.

Adj: adjectives. Imp: Shocking Agrs: Aggressive Agrd: Nice voice. Con: Convincing Dagr: Nasty Mac: beautiful voice, llet: Ugly voice.

Tip. - Type: i.-Child, J., Young, M., mature

m. - Average

TIM. - Timbre

VOL. - Volume

DIC. – Diction

E I. - Emotional Impact

Table 1. Results of the voice test.

A	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	mac	llet	imp	llet	agrd	dagr	agrs	llet	agrd	imp
Tip	j	j	m	j	m	m	m	m	i	j
TIM	5	1	4	4	1	3	1	3	5	4
VOL	3	2	5	2	5	3	5	3	5	5
DIC	4	1	5	2	5	4	2	2	5	4
TO	4	3	3	4	2	4	1	2	5	1
EI	3	1	4	1	1	2	4	1	5	5
B	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	agrd	agrd	con	con	dagr	dagr	imp	imp	con	con
Tip	i	i	m	m	j	j	m	m	i	i
TIM	3	5	3	3	2	2	4	3	3	3
VOL	3	3	3	2	3	2	5	4	3	4
DIC	3	4	3	2	2	2	5	4	4	4
TO	4	3	4	4	2	2	1	1	5	5
EI	4	4	2	1	1	1	4	5	3	3
TIMm	*4*	*3*	*3,5*	*3,5*	*1,5*	*2,5*	*2,5*	*3*	*4*	*3,5*
VOLm	*3*	*2,5*	*4*	*2*	*4*	*2,5*	*5*	*3,5*	*4*	*4,5*
DICm	*3,5*	*2,5*	*4*	*2*	*3,5*	*3*	*3,5*	*3*	*4,5*	*4*
TOm	*4*	*3*	*3,5*	*4*	*2*	*3*	*1*	*1,5*	*5*	*3*
EIm	*3,5*	*2,5*	*3*	*1*	*1*	*1,5*	*4*	*3*	*4*	*4*
C	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	agrd	con	con	llet	mac	agrd	imp	imp	mac	llet
Tip	j	j	m	m	j	j	m	m	i	i
TIM	5	4	3	2	4	3	4	5	3	2
VOL	4	3	5	1	5	4	5	4	4	5
DIC	4	3	5	2	5	4	5	4	4	4
TO	4	3	2	3	2	2	1	1	4	4
EI	4	3	2	1	4	2	4	5	2	1
D	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	*dagr*	*dagr*	*agrd*	*agrd*	*dagr*	*llet*	*con*	*dagr*	*mac*	*mac*
Tip	*i*	*i*	*m*	*m*	*m*	*j*	*m*	*m*	*i*	*i*
TIM	*2*	*2*	*4*	*4*	*1*	*1*	*3*	*1*	*3*	*3*
VOL	*3*	*3*	*4*	*5*	*3*	*3*	*3*	*1*	*3*	*4*
DIC	*3*	*3*	*4*	*4*	*3*	*4*	*5*	*4*	*4*	*4*
TO	*3*	*3*	*3*	*3*	*4*	*3*	*2*	*3*	*5*	*5*
EI	*1*	*1*	*1*	*1*	*1*	*1*	*3*	*1*	*1*	*1*
TIMm	3	3	3,5	3	2,5	2	3,5	3	3	2,5
VOLm	3,5	3	3,5	3	4	3,5	4	2,5	3,5	4,5
DICm	3,5	3	4,5	3	4	4	4	4	4	4
TOm	3,5	3	2,5	3	3	2,5	1,5	2	4,5	4,5
EIm	2,5	2	1,5	1	2,5	1,5	3,5	3	1,5	1
E	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*

Adj	agrd	agrd	mac	dagr	con	agrd	agrd	dagr	agrd	agrd
Tip	i	j	j	j	j	j	m	m	i	i
TIM	4	4	3	2	5	4	5	3	3	3
VOL	4	4	4	1	5	3	5	2	3	5
DIC	4	4	5	3	5	5	5	4	3	3
TO	4	4	3	4	3	3	1	2	4	4
EI	3	4	4	1	5	4	5	3	4	4
F	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	agrd	agrd	agrd	llet	dagr	llet	imp	dagr	llet	dagr
Tip	i	i	m	m	m	j	m	m	i	i
TIM	4	4	4	2	3	4	4	3	3	3
VOL	4	4	4	1	5	4	4	3	4	5
DIC	5	4	5	4	5	5	5	4	3	3
TO	4	3	3	3	2	2	1	3	3	4
EI	3	2	3	2	4	3	4	3	3	1
TIMm	4	4	3,5	2	4	4	4,5	3	3	3
VOLm	4	4	4	1	5	3,5	4,5	2,5	3,5	4
DICm	4,5	4	5	3,5	5	5	5	4	3	4
TOm	4	3,5	3	3,5	2,5	2,5	1	2,5	3,5	4
Elm	3	3	3,5	1,5	4,5	3,5	4,5	3	3,5	2,5
G	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	llet	llet	agrb	dagr	llet	dagr	con	imp	mac	agrb
Tip	i	j	m	j	m	m	m	m	i	i
TIM	1	3	5	1	2	1	4	3	4	3
VOL	5	4	5	1	5	3	4	2	4	5
DIC	4	2	5	2	2	3	4	2	4	4
TO	5	3	3	2	3	2	2	2	4	3
EI	1	3	5	1	1	1	4	2	5	4
H	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	agrd	agrd	agrd	agrd	agrs	con	con	dagr	agrd	agrs
Tip	j	j	j	j	j	j	m	m	i	i
TIM	3	3	4	2	3	5	4	3	4	2
VOL	3	2	4	1	5	5	5	2	4	5
DIC	4	3	4	3	5	5	5	5	3	3
TO	3	3	4	4	4	5	5	3	3	4
EI	3	2	3	1	4	4	5	2	4	2
TIMm	*2*	*3*	*4,5*	*1.5*	*2,5*	*3*	*4*	*3*	*4*	*2,5*
VOLm	*4*	*3,5*	*4,5*	*1,5*	*5*	*4*	*4,5*	*2*	*4*	*3,5*
DICm	*4*	*2,5*	*4,5*	*2,5*	*3,5*	*4*	*4,5*	*3,5*	*3,5*	*3,5*
TOm	*5*	*3*	*3,5*	*3*	*3,5*	*3,5*	*3,5*	*2,5*	*3,5*	*3,5*
Elm	*2*	*2,5*	*4*	*1*	*2,5*	*2,5*	*4,5*	*2*	*4,5*	*3*
I	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	*llet*	*dagr*	*agrb*	*dagr*	*imp*	*con*	*imp*	*dagr*	*agr*	*con*
Tip	*i*	*j*	*j*	*m*	*i*	*i*	*j*	*m*	*m*	*i*

TIM	*2*	*3*	*5*	*1*	*1*	*3*	*4*	*2*	*5*	*3*
VOL	*4*	*3*	*3*	*1*	*5*	*3*	*4*	*2*	*3*	*4*
DIC	*4*	*3*	*5*	*2*	*4*	*4*	*5*	*4*	*5*	*5*
TO	*5*	*3*	*3*	*4*	*2*	*3*	*1*	*2*	*4*	*3*
EI	*2*	*2*	*5*	*2*	*2*	*3*	*4*	*2*	*5*	*3*
J	V1	V2	V3	*V4*	*V5*	*V6*	*V7*	*V8*	*V9*	*V10*
Adj	dagr	dagr	dagr	agrb	dagr	dagr	agrb	llet	dagr	dagr
Tip	i	j	j	j	m	m	m	m	i	i
TIM	3	3	2	4	1	1	5	2	2	2
VOL	5	3	4	3	5	5	4	3	3	5
DIC	2	3	3	4	3	3	4	4	2	3
TO	4	4	4	3	4	4	3	2	5	5
EI	3	2	2	4	2	2	4	2	1	1
TIMm	2,5	2,5	3,5	2,5	1	2	4,5	2	3,5	2,5
VOLm	3,5	3	2,5	2	5	4	4	2,5	3	3
DICm	4,5	3	3,5	3	3,5	3,5	4,5	4	3,5	5
TOm	4,5	3,5	3,5	3,5	3	3,5	2	2	4,5	4
Elm	2,5	2	3,5	3	2	2,5	4	2	3	3,5

Source: the authors.

4. Discussion and conclusions

About children, it seems that sex has no correlation with the emotional impact, because the data are highly variable. Nor any of the mentioned qualities seem to have correlation with the emotional impact. Given that there is a tendency that when the ring is usually less than pleasant EI, EI higher volume lower, diction and tone lower than IE can not find relevance. The voice is clearly the most powerful type male white bass and voice

In teens, we don't find significant correlations with sex. There seems to be a trend towards higher in EI nicer ring in high volume, tone and clear diction variables by sex. The voice is higher EI rates low and serious voice white male.

In the case of young people, there seems to be a trend towards higher in Ei nicer ring in high volume, diction clear although there are exceptions and shades according to sex. The voice is kind of more feminine Ei low (contralto), type the low male voice strong and child's voice

About adults, EI are higher in more pleasant tones, even at high volumes some exceptions, clear diction and tone all so variable. The voice is kind of more feminine EI low (contralto) high volume, the low type male voice loud and child's voice.

In the case of seniors, EI are higher in more pleasant tones, there is variation in volume, diction clear although there are exceptions rather serious tone. The voice is kind of more feminine EI low (contralto) high volume, low volume high the male kind, the feminine floor (contralto) loud and child's voice

The pattern is repeated in all the groups: after the voice has gone through a mechanical means, telephone, the voice with higher EI (emotional impact) was: child voice, low male voice, female voice loud, high volumes and serious tones.

Therefore it is recommended to use a good emotional impact through mechanical means such as voice or white bass. It is interesting to repeat this study in other samples and in other countries, to find possible trends in the perception of voice, and changing the used technological appliance.

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This research forms part of the project "New Formats of Interactive Advertising on the Television, Internet and Digital Media. Applications on HbbTV", funded by the Ministry of Economy, Industry and Competitiveness (Spain), reference CSO2017-88895-R (MINECO/FEDER).