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Original article

COMPARATIVE ANALYSIS OF WAYS OF INTERPRETING BODY LANGUAGE BETWEEN TWO GROUPS.

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Abstract

Aim. This paper focused mainly on analysis and the importance of a correct understanding of body language in transmitting emotions and affective experiences among those aged 20-30 years, by addressing in primary form the issues of multimodal modeling of several body expressions. The purpose of this work was to understand differences in understanding and examine the use of body expressions as an important way to communicate and create affectively aware technologies. The expression, gestures and movements of the teacher of physical education or the coach, the use of the hands and head to indicate to the students how to correct their posture or form during an exercise, without the need for verbal interruption of activity, is obviously an important addition to the theoretical or tactical contents in the case of sports competitions.

Methods. This study was conducted with the participation of 74 clients of Ovidius University of Constanta, to whom we addressed a questionnaire with ten questions, to find out what is their perception of their own opinions and perceptions about how they understand the body message of a person known in the case of group one, or unknown in the case of group two. Both groups consisted of subjects of the same age and level of training, all being second or third year customers between the ages of 20 and 30.

Results. The dispersion of group one options found in the first question is retained also in the case of the second question

Conclusions. The results of the above research indicate that there is a different way of interpretation but that is not a form of deception. Importantly, it has been proven that there is another way of interpretation, not only that both the face and the body play different roles that are interpreted differently. The study also examined and showed significant differences between the two groups in the assessment of the role played by the body in communicating emotions when presenting to the subjects affective displays containing a combination of facial expressions or sometimes of posture or movement.

Keywords: communication, language understanding, body expression.

Introduction

The tasks of the physical education teacher are clearly correlated with the ability to recognize and understand the body messages of the clients. This ability is essential to be able to communicate effectively with all parents and thus with all clients in order to create an environment conducive to the accumulation of practical or theoretical knowledge. A very important aspect is the ability to communicate emphatically with groups of clients. Thus, by carefully observing the facial expressions and body language of the students, the teacher can better understand their needs and emotional states, helping to approach them accordingly. Thus, the teacher can use specific gestures and expressions to encourage and support students who may need more attention or support. By using the means specific to body expression, the teacher can convey clear and precise messages, the teacher can correctly demonstrate exercises and movements along with verbal explanations, which helps clients to correctly understand and imitate techniques. The survey shall bring to the attention of automatic damage recognition systems that use body expressions as at least one way of introduction. Facial expressions of the teacher, as well as body language, can express enthusiasm and encouragement, which can motivate students to actively participate and try to improve their performance.

The gestures and movements of the teacher of physical education or the coach of using the hands and head to indicate to the students how to correct their posture or form during an exercise, without the need for verbal interruption of the activity, are obviously an important addition to the theoretical or tactical contents in the case of sports competitions. Another way to communicate with athletes or clients is through smiles, applause and gestures of approval, they can strengthen positive behaviors and encourage students to continue to work. Creating a positive environment can be achieved by maintaining an open body language (open arms, a relaxed posture) helps to create a relationship of trust and respect between the teacher and the students. The knowledge and use of this knowledge by the teacher can influence the attitude and raise self-confidence, the recommendation made to the clients with reference to a straight, firm posture and a direct look can convey authority and help maintain discipline in the classroom. The teacher can use body expressions to attract students' attention and give signals of the start or end of the physical education class or training lesson, contributing to a better organization of the time used for preparing clients. Influenced and the importance of the means of

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communication used by young people today became the most important vectors in the construction of the personality of future adults. The evolution of today's technology in the increasingly obvious expansion is based on the need and desire of customers and the decrease in costs compared to the 90s.

The objective of this survey is to present different approaches to perception and recognition of affective body expression. Considering the emotional value of bodily expressions, it is somewhat surprising that the study of perception of whole-body expressions lags so far behind that of facial expressions (Van den Stock, Righart, De Gelder 2007). The question that I started with is whether there are universal aspects that influence the perception of the expression, recognition patterns or whether they are based on an earlier period of relationship between the participants in the study and the subjects that were exposed alongside the questionnaire questions.

Affect expression occurs through combinations of verbal and nonverbal communication channels such as eye gas, facial expressions, and bodily expressions (Picard 1988). A number of psychological studies have investigated body configurations to assess whether specific traits can be identified that contribute to the recognition of specific affective states. Thus, a fair amount is known and accepted about affective facial expressions, such as some ways in which they are conveyed and recognized, their neurobiological bases (De Gelder 2006), and an understanding about how to code them (Ekman, Friesen, 1978). This study tried to determine what role body information plays and how it influences the recognition of states compared to previous communication experiences in which the same actors related? The importance of the physical education teacher understanding all means can make body expression an essential tool for all trainers, regardless of the age of the client, especially for physical education teachers. Properly used, these means can improve communication, motivation and effectiveness of the training, thus contributing to the physical and emotional development of the students. The examination of facial expression perception has been the basis for learning how humans process neurologically (Adolphs 2002). The same cannot be said of affective body expressions. Only recently there has been research in the field of affective calculations and related disciplines focused on body movement and posture. Indeed, in a 2009 article, De Gelder (2005), states that 95% of death per emotion in humans was conducted using facial stimuli of expression during research using information from ambient voice, music and sounds constitutes the majority of the remaining 5%, with research on expressions comprising the lowest number of studies.

While many studies presented during the survey describe body expressions in terms of discrete emotions, fewer studies attempted to classify them in affective and correlated terms, size and intensity. Ekman and Friesen (1967) indicated that the body may be better to communicate larger dimensions that have influenced than discrete categories of expressions. Paterson and colleagues (2001) aimed to thoroughly describe the movements of the head and arms in space. They examined not only how well it can be recognized, but also the structure of the representation of how the emotional component expresses itself. The two groups of subjects involved in the study perceived and transmitted body messages differently. Mehrabian and Friar (1969) found that bodily configuration and orientation are significantly affected by a communicator's attitude toward her/his interaction partner. Ekman and Friesen (1967, 1969), conjecture that postural changes due to affective state aid a person's ability to cope with the experienced affective state. De Gelder (2006) postulates that for fear specifically, by evaluating body posture, it is possible to discern not only the cause of a threat but also the action to be carried out (the action tendency). The face communicates only that there is a threat. Fear and various emotions close to fear are more common in the answers that the subjects participating in this study submitted in the research carried out before using the questionnaire. Our material includes static images of participants in the study with which we tried to cover a range of body expressions commonly encountered in daily communication within the group of subjects. In some more complex situations, body language can try to hide various emotions or induce another perception of those it communicates with. On the other side of the argument, Hocking and Hocking and Leathers (1980) believe that facial expressions are more difficult to control due to the expresser's inability to view them, while body expressions can be visually monitored. Furthermore, they argue that due to a stereotyped expectation that deceivers in particular will display more body movements, there is a greater attempt to control them. Indeed, a number of studies have shown that fewer finger, hand and lower limb movements are used during deceptive situations (Burgoon et al., 2005; Ekman 1997; DePaulo et.al 2003).

The identification of body expressions as combinations of discrete expressions is cataloged with the labels and levels of affective dimensions. They may provide a more complete description of the exposed emotional state; the single label may not always be sufficient to reflect the complexity of the affective state transmitted. Indeed, in the realm of affective computation, research is now focused on a grace of discreet emotions and affective dimensions with different approaches (Clavel et al., 2009; Gunes, Piccardi, 2006).

The purpose of this work was to understand differences in understanding and examine the use of body expressions as an important way to communicate and create affectively aware technologies. Unfortunately, too many of these studies were based on a set mixed body expression link (e.g. dance, gesture, posture and gait), although previous research has shown unequivocally that the aforementioned means do not represent a form of expression that does not require the intellectual resources of the subjects and is not relevant for the transmission of messages, often they are assimilated to the group of false manifestations that sometimes the representatives of a group use entirely for purposes other than those of the formation and crystallization of the personality of the young population. A more systematic investigation of the types of crops (e.g. local vs. global) in which the affective stakes change is needed. The differences found often change the meaning of the agreement or activity it transmits.

Methods

This study was carried out with the participation of 74 clients of the Ovidius University of Constanta, to whom we addressed a questionnaire with ten questions, to find out what is their perception of their own opinions and perceptions about how they understand the body message of a person known, in the case of group one, or unknown in the case of group two. Both groups consisted of subjects of the same age and level of training, all being second or third year customers between the ages of 20 and 30. The subjects who participated in the questionnaire and whose images appear in each question are part of the group one. Group two has no representatives in the pictures in the survey content. Members of group two are unaware of, and have never had contact with, members of group two. The subjects participating in this study are clients of the university, following the bachelor's cycle. The two groups of subjects participating in this study are clearly influenced by previous experience in communicating with the people whose pictures were joined to each question, or by its complete lack in the case of group two. Group one was represented by the colleagues of those who participated in the production of the questionnaire images. The group providing the comparative data had no contact with any subject appearing in the questionnaire images. The age and course of the two groups are similar, both groups being clients of the university. Subjects were trained in completing the questionnaire. The survey was done by asking questions for collecting data on how to understand a message by the two groups, By identifying some models and setting some benchmarks for comparing the two systems of automatic recognition we highlighted those differences of perception of the same message. The subject values were analyzed mathematically. The answers generated a number of questions, but also confirmations.

Results

The first question of our study was part of the accommodation section and the closeness of the participants in the research to the proposed objective. The first three questions do not draw the readers' attention to the parallel presentation of the results of both groups. Question number one - Based on the man's body language, what emotion he most likely feels. The following percentages were recorded for the response variants: Shaken 3.2%, Exasperated 6.5%, Bored 42.4%, Concerned 35.5%, Delighted 3.2%, Confused 3.2%. We unexpectedly find that all the answers were at different percentages except for the answer I don't know 0%. The distribution of the answers to all the variants offered makes us understand the complex but very different way of interpreting an image, the different way in the case of group one. Second question - Based on the language of women's body, what emotion most likely feels? Sad 35.5%, Tired 12.9%, Conflict 12.4%, Careful 0%, Baffled 32.3%, Angry 0%. The last one had no answer option, I don't know 0%. The dispersion of group one options found in the first question is retained also in the case of the second question. The third question in the first set of questions was - Based on the woman's body language, what emotion is most likely to feel? The answers to the third question were distributed similarly to the first two, as follows: Impatient 54.8%, Frightened 19.4%, Angry 19.4%, Careful 6.5%, Amazed 0%, Hopeless 0%, I don't know 0%.

The main body of this questionnaire through which we conducted this test is composed of the following questions, the first question was: Based on the body language of this couple, what emotion do I most likely feel? Starting with question number four, we also introduced the answers collected from group two, that is, the group of those who had no contact with the people appearing in the photos that accompanied each question. So we found that the responses from the two groups were much more grouped than the responses from the first group participants. To the first question the answers were assigned as follows: Variant one answer: Group one - Playful - 25.8%, Group two - 0%. Second choice response: Group one - Combative 22.6%, Group two - 58.13%. Choice three: Group one - Exalting 0%, Group two - 0%. Option four: Group one - Funny - 3.2%, Group two - 0%. Fifth choice: Group one - Flirty 32.2%, Group two - 41.8%. Option six: Group one - Challenged 16.1%, Group two - 0%. I don't know 0%. Question five of this study was: Based on the body language of the woman in the background, what emotion is most likely to feel? First responder: Group one - Jealous 41.9%, Group two - 95.3%. Answer option two: Group one - Resentment 6.5%, Group two - 0%. Third choice: Group one - Enemy 38.7%, Group two - 4.5%. Option four: Group one - Humiliated 3.2%, Group two - 0%. Fifth choice: Group one - Desperate - 6.5%, Group two - 0%. Option six: Group of one - Love sick 3.2%, Group two - 0%, I don't know 0%. The next question of this study was: Based on the language of the woman's body, what emotion is most likely to feel? First responder: Group one - Annoyed - 12.9%, Group two - 69.76%. Option two: Group one - Uncertain 3.2%, Group two - 0%. Third choice: Group one - Confused 29%, Group two - 14.06%. Option four: Group one - Sad 9.7%, Group two - 0%. Fifth choice: Group one - Fascinated 3.2%, Group two - 4.65%. Option six: Group one - Overwhelmed 41.9%, Group two - 11%. I don't know 0%. The next question was the number seven question - Based on the body language of the man on the left side of the image, what emotion is most likely to feel? The first response was: Group one - Pouting 16.1%, Group two - 0%.

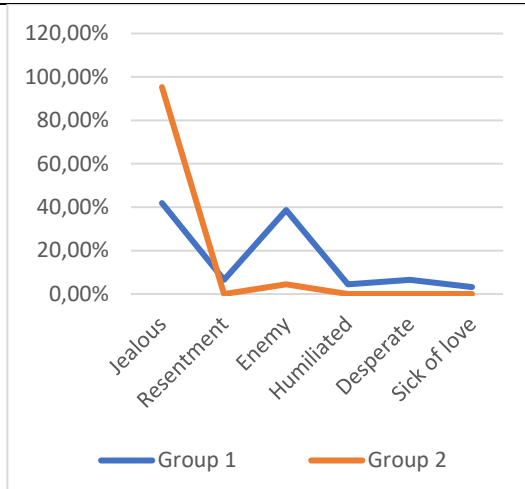


Figure 1. Graphical representation of the percentages recorded in question number 5

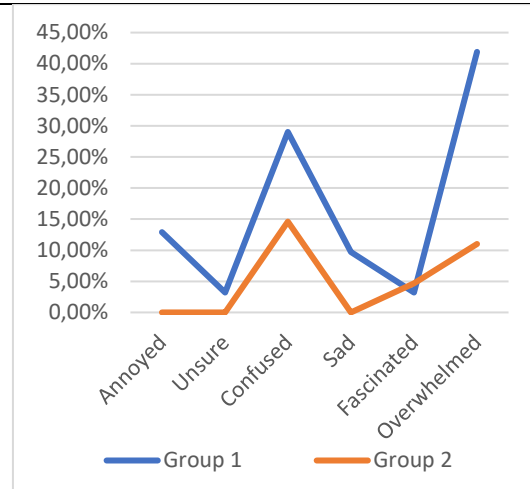


Figure 2. Graphical representation of the percentages recorded in question number 6

Answer option two: Group one - Furious 3.2%, Group two - 0%. Third choice: Group one - Disgusted - 25.8%, Group two - 76.7%. Option four: Group one - Annoyed - 16.1%, Group two - 0%. Fifth choice: Group one - Enemy 12.9%, Group two - 0%. Option six: Group one - Sad - 25.8%, Group two - 23.3%. I don't know 0%.

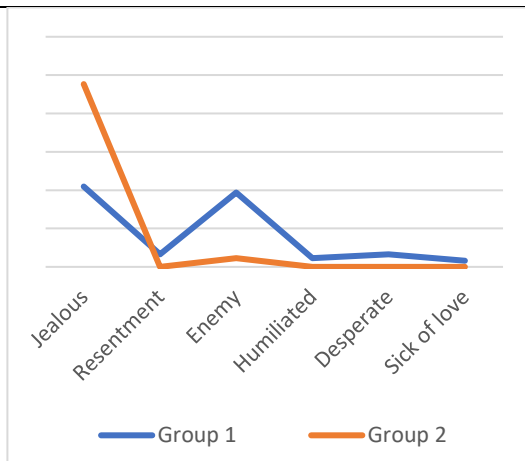


Figure 3. Graphical representation of the percentages recorded in question number 7

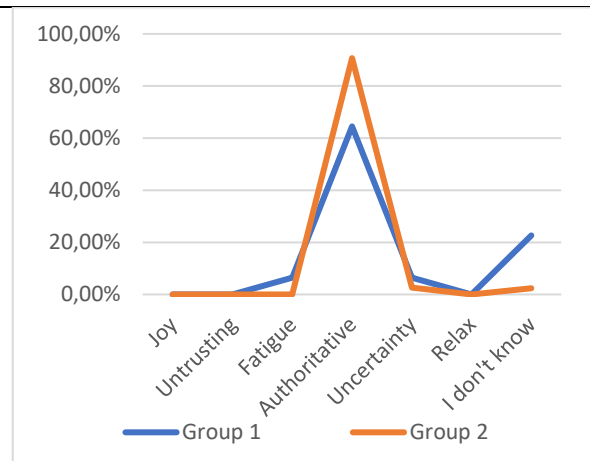


Figure 2. Graphical representation of the percentages recorded in question number 8

The next question of our study was: Based on the language of the woman's body, what emotion is most likely to feel? Option one: Group one - Joy 0%, Group two - 0%. Option two: Group one - Mistrust 0%, Group two - 0%. Answer option three: Group one - Fatigue 6.5%, Group two - 0%. Option four: Group one - Authoritarian 64.5%, Group two - 90.7%. Fifth choice: Group one - Uncertainty 6.5%, Group two - 2.65%. Option six: Group one - Relaxation 0%, Group two - 0%. Option seven: Group one - I do not know 22.6%, Group two - 2.65%. We find that in the last variant of answer the difference of 19.95% confirms the different approaches in which the two groups perceived the facial expression of the subject in question picture number eight.

The new number question of this study was — Based on the woman's body language, what emotion is most likely to feel? First choice of answer: Group one - 45.2% injured, Group two - 11%. Second choice: Group one - Remorse 6.5%, Group two - 0%. Answer option three: Group one - Pessimist 6.5%, Group two - 0%. Option four: Group one - Discouraged 41.9%, Group two - 3%. Fifth choice: Group one - Furious 0%, Group two - 81.39%. Option six: Group one - Resigned 0%, Group two - 0%. I don't know 0%. The penultimate question of this test was - Based on the woman's body language, what emotion is most likely to feel? The first choice was: Group one - Delighted 12.9%, Group two - 88.37%. The second response: Group one - Flatat 41.9%, Group two - 0%. Answer option three: Group one - Jolly 0%, Group two - 0%. Option four: Group one - Affectionate 41.9%, Group two - 11%. Fifth responder was: Group one - Hysterical 0%, Group two - 0%. The last response was: Group one - Proud 3.2%, Group two - 0%. I don't know 0%. The last question has large and significantly different differences between the two groups, it was: Based on the language of the woman's

body, what emotion she most likely feels (along with those watching a game on tv)? The first response was: Group one - Bored 64.5%, Group two - 4.65%. The number two response variant was: Group one - Detached 9.7%, Group two - 0%. Third choice: Group one - Ignorant 16.1%, Group two - 90.7%. Option four: Group one - Shy 0%, Group two - 0%. Fifth choice: Group one - Depressed 6.5%, Group two - 4.65%. Option six: Group one - Annoyed 3.2%, Group two - 0%. I don't know 0%. For the third response we have large differences between the two groups, within the first group the number of those who opted for this response is 74.6% lower.

Conclusions

The results of the above research indicate that there is a different way of interpretation but that is not a form of deception. What's important is that it turns out that there's another way to interpret it, not only that the face and the body play different roles that are interpreted differently. The presented results bring into question the difference between shape and motion information perceived differently, although studies have shown that they are governed by separate pathways in the brain, in the case of both groups participating in the study. Our aim in discussing this issue is to emphasize the importance of taking into account the experience previously gained through direct networking. Ultimately, a multimodal approach may be most effective, as there are many factors that are involved, for example, the cultural basis or local habits, and they may taint the final outcome of the interpretations. The study also examined and showed significant differences between the two groups in the assessment of the role played by the body in communicating emotions when presenting to the subjects affective displays containing a combination of facial expressions or sometimes of posture or movement. The result of the study shows us how necessary to go beyond this simplistic objective of understanding and to consider the possibility of creating systems capable of recognizing emotions independently of the actions involved in the person or group of clients.

This is very important given the high degree of agreement I have with the freedom of the body and given that these systems can be borrowed and adapted by using artificial intelligence. In addition, as data and the labeling process are time-consuming and very subjective, it is necessary to take steps towards the outsourcing of types of mining process labels to the public. This may allow the generation of data set labels for which reliability and generality can be more numerous correctly calculated.

This raises other very important and interesting issues that would require significantly more time and space to address and therefore were left for a later publication location. The different perception of a person's image by two groups can be explained by several factors, including cultural differences, past experiences, social context, media influences, and individual psychological factors. In the specialists of the discussion group, cultural norms and values, based on experiences accumulated in different cultures or different standards and values related to communication, clothing, behavior and facial expressions, can be an explanation. What can be considered attractive or respectable in one group can be perceived differently in another group of subjects, differences produced and cultural resources used. People who had experience communicating with people in the image reacted differently from those who did not. Another cause that a person is responsible for significant differences in understanding is how an individual has been educated and the values that they have learned from family and community can influence how they perceive an image. Although all subjects came from the same environment, the opinions and reactions of the group to which each part belongs can influence its perception. If a group has a predominant opinion about a particular image, individuals in that group can be influenced by that opinion. Status and social roles can influence perception.

People with different social statuses can see the same image through their own social positions and experiences. Last but not least, the way in which the media present certain individuals or groups can influence the public's perception. For example, if the media portrays a specific group in a light, people exposed to that representation may perceive the image similarly.

The media may have trends or prejudices that affect the public perception of particular images. These explanations illustrate how complex and nuanced perception can be and how much it can vary from group to group, depending on a multitude of interconnected factors.

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