

## Usage of clay in depicting facial expressions

Eugene Ofori Agyei<sup>1\*</sup>, Michael Dela Dika<sup>2</sup>, Kenneth Donkor<sup>3</sup>, Dr. Robert Amoanyi<sup>4</sup>

<sup>1</sup>University of Florida, School of Art and Art History, USA.  
[eugeneofori57@gmail.com](mailto:eugeneofori57@gmail.com)

<sup>2</sup>University of Delaware, Department of Art and Design, USA.  
[mickydel20@gmail.com](mailto:mickydel20@gmail.com)

<sup>3</sup>Kwame Nkrumah University of Science and Technology, Technology Consultancy Centre, Kumasi, Ghana.  
[atodonkor@yahoo.com](mailto:atodonkor@yahoo.com)

<sup>4</sup>Kwame Nkrumah University of Science and Technology, Faculty of Art Department of Industrial Art, Kumasi, Ghana.  
[bobamoanyi@gmail.com](mailto:bobamoanyi@gmail.com)

\*Corresponding Author

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### Abstract

People convey emotions or feelings through facial expressions. In terms of emotions and feelings, it is possible to illustrate such expressions by using various visual art application techniques. Nevertheless, such examples which directly interpret facial expressions within ceramic art which is the focus of this study, have not been detected. In this research, some human facial expressions have been studied, to conform to the facial expressions abstract sketches have been designed and eventually, five facial expressions in Ceramic Art have been produced. Employing a studio-based research method, the study revealed that human facial expressions can be expressed by using clay as a medium. The study also revealed that emotions and feelings can be easily miscommunicated, especially when the body gestures of the individual do not match one's facial expression. The success of the study provides a good platform for people to interpret facial expressions as non-verbal forms of communication. The study calls for further research on other facial expressions using other mixed media. It is also recommended that in the future a mould could be made with varied facial expressions to speed up production and for reproduction purposes.

**Keywords:** Ceramic Art, Conceptual Art, Facial Expression, Communication.

## INTRODUCTION

Since the prehistoric era, pottery had been used as a medium of expression (Peterson, 2011; Nortey et al., 2017: 72). According to Marschall (2002) cited in Nortey et al., (2017: 79), pottery like any other art plays an important educational role, bringing artistic skills, values and practices into the public eye, which provides a form of expression and gives validation to the experiences, history and cultural heritage of societies where most of the population may have been historically marginalized. Ceramic has one of the richest histories of any medium.

Ceramic art is a term used to describe objects made from clay or similar natural materials. In some cases, these objects may be functional such as tiles, cups, bowls, and tea pots. In other cases, it may be art pieces such as statues and figurines. These are entirely decorative. As this type of art is made with materials that are readily available in many parts of the world, its history dates back to the prehistoric era. Ceramics have an incredibly long history (Goettel, 2021: 3). Ceramic art is made from ceramic materials, including clay. While some ceramics are considered fine art, as pottery or sculpture, some are decorative, whereas some are produced for utilitarian purposes. Peter Voulkos; a participant in the resurgence of American studio crafts, he helped change the viewpoint that ceramics were merely utilitarian objects. Through an active process of formal experimentation, he expanded the confluence of sculpture and pottery. "I am not a conceptual artist", Voulkos

said. "I can't just sit there and think of an idea. Most of it comes out of my hands" (Artnet Worldwide Corporation, 2021: 1).

According to Delahunty (2010) and Asinyo et al., (2016: 117), conceptual art became an international movement, thus, it began in North America and Western Europe and spread to South America, Eastern Europe, Russia, China, and Japan. The authors further said it was a major turning point in 20th century art, challenging notions about art, society, politics, and the media with its theory that art is about ideas. Specifically, art can be written, published, performed, fabricated, or simply thought. Conceptual art is the art in which the idea or the concept behind the artwork is more important to the finished art object. Conceptual Art as defined by Supensky (2010: 1). Exponents of conceptual art argued that artistic production should serve artistic knowledge and that the art object is not an end in itself (Delahunty, 2010: 4). Supensky (2010: 6) explains further that in conceptual art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine that makes art.

Facial expressions are the facial changes in response to a person's internal emotional state, intentions, or social communications (Tian et al., 2020: 2). One must be intelligent in terms of understanding human's moods and emotions. Humans communicate effectively and are responsive to each other's emotional state. One of the means of showing emotion is through changes in facial expressions (Bettadapura, 2012: 8). Russell & Fernandez-Dols (1997: 18) quoted Aristotle that "there are characteristic facial expressions which are observed to accompany anger, fear, erotic excitement and all the other passions". When we turn our eyes to face another human being, we often seek, and usually find a meaning in all that it does or fails to do (Russell & Fernandez-Dols, 1997: 24). One of the central questions in human evolution is the origin of human sociality and ultimately, human culture. Some basic facial expressions are sadness, anger, disgust, joy, fear and surprise (Schmidt, 2001: 14).

Facial expressions are the form of non-verbal communication. Most emotions and feelings are within and therefore very difficult to depict or express. People convey emotions or feelings through facial expressions. Cherry (2018: 6) opines that judgement is made about people's intelligence based upon their faces and expressions. Individuals who had narrow faces and more prominent noses were more likely to be perceived as intelligent. People with smiling and joyful expressions were also judged as being more intelligent than those with angry expressions. According to Frith & Frith (1999: 1692), facial expressions are one of the more important aspects of human communication. Faces serve as an important source of information in inferring social characteristics of each individual. Faces provide not only information about the identity of an individual, but also pertinent information in inferring the emotions of the individual through facial expressions which also serve as an example of public information (Van't Wout & Sanfey, 2008: 799). According to Parkinson, such expressions are also cues that are produced inadvertently and can be useful to observers. The appearance of an expression of fear is a signal to be vigilant since there may be something dangerous nearby. However, once emotional expressions become signals of value to observers, then it also becomes possible for these signals to be used deliberately as acts of communication (Parkinson, 2005: 290). Reading facial expressions of emotion can aid the development of rapport, trust, and collegiality and also, they can be useful in making credibility assessments, evaluating truthfulness and detecting deception; and better information about emotional states provides the basis for better cooperation and negotiation (Matsumoto & Hwang, 2011: 2).

Some art forms like painting can depict emotions and feelings through facial expression. In terms of emotions and feelings, it is possible to illustrate such expressions by using various visual art application techniques. The famous artist Edward Munch expressed emotions in art through painting. His famous painting was titled *Scream* which was used to express anxiety (Pos & Green-Armytage, 2007: 15). This study sought to use clay to draw more attention to contemporary ceramic works in Ghana. In Ghana ceramic works are mainly associated with utilitarian purposes, such as pot, cups, earthenware, flower vases among others rather than conceptual works. Thus, the study breaks the monotony by highlighting and drawing more attention to conceptual contemporary ceramic works that have no link to utilitarian use by using everyday facial expression. Also, the research explores the use of clay in depicting some facial expressions usually communicated by humans to educate people. The specific objectives of the research are to; (1) study some human facial expressions, (2) design abstract sketches to conform to the facial expressions (3) produce ceramic

art works to depict the facial expressions and discuss the results to educate people on the meaning of various facial expressions.

**MATERIALS AND METHODS**

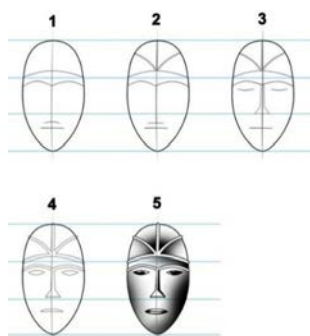
The study employed studio-based research method involving studio activities with the use of materials, techniques, tools and aesthetic analysis (Greenwood, 2012: 15; Asinyo et al., 2016: 117). It is also an original investigation undertaken to gain new knowledge partly by means of practice and its outcomes (Candy 2016: 18; Agyei et al., 2018: 76). In this study, the materials and tools used were clay (Mfensi fired at 900°C), putty filler, cutter, cutting wire, modeling tools and rolling pin, sack board, acrylic paint, etc. Slab and coil as well as incision and relief methods were used in producing the art works. The ceramic artworks were later dried, fired and finished in acrylic paint by brushing.

**Design and Sketch Models**

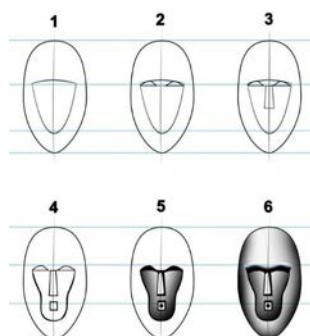
Various forms of human facial expressions were observed and analyzed descriptively from random people in different environments and ethical consideration was used in the study, thus, the photos were taken willingly with the acceptance of the people in view that it was for academic exercise only. The artist spends some time on student campuses, market places, churches and some work places keenly observing random people’s facial expressions with regards to sadness, happiness, surprise, disgust, tremble and anger. An abstract design representing the various moods of the human facial expressions was designed with the aid of Adobe Photoshop irrespective of the expressions. The final design concept emanated from the series of sketches developed from the pictures of the human faces obtained from the selected pictures.



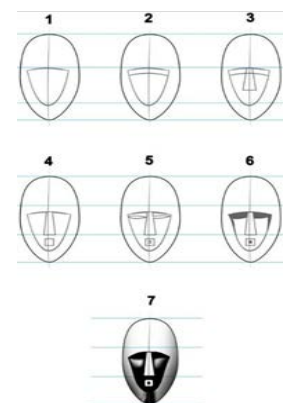
**Figure 1:** Human facial expressions



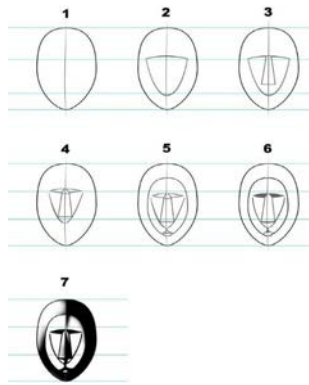
**Figure 2:** Preliminary sketches (Sad)



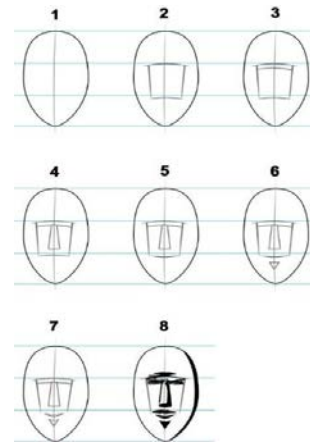
**Figure 3:** Preliminary sketches (Anger)



**Figure 4:** Preliminary design (Disgust)



**Figure 5:** Preliminary design (Tremble)



**Figure 6:** Preliminary design (Happiness)

### Production of the Ceramic Facial Expressions

In the production of the artworks, slab method was employed. Mfensi clay was processed into a cylindrical form using a pug mill. The processed clay was kneaded to remove air traps. After which slaps were rolled out of it. The slaps were cut out, folded and designed to express the various facial expressions conceptually. The facial expressions were done using the incision and embossing techniques. The artworks were dried in room temperature. This allowed the works to dry gradually to avoid cracks and later packed into the kiln for firing. They were fired to a temperature of 900°C and the rough surface was filled with putty filler (Figure 7).



**Figure 7:** Surface filled with putty filler

Sandpaper was used to smoothen the surface of the artworks. They were then given a complete finish by painting them using oil base acrylic paints (Figure 8).



**Figure 8:** Giving the artworks a complete finish

## RESULTS

**Project one:** Sadness is known in the Akan dialect as *awereho*. The artwork in figure 9 depicts a sad face. These various features are conceptually represented to project sadness. The face of the artwork has the eyebrows drawn out to lay more emphasis on the eyes. The incision created in the eyes represents the absences of the pupil which one needs to see the beautiful environment. The missing pupil symbolizes the blindness to the beautiful things around us when feeling sad. Naturally a sad face has both eyes rolled down and sometimes sunken. A better expression of one's sad emotions artistically is by practically taking out the two most important things that ease one's sadness that is the eyes and the ears. Thus, the pupil and the ears in figure 9 are absent. The eyebrows are curved to touch the nose. This is to project the eyes as sunken and stressful thus a sad face has mostly an effect on the eyes. The forehead and the face are separated with four lines embossed on the upper part of the face. The top lip of the artwork is turned down and the bottom lip is pout out. The forehead and the face are separated with four embossed lines on the upper part of the face, which symbolizes the subconscious mind that is usually triggered by unaware events. The subconscious mind controls almost all emotions, including sadness. The face portrays someone characterized by feelings of disadvantage, bereavement and disappointment. In our society, people show these kinds of features when they are sad. Some people also cry to the extent of having swelling eyes with the mouth drop. The eyes in tears and mouth in the artwork symbolize the expression of one's emotion through the death of a fellow, a friend or family. This description of sadness projected in the work educates the society on features of sadness in order to differentiate between sadness and depression.

Sadness is associated with loss or bereavement. It can sometimes be associated with something negative or disappointment characterized by feelings of disadvantage. In most cases, when people express their deep regret, it is manifested through their facial expression. In Ghana and around the world, one common way of expressing one's emotion is through the death of a loved one, fellow colleague, friend or family member. Some also show signs of sadness when their heart is broken, they are disappointed or when expectations are not met. Culturally, sadness is expressed globally without respect to one's beliefs, norms or customs. We sometimes hear or read a tragic news story and feel sad for those involved. We might hear overwhelming news such as the death of a loved one, friend, extended family member etc. These events evoke the feeling of sadness within us. Sadness accompanied with tears often liberates one's soul. It is therefore only natural that people cry to pour out their deep regret during tragic events. Fader (2018: 4) confirms that when sadness comes upon us suddenly, there may be some subconscious reason for it. Our brains store so much information and memories that we are unaware of. Visual or auditory stimulation can trigger the unaware subconscious event within us. Sometimes we are not always aware of the actual memory being triggered, but we become acutely aware of the feeling of sadness.



**Figure 9:** Sadness (7 x 3.4 inches)

**Project Two:** Anger. The word anger is the strong feeling of annoyance, displeasure or hostility. While some people express anger by making loud sounds, baring teeth, staring and adopting postures as a warning to perceived aggressiveness thus, in an attempt to stop their threatening behavior, others also show theirs through facial expression. The artwork shows an angry face with the eyes literally missing. The missing eyes portrayed



in the artwork consciously to communicate the reaction of people when angered. The artwork seeks to project anger by exploring the elements that causes one to be angered while highlighting these elements as very important to calm one down when angered. Drawing attention to the thing we see, hear and smell. Being blinded by the things around us makes us not act cervical when angry. Just as the nose is created without the nostrils symbolizes the missing of the core elements that guards one's decision making process. The nose and the mouth firmly pressed to the face reveals the readiness of the extra mile to attach without carefully processing the existing information before acting. These features found on the artwork depict the extent of one's angriness. People shout or raise their voices when they are angry thus the artwork was portrayed with an open round mouth. The finishing was done with some rough texture which represents the nature of anger. Some people are unpredictable when they become angry. This concept is also represented in the artwork by giving it a rough finishing. All these features point to the fact that a facial expression for anger has no limit with respect to cultural background.

According to Nordqvist (2016: 5), sexual frustration, disappointment, rudeness and injustices, tiredness, hunger, pain, physical or mental illness, being teased, embarrassment and stress are some of the common factors that make people angry. The reaction of anger is expressed differently with respect to individual cultural backgrounds. However, the facial expression remains almost the same across the world. In most western countries, the majority of individuals express their anger by smashing objects. In Ghana, most people express their anger mostly through insults, throwing stones, shouting or raising their voices. People end up doing things which they regret afterwards.



**Figure 10:** Anger (7.8 x 3.3 inches)

**Project Three:** Disgust. Is a strong negative feeling of aversion or disapproval? Also, it is an emotional response of rejection to something potentially unpleasant, offensive, or distasteful. One can tell a disgusted face by the curl of their upper lips, the lip corners are drawn down and back with narrow or partly close eyes, lower and slightly narrowed eyebrows, lowering the inner corners of the eyebrows, draw up and wrinkle noses, jerk heads backwards, etc. The facial expression of disgust is carefully represented in this art piece showing an angular human face which symbolizes strong disapproval with no room for compromise. The projection of the forehead communicates the individuals' level of displeasure expressed physically. The close eyes connote withdrawal from any discomfort or displeasure in its present environment. The rigid face with sharp edge communicates to the artist a way to deflect unwanted elements in their environment. This is translated in the firmly pulled and closed mouth. The finishing was done with a rough texture painted in red which represents the disgust fueled by anger. The red color used in the work naturally translates as discomfort of an individual in Ghanaian traditional setting hence employing the red colour in the finishing of the work.

The emotion of disgust involves a response to offensive foods that may cause harm to the organism. A common example of this is found in individuals who show disgust against the environment or unusual things around them. Disgust appears to be triggered by objects or people who visit different cultural settings such as the way they eat, their way of dressing, the type of food they eat among others. These attributes which are expressed facially are usually common to individuals who have strict preferences.

Sensitivity to disgust is negatively correlated to aggression because feelings of disgust typically bring about a need to withdraw. Faces of people also may naturally look disgusted as a result of continuous expression of displeasure with something. These actions may at some point in time show in a person's face. Gupta (2017) asserts that a lot of times people are not necessarily disgusted, but it makes certain faces when they feel pressure. The pressure could come from their shortcomings in social skills. It could also come from them simply trying to concentrate on what someone is saying.



**Figure 11:** Disgust (7.3 x 3.3 inches)

**Project Four:** Surprise. Which is the feeling caused by something unexpected or unusual? As a sign of surprise, the artwork was intentionally finished with wide opening eyes, raised up and curved. The jaw of the artwork is dropped with the mouth open, to symbolize the feelings caused by something unexpected be it negative or positive. The feeling of surprise, which is caused by an astonishment, is generally expressed with an open mouth around the world. The work focuses on using a big nose and protruding cheeks to establish a surprised face. The colour blend on the face reveals the introduction of light on the face as one is exposed to new elements that awaken one's desires.

Surprise can be neutral, pleasant, unpleasant, positive or negative. Surprise can occur in varying levels of intensity ranging from very-surprising to little-surprising. People show the sign of surprise through facial expression. Individuals express surprise in different ways. Some people express their surprise immediately whilst others need to see enough evidence before expressing their surprise. However, the facial expressions of surprise are almost the same with all individuals. We have positive and negative surprises. Suttie (2015: 10) confirms that negative surprises are much more challenging than positive ones; thus, receiving a devastating diagnosis, having a car accident or losing a job are terms to be negative surprises. The author further explains that being open to uncertainty, learning how to reframe negative experience in more positive ways and nurturing stable relationships are all tools we can use to recover from negative surprises easily.



**Figure 12:** Surprise (7 x 4 inches)

**Project Five: Tremble.** Trembling is a physical or emotional condition characterized by anxiety and cold. The tremble is an expression that involuntarily reveals an individual's state, mostly in reaction to the physical environment. Depicting tremble in a conceptual artwork, involves the intentional finishing of a face sunken in a black layer. The black layer represents a form of cover or shelter. Where the face escapes from the harsh conditions of the physical environment. The jaw of the artwork is almost at the same level with the lower lips connoting the high desire to seek a shelter. The big protruding nose, however, represents our ability as humans to create suitable environments for ourselves during exposure to unfriendly surroundings. The open mouth shows the involuntary shivering of the face.

Naturally trembling occurs at different levels with respect to the individual's make up and exposure to certain environmental factors. Such as fear of the sea, height, cold, cowardliness among others. To tremble is an expression that is mostly expressed not only on the face but includes the whole body as well.



**Figure 13:** Tremble (8 x 4 inches)

## CONCLUSIONS AND RECOMMENDATIONS

The main findings of the study revealed that facial expression is a non-verbal form of communication and most emotions and feelings are very difficult to depict or express. However, the study also revealed that most people talk about facial expression but barely take notice of one's emotion when expressed facially. In some cases, people are unable to interpret one's facial expression correctly. From the various observations on student campuses, marketplaces, offices among others, it was observed that, in terms of emotions and feelings, such expressions can be easily miscommunicated, especially when the body gestures of the individual do not back one's facial expression. Often in art, emotions are easily illustrated through paintings and other visual art forms but less in ceramics. It is upon this idea that the research explored different facial expressions using clay as a medium of expressing facial emotions and educate people with its interpretation.

Manipulation of the clay to form the various facial expressions was very interesting especially, when making incisions and the embossments on the artwork to depict the expressions. Though the production of the artwork to depict the expressions was a very demanding exercise, which requires mastering of tools to be able to achieve realistic facial expressions with clay. The five different facial expressions including anger, sadness, disgust, tremble and surprise were developed using slab and coil technique and finished with oil based acrylic paint. The study also revealed that emotions and feelings can easily be miscommunicated, especially when the body gestures of individuals do not match their facial expression. The success of the study provides a good platform for people to interpret the above-mentioned facial expressions. This will help the development of rapport, trust and better cooperation among people and the societies. Matsumoto & Hwang, (2011; 4) confirmed that reading facial expressions of emotion can aid the development of rapport, trust, and collegiality and also, they can be useful in making credibility assessments, evaluating truthfulness and detecting deception; and better information about emotional states provides the basis for better cooperation and negotiation. The study calls for further research on other facial expressions using other mixed media. It is also recommended



that in future a mould could be made with varied facial expressions so as to speed up the production and enable reproductions.

### Authors' Contributions

The authors contributed equally to the study.

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Not applicable

### Competing Interests

There is no potential conflict of interest.

## REFERENCES

- Asinyo, B. K., Frimpong, F., & Dowuona-Hammond, D. (2016). Conventional and non-conventional materials in conceptual textile art. *International Conference on Applied Sciences and Technology (ICAST)*, 3(1), 116-125.
- Agyei, E. O., Amponsah, K. O., & Amoanyi, R. (2018). Design and production of water sustainable planter. *Cross-Currents: An International Peer-Reviewed Journal on Humanities & Social Sciences*, 4(4), 75-86.
- Artnet Worldwide Corporation (2021). Peter Voulkos: American, 1924–2002. <http://www.artnet.com/artists/peter-voulkos/> (08.07.2021).
- Bettadapura, V. (2012). Face expression recognition and analysis: The state of the art. <https://arxiv.org/ftp/arxiv/papers/1203/1203.6722.pdf> (21.05.2020).
- Candy, L. (2006). Practice based research: A guide. *CCS Report, 1*, 1-19.
- Cherry, K. (2018). Understanding body language and facial expressions. <https://www.verywellmind.com/understand-body-language-and-facial-expressions-4147228> (20.02.2021).
- Delahunt, M. (2010). Conceptual art. <http://www.artlex.com/ArtLex/c/conceptualart.html> (20.05.2020).
- Fader, S., (2018). Why do I feel sad for no reason? <https://www.betterhelp.com/advice/depression/why-do-i-feel-sad-for-no-reason/> (03.30.2021).
- Frith C. D., & Frith, U. (1999). Interacting minds—a biological basis. *Science*, 286(5445), 1692–1695.
- Goettel, D. (2021). What is ceramic art? <https://www.wisegeek.com/what-is-ceramic-art.htm> (06.20.2021).
- Greenwood, J. (2012). Arts-based research: Weaving magic and meaning. *International Journal of Education & the Arts*, 13(1), 13-20.
- Gupta, N. (2017). Why do people sometimes unconsciously make a face of disgust whilst talking to them? <https://www.quora.com/Why-do-people-sometimes-unconsciously-make-a-face-of-disgust-whilst-talking-to-them> (08.21.2019).
- Matsumoto D., & Hwang H. S. (2011). Reading facial expressions of emotion. <https://www.apa.org/science/about/psa/2011/05/facial-expressions> (05.20.2020).
- Nortey, S., Amoanyi, R., & Essuman, A. (2017). The determinants of pottery demand in Ghana. *Journal of Science and Technology*, 37(1), 75-84.
- Nordqvist, C. (2016). How can I control anger? <https://www.medicalnewstoday.com/articles/162035.php> (02.20.2021).
- Pos, O. D., Green-Armytage, P. (2007). Facial expressions, colours and basic emotions. *Colour: Design & Creativity*, 1(1), 1-20.

- Parkinson, B. (2005). Do facial movements express emotions or communicate motives? *Pers Soc Psychol Rev.*, 9(4), 278-311.
- Russell, J. A., & Fernandez-Dols, J. M. (1997). *The psychology of facial expression*. Cambridge University Press.
- Supensky, T. (2010). The meaning of conceptual art (a response to what the hell is conceptual jewelry?). <http://crafthaus.ning.com/forum/topics/the-meaning-of-conceptual-art> (09.02.2020).
- Suttie, J. (2015). Why Humans Need Surprise. [https://greatergood.berkeley.edu/article/item/why\\_humans\\_need\\_surprise](https://greatergood.berkeley.edu/article/item/why_humans_need_surprise) (10.11.2021).
- Schmidt, K. L., & Cohn, J. F. (2001). Human facial expressions as adaptations: Evolutionary questions in facial expression research. *Yearbook of Physical Anthropology*, 44, 3–24.
- Tian, Y., Kanade, T., Cohn, J. F. (2020). Facial expression recognition. <http://www.cs.cmu.edu/~cga/behavior/FEA-Bookchapter.pdf> (12.12.2020).
- Van 't Wout M., & Sanfey, A. G. (2008). Friend or foe: The effect of implicit trustworthiness judgements in social decision-making. *Cognition*, 108(3), 796–803.

### Figure References

- Figure 1:** *Sadness*. Eremionkhale, O. (2016, February 23). Here's what Lagosians can expect from the violence against children campaign tomorrow. Photograph: CISA Global. <https://venturesafrica.com/heres-what-lagosians-can-expect-from-the-violence-against-children-campaign-tomorrow/> (20.02.2021).