Emotion Detection: Differing Abilities Amongst Income Levels

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ABSTRACT

People’s abilities to detect emotion vary based on a person’s life experiences, biology, genetics, and training. Currently there are many factors such as these which contribute to emotion detection. Still, more research is needed to rule out what causes some people to be better than others. Is there a relationship between money and emotion detection ability?

Introduction

What makes some individuals better at identifying emotion? Specifically, does the amount of money a person makes per hour play a role in their ability to accurately identify emotion? We notice people around us that are very skilled in this area and some that struggle with successful emotion detection. Throughout time people have gathered information in hopes to find what influences emotion detection. Just how much does income play a role in emotion detection?

The Brain

The brain is a very complex unit with a sensitive system of operations. The brain, while controlling temperature, heart rate, and senses, can also be broken down into small parts that influence the detection of emotion. One small physical substance called white matter was at one time thought to just be dormant tissue (Multani, 2017). However, this small matter, when unstable, showed a decline in human memory (Multani, 2017). White matter of the physical brain affects non-physical aspects of the mind. Tissue once thought to be dormant has influence on the actions of the mind. So, the physical brain is influenced not only from physical alterations on a large visible scale, but in small once disregarded matter as well. This makes altering physical states of the brain parallel altering mental states. If these small differences can cause change, this leaves room to study more variables that cause change.

The Body

The body distributes clues of emotion in areas many people may not expect, including areas such as our feet (Navarro, 2008). For example, people tend to point their feet in favor of a person or away from unfavorable situations. This is the case even when the rest of the body may be facing a person out of respect or to be polite. People practice concealing their true feelings from the hips up, but less so below the waist (Navarro, 2008).

The Face

When breaking emotions down to a specific science many people analyze static emotion of the face. Static emotion means the emotion is not active, but a mere frozen definition
displayed. This is one way to turn emotions into measurable data. The recognition of these facial expressions gets separated into something called micro-expressions. Dr. Paul Ekman is considered the father of micro-expressions because of his time spent studying this specific measure of emotion. Dr. Ekman traveled to South East Highlands during his research on micro-expressions. He studied the Fore people of south-eastern Papua New Guinea which is just north of Australia.

Their culture had not been influenced by outsiders, giving his data more authenticity. He found that these people who had not been touched by the outside world displayed emotions on their face in the same way people outside of their culture projected them (Ekman, 2007). His research pointed to there being a commonality amongst humans when expressing emotion. This makes future studies of projecting static images of expressions more reliable. However, this is only true for facial expressions of anger, contempt, disgust, fear, happiness, sadness and surprise; we cannot assume this is true for body language beyond static facial expressions (Driver, 2010). For example, when Eastern Asian countries and Western countries are compared, their ability to recognize emotion across culture differs (Jack, 2016).

When identifying whether income effects emotion recognition, my study will involve the use of static imagery (still photos) of displayed emotion. When these emotions are displayed, it is agreed that anger, fear, disgust, happiness, sadness and surprise are universally applicable to the audience studied. For example, the face of sadness will be the face of sadness for everyone participating regardless of their background. This was helpful for judging accuracy.

**Gender and Emotion**

Currently, our society is experiencing meaningful shifts in understanding gender in a broader sense than the historical male-female binary. While I recognize that, the research being reviewed in this paper was conducted at a time when the dominant narrative was to discuss gender in just a male-female dichotomy. Thus, the research reviewed in this section will retain the male-female binary.

Some people, because of stereotypes, believe that woman and men experience emotion differently. This, in part, may come from television because children’s television shows portray men to have more anger and woman showing more fear and sadness (Martin, 2017). An important factor to consider when interpreting emotion are cultural social display rules. Woman are expected in Western culture to smile more often. If they do not, it is assumed that there is something wrong or that they may be upset. Similarly, men are expected to show less sadness. If they do show sadness it is many times considered a sign of weakness. However, when self-reporting is done, men and woman experience emotion very similarly. While there are some outliers where woman report experiencing sadness more, overall emotions amongst gender are felt and experienced at the same rate (Burkley & Burkley, 2017).

**Creativity**

Albert Einstein was correct in more ways than one when he said during an interview, “imagination is more important than knowledge” (Einstein, 1929). Creativity is a personality trait that increases a person’s ability to recognize emotion and empathize with others (Geher,
Betancourt, & Olivia, 2017). In Betancourt and Olivia’s study they used independent judges to rate 10 different personality traits of the trial subjects. Then, they were given an emotion recognition test. The test scores showed that people rated as more creative were better at correctly identifying emotion.

This points to the question of where creativity comes from. If it is one part nature, one part nurture, we can influence one part. Or in my studies case, our nurture, including the money we make can influence us. When people do not have money, they may need to come up with creative methods to make ends meet. People making a low rate of pay may have more opportunity to practice creativity, not by choice, but by necessity. More creativity leads to better emotional recognition. This points to low-income recipients having a better chance at picking up emotional cues.

**Robotics and Computers**

Picking up cues with the data we already have has proven useful in preventing crime. Computers are able to use emotional body language algorithms to identify threats. This is being used to prevent retail theft by detecting criminals’ intentions and alerting security (Lewinski, 2016). Lewinski used Automated Facial Recognition Systems in his article discussing the limits to privacy technology like this sets. This technology has been developed by using pre-programed facial expressions and comparing them to people who come into the camera sensors point of view this is called “hot mode” (Lewinski, 2016). Apart from “hot mode,” the camera and sensors can save a person who has come in contact with the camera in the past. With these saved expressions the system can establish a baseline and emotions deviating from this baseline. It knows what items people spend the most time around and this technology can be used for advertising purposes depending on the goals of the company using it. Through these algorithms of past behavior and pre-programed expressions, the AFRS can determine possible threats before they occur. One being retail theft (Lewinski, 2016). Investing money in this technology gives less need to rely on humans’ ability to practice and recognize emotion detection. This may increase the demand for guards to compete with robotics for work; possibly emotion detection abilities.

**Animals**

There are multiple reasons an employee may practice and have a need for accurate emotion detection. It may be fear of a demanding boss, low job security, high demands, or even drive to achieve higher positions. Animals have the ability to process emotion in a more detectable way after exposed to stressful situations; specifically, negative emotions (Bethell, Holmes, Maclarnon, & Semple, 2016). As a part of the animal kingdom, humans may be displaying similar tendencies on a more measurable platform. Specifically relating to their employment. If their job has low wages, they may be expendable as employees. This, causing fear or uncertainty will being out the animal instincts of emotion detection.

**Income**

Income has an effect on the way people behave. For example, there is a trend of people using hospice as their income reaches a more average rate. This means when they have some
money they are more likely to go to hospice. Whereas people with lower income use hospice care less (Martin, et al., 2015). This showed that income influences how people choose to die.

Recent research from 2017 still shows that overall increased income in society does not cause an increase in happiness; between $40 and $50 thousand dollars a year, happiness tops off (Clark, 2017). People get income-based happiness many times from perspective rather than actual earnings increase (Clark, 2017). Meaning, they look at their living situation and compare it to their peers around them, then muster up their feelings.

If a couple decides to get married, income has no effect on the success of the first 4 years of marriage (Jackson, 2017). However, over time it does have an effect on the individual spouse. This may be because of the disconnect between the working of multiple jobs by one over the other to satisfy the household (Jackson, 2017).

Not only does income perception influence happiness, income also decides our care during death. In addition, income weighs in on marriage. This occurs from the stress it causes on partners when it is low. This stress leads to dysfunction (Bohnert, 2011). It can be assumed that there are many other areas of life that income contributes to outcome. Hourly wages may affect people’s ability to function in emotional situations. Specifically, their ability to recognize emotion accurately.

The Proposed Study

The study will involve psychology students from UWS, who will complete an informed consent and a disclosure of possible ailments such as discomfort, confusion, or possible boredom occurring during the study. They will be given a computer-generated test with pre-determined emotions displayed on the screen. They will be given choices to select from as to which emotion is displayed. The test will be scored based on the number of slides they get correct. A separate survey will be given to the test subjects. This questionnaire will ask the participant’s wage. The wage question will be inconspicuous amongst other questions.

The accuracy of emotion detection will be calculated and correlated with the income information provided. Testing the possible impact of income on emotion detection will give us another factor to consider when attempting to manage the abilities individuals have when it comes to accurately detecting emotion. I predict that those participants who report lower income will be more accurate in their emotion detection. If this is supported by the data, there are a number of implications for how this information could be used in the general public. It may be that highly-trained (and well-payed) professionals will need to add emotion detection training to their training, so that they are able to connect with clients at a deeper level. This will also improve higher income recipient’s family life. This awareness will remind people of higher income that their emotion detection skills may be behind and therefore extra attention is needed in person to person encounters. The impacts of this include stronger marriages, partnerships, and bonds with kin or extended family.
Acknowledgments

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Works Cited


## Tables

Students results

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*Note:* This table shows how I plan to present the findings