Understanding Emotions

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We are all unique individuals with our own personalities, which is what distinguishes me from you and you from me, but there is a vital part of our lives that may not be unique to each individual: emotions. Everyone feels emotions, but do we all feel them in the same ways? And, how do we feel them?

Before I can discuss how emotions may differ from being to being, we must first explore the commonalities. Other animals besides humans have emotions and there are universal facial features expressed from primates to people. Charles Darwin discusses the idea that "…all people as well as some nonhuman primates display common facial expressions for certain emotions, including happiness, anger, and fear" (Bower 191). He states that the way we express emotions isn't solely confined to humans, which implies that facial expressions are used as a form of communication as well as self-expression. Psychologist and expression expert, Paul Ekman, Ph.D, agrees with Darwin's observation, he says "…people everywhere recognize the same expressions for a handful of emotions: anger, disgust, sadness, enjoyment, and fear or surprise" (Bower 191). Humans all express those emotions the same way and because of this we can recognize those emotions on others. This expressive form of communication is such a natural part of our lives that we are usually unaware that it is happening. [1]

During a conversation Paul Ekman had with the Dalai Lama, he says that we originally evolved to be unaware of our emotions as a survival tactic. He explains, "It is in the nature of emotions to keep consciousness out" (Ekman 42). Here, consciousness is defined as the awareness of something for what it is, that something being our emotions. For example, if something scared us and we actually thought about why we were afraid we wouldn't react as fast to the source of the fear. He developed the term "micro-expressions," which refers to the quick expressions of emotion that will almost always be present when someone feels an emotion, even if that person is trying to cover it up. Emotions are triggered automatically; it's called "automatic appraisal" and that is why these micro-expressions will always be present. When these micro-expressions flash across our faces, we are usually unaware that we are doing it.

Everyone expresses emotions the same way, and feel them immediately when provoked. So, what happens if we purposefully provoke certain emotions using expression? It's been proven that physically smiling (not just your mouth but also using the muscles around your eyes), even when you aren't happy, can cause real happiness.[2] When I first heard this in a documentary in my human physiology class, I was skeptical, but then I actually tried it. I was being kind of grumpy one day and thought back to the documentary, my mood improved somewhat but not entirely, but a different day I tried pretending to laugh and I actually started laughing and feeling completely different. Merely imitating the movements of an emotion in our bodies can simulate and create emotion. This means our facial expressions have a direct effect on how we feel emotions.

A TED Talk done by Amy Cuddy, a Social Psychologist and professor at Harvard Business School, focuses on a similar theory that our body language can change how we might feel. The talk was called "Your Body Language Shapes Who You Are." She spoke about how our bodies and body movements can change our emotions, specifically about body positioning

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[1] Bower, Bruce. "Getting a Feel for Emotions: Emotional Development Attracts Cross-Cultural Explorations." *Science News* 19 Sept. 1998:190-1. Print.

[2] There have been multiple studies done about genuine facial expressions affecting people's moods slightly. Psychologists at a university in Whales have proven that genuine smiles reduce stress and therefore increase happiness.

for “power” and “submission.” She described two experiments she did about the effects of our body language, not only on ourselves, but also on the people around us.

During other studies, people noticed that the naturally more confident people in a room will sit with a more open body (sitting up tall, arms out, legs out) and the naturally more submissive/quiet people are more closed off with their bodies (hunched over, arms folded or in front of them, legs usually crossed). They found that more men have the more “powerful” positioning and women have the more “submissive” positioning. She explained that the people who are naturally more “powerful” are more confident in their abilities, think more abstractly, and take more risks. Chemically the more “powerful” people have higher testosterone levels (dominance hormone) and lower cortisol levels (stress hormone).

Cuddy used this information about body positioning as the basis of her experiments. In the first experiment, the question asked was: “Do our bodies change our minds?” She had people adopt either a high power pose or a low power pose for two minutes at a time. In between pose changes the test subject would be asked to spit in a cup for chemical analysis of hormone levels. She found that when people were in a high power position they were much more likely to gamble than in a low power position, meaning they had more confidence in themselves and their abilities. She also found changes in the subjects’ testosterone and cortisol levels; with high power the testosterone would increase and the cortisol would decrease, with low power it was the opposite. The conclusion of the experiment was that our “non-verbals” (body language seen as communication, that influences other peoples opinions as well as our own) govern how we think and feel about ourselves and that, much like facial expressions, our bodies do, in fact, change our minds. Manipulating our bodies into positions that can express confidence can make us feel more confident in ourselves.

Cuddy’s second experiment focused on the question: “Can power posing for a few minutes really change your life in meaningful ways?” To test this, she and her team of psychologists put multiple people through a stressful job interview, having a few people do power posing for two minutes before going in. They then had a different set of people watch the interviews and pick who they would hire, without knowing which people did the high power posing before the interview. They found that people still picked all the high power posers.

Cuddy concluded her talk by saying that power posing helped people come out of their shells and be able to express more of who they are inside to others. When she was asked: “Isn’t it just faking it till you make it?” She replied, “Fake it till you *become* it.” So it’s true that changing our bodies can change our minds, not only in a chemical way but also in a mental way. However, there are other things that can affect our emotions.

One’s living environment has a huge impact on our emotions and moods. In the documentary *Happy,* happiness is split into three sections: genetic set point (50%), intentional activity (40%), and circumstances (10%). The genetic set point is the level of happiness we are born with; intentional activities are actions we choose to do; and circumstances have to do with income, social status, environment, and age. Only 10% of our happiness has to do with our environment, but it still seems to affect our moods and emotions drastically. When we are around other happy people or our loved-ones we tend to be much more happy than when we are alone or in a stressful situations.

In the documentary, they discussed the effects of working on people in Tokyo, Japan. The majority of people in Tokyo overwork themselves to the point of exhaustion, and there have been many cases of people literally working themselves to death. Even though Japan’s economy is booming and a lot of people are working and making money, the overall happiness of the

people has gone down. However, there is another part of Japan that has a much higher level of happiness. Okinawa is a small island of the coast of Japan and some of the oldest and happiest people live there. Most of the people living there have been there their whole lives and have never felt the urge to leave. They say that the people and the community are so close and friendly that it keeps them happy almost all the time, thus proving that having stability, living in a less stressful environment, and having a community that supports you as much as you support them can lead to a happy life which, in turn, can lead to a long life.

But the depression of the workers in Tokyo and the constant happiness of the people in Okinawa aren't actually emotions; they are moods. So, what's the difference? Paul Ekman believes that emotions are quick and don't usually last that long (under an hour or so), where as moods are much more prolonged. In his book *Emotions Revealed*, Ekman states, "Emotions prepare us to deal with important events without our having to think about what to do" (Ekman, 20). Hence, the reason emotions are so fleeting. He goes on to describe how emotions produce changes in parts of our brain that mobilize us to deal with the cause of the emotion, as well as changes in our nervous system that regulate our heart rate, breathing, sweating, preparing us for different actions. For example, when we feel anger blood rushes to our hands preparing us to fight, and when we feel fear our blood rushes to our legs and arms preparing us to run.

It's not just our brains that have an influence on how we feel; our guts do a lot of the work too. 80% of serotonin is found in the intestinal tract. Princeton University calls serotonin the "happiness hormone" because it contributes to feelings of well-being. However, not all "gut feelings" are good. In a Radiolab interview with Michael Trimble, a Professor in Behavioral Neurology, he says that "crying begins in the gut—it's a gut feeling that rises upwards"(Trimble, *Why Cry?*). This idea of "gut feelings" was put to the test by John Cryan, a Professor of Neuroscience at University College Cork in Ireland. He found bacteria in the stomach that he thought might change a person's mood. He did an experiment with mice to see if feeding them these bacteria would change their "personalities". He put the mice in water to see how they would react to it. The mice that were not given the bacteria swam desperately for about four minutes and then stopped and "went into despair" and their stress levels were increased. The mice that *were* given the bacteria kept swimming long after seven minutes and had less stress hormones. They also found "GABA" in the brains of the mice that were given the bacteria. GABA or Gamma-Aminobutyric Acid, is what can make us more relaxed. He found that the bacteria were sending a signal through the vagus nerve, which runs from the gut to the brain.[3] Scientists now think they can use this bacteria to help in an ingestible form (a pill) to regulate people's moods.

We all have had that time when our gut told us what to do. Maybe it was a risky gamble in a casino, or maybe the chance of getting your heart broken. Either way, it's the same feeling that rises up from our gut and is enforced by our brain and our actions. We rely on our gut to tell us what to do, how to feel, maybe even what to say.

When I feel emotions or have moods, I almost always feel it in my stomach. That lurch of fear on a rollercoaster, or the indescribable warmth of loving someone, or the emptiness of sadness…I feel it all in the pit of my stomach. It's both thrilling and terrifying to know why I feel emotions.

We all feel and *express* emotions in the same way. How we feel emotions is not what differentiates us. The same things can emotionally trigger all of us. *Understanding* our emotions

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[3] The *vagus nerve* is one of the twelve cranial nerves and runs from the head to the abdomen. It is part of the involuntary nervous system and commands unconscious body procedures.

is what differentiates us, and what truly makes us different is how much we allow those fleeting feelings to govern how act. We can't always rely on our guts to make the right move; sometimes we need to think before we act.

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