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Decoding the language of lies

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Paul Ekman was named one Time Magazine's Top 100 most influential people in May 2009. His work in the study of facial expressions and the creation of an "atlas of emotions" containing more than ten thousand facial expressions inspired the TV series "Lie to me" with the lead character Dr Lightman being largely based on Paul Ekman himself.

Ekman served as a scientific adviser for the series reading and editing the scripts and sent video clip-notes of facial expressions for the actors to imitate. This hugely successful series has aired in more than 60 countries.

Astoundingly, he discovered that many of these identified expressions are universal. Regardless of being raised in a Western or Eastern civilisation, the facial reaction to emotions is near enough identical. Subsequent evolution of his work has gained him a reputation as "the best human lie detector in the world".

Ekman also collaborated with Pixar's film director and animator Pete Docter in preparation of his 2015 film "Inside Out". This project inspired Ekman to write a parent's guide to using Inside Out to help parents talk with their children about emotion.

He was ranked 59th out of the 100 most cited psychologists of the twentieth century.

Ekman has not always worked alone. One of his most fruitful collaborations has been with David Matsumoto, an author, psychologist and judoka. Their shared interest in emotion, facial expressions, and nonverbal behaviour has led to work that created an acceptance and continued expansion in the more defined field of microexpressions.

Now a growing field of international interest so much so that the US Department of Defense awarded a $1.9m grant to examine microexpressions as a means to understand the role of emotions in ideologically-based groups.

With the addition of fellow psychologist Dr. Mark Frank extensive research began to allow for a practical application of their findings. Matsumoto, Ekman and Frank created the Microexpression Training Tool (METT 1), the first training tool developed to improve one's ability to read microexpressions. Ekman and Matsumoto subsequently refined this tool creating METT2.

In 2009, Matsumoto would make a further remarkable discovery from his seemingly unconnected love of martial arts. While conducting a study examining spontaneous facial expressions in blind judo athletes they noted that many facial expressions are innate and not visually learned. Matsumoto stated "facial expressions of emotion of both congenitally and non-congenitally blind individuals are the same as for sighted individuals in the same emotionally evocative situations." This study received much publicity and critical acclaim, including coverage in Time Magazine and on CNN.

Between Ekman and Matsumoto, it has been proven that our expressions, including those when lying, are both universal and innate. In a world obsessed with nature versus nurture, nature wins this particular battle hands down.

This ultimately leads us to Pamela Meyer, an American author, certified fraud examiner, and entrepreneur with a Ted talks smash hit ranking in the Top 20 most popular of all time, the views exceeding 16 million. After becoming an ardent student in the work of both Ekman and Matsumoto, Meyer decided to write a book taking the research findings and applying them solely to the topic of untruths. In 2010 "Liespotting: Proven Techniques to Detect Deception" earned Meyer the reputation as "the nation's best known expert on lying," as described by Reader's Digest.

It is from these pages that Meyer draws for her 2011 TED talk, "How to Spot a Liar", in which she opens by joking

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that no-one is willing to meet her for coffee face to face anymore. The disappearance of her friendship circle is fairly understandable once she lays out a couple of exceedingly comfortable home truths. Everybody lies. In fact, the average person will tell between ten to two hundred lies per day. Should you meet a stranger you might want to know that they will lie to you on average three times in the opening exchange. Luckily for married couples this reduces vastly to only one or two prevarications amongst every ten.

While Meyer mentions an increase in lie recognition from around 50% to 95% after the correct training, this number is not supported by the research from which she has drawn.

Ekman places the ability to accurately identify deception as profoundly rarer. Even with the creation of METT2, there is no mention of this type of success rate with many questioning whether even his actual successes are inflated. Some may believe that all of this work seems to have been in vain with such an arguable degree of practical application and certainty of result.

While decades of research and experimentation may not create an instant lie detector system in anyone who should decide to learn the standard tips and tricks of spotting a fibber, it does provide firm and inarguable pattern recognition. This knowledge and data set are the basis for the F-M Facial Action Coding System 2.0. Created in 2017 by Dr. Freitas-Magalhães, the programme already analyses 2,000 facial segments in 4K, using 3D technology and automatic and real-time recognition.

So, while we now know we all lie and the physical evidence of such is both universal and unlearnt, we will very soon have to become used to the fact that we no longer have the ability to hide it.