



“Artificial intelligence can determine if you’re gay – all it takes is one photo!” Will our most intimate secrets now be brought to the light of day?

The above mentioned headline was circulated by the press in early September 2017.^{1,2,3} The mysterious artificial intelligence has struck and now threatens to disclose our secret personal characteristics. For the LGBT (lesbian, gay, bi, transgender) community of some countries, this might have catastrophic implications as some sexual orientations can let someone face the death penalty. Homophobia still remains prevalent in developed countries which is being actively spread by American election campaigners. The recently failed senate bid of the republican politician Roy Moore is a great example for this.⁴ He himself has allegedly harassed underage girls. And what else can an artificial intelligence dig up about our personality traits. Will we be fully transparent in the next job interview?



What happened? A peer reviewed study conducted by the renowned Stanford University was published in the acclaimed ‘journal of personality and social psychology’. This alone made it clear, that we were dealing with scientific research. Theoretically. Only until AI (artificial intelligence) experts were taking a closer look at the matter. Perhaps you’ll get a first glimpse of what might have gone wrong as soon as you read the test specifications:

The basis was a sample of 35.000 facial photos from an American dating website. The research professor Michal Kosinski and the student Yilun Wang extracted features from the photos utilizing ‘deep neural networks’, i.e. a complex mathematical system which learns by itself how to analyze faces with an extensive data set.

The research determined, that homosexual men and lesbian women showed „gender atypical“ features, facial shapes and grooming styles. Generally asserting that gay men showed more feminine and lesbian women more masculine bone structures. This would revive the already refuted theory of physiognomy. It assumes, that a discrepant hormonal development in the womb can be attributed to sexual preferences, determining separate developmental characteristics. Physiognomy, i.e. the manifestation of personality traits in facial features (bone structure), is now regarded as pseudo-science, which peaked as part of the Nazi ideology. This has, however, not been sufficiently examined by authors.



A team of Google AI specialists as well as an American psychology professor have dug deeper into this study and let us breathe a sigh of relief. Not even artificial intelligence can find, what doesn't really exist. However, it can apparently lead researchers from Stanford down the wrong path. One of the big dangers of 'Big Data'.

Blaise Agüera y Arcas, distinguished scientist at Google concisely summarized the study as follows: „bullshit“. Together with his colleague Margaret Mitchell and the psychology professor Alexander Todorov, he took an interest in physiognomy a long time ago. A few months before the above mentioned study they have published a scientific paper, which refuted the assertion by Chinese scientists that criminals share facial features.⁵

The problem of the study was, that all of the pictures were selfies. And for verification purposes, only those Facebook profiles were selected, that publicly divulged their sexual preferences. So no standardized passport photos. And what is it that people do on their profiles, irregardless whether it's for dating or social purposes? One wants to make an expression, to send a signal, which will then hopefully be decoded by the target group in the right manner! A lack of consideration of this is the main flaw of this research.

What the algorithm eventually found out, weren't any discrepancies in the specific bone structure of the face but rather signals, that people create, mostly on purpose. The AI is thus not superhuman, but rather just really good in deciphering patterns. (Which in return poses its own problems.)

Are you by any chance interested, which features were found?

Gay men are disproportionately often wearing glasses, a great gadget to put an emphasis on expressing their modern/fashionable character. Creative individuals might however do the very same thing. Gays wear beards less often (in the States) – even though gays in their forties and older do and younger people prefer a three day stubble. A hint on cultural influences on signals. Also, selfies are mostly being taken from an upward angle to put a stronger emphasis on the eyes and let the chin appear less aggressive.

A main aspect for women is, that gay women seldom wear make-up or eye shadow. Also, they seem to prefer a horizontal angle when taking selfies. While heterosexual women prefer a downward angle. Perhaps as they try to emulate the perspective, which taller men experience? Or perhaps in order to show some cleavage?

The Google researchers have swiftly verified their analysis by a simple online questionnaire. They asked a few thousand people about their sexual preferences and the above mentioned personality traits. The neural network had a 71% accuracy with gay women. When women are asked whether they use eyeshadow, one already gets a rate of 63% while the incremental information on make up with its 68% already comes very close to the so called genius performance of the neural network. On this occasion, researchers were able to deduce, that the signal transfer from hetero to self-declared lesbian women is fluent. When women find other women attractive, they use less cosmetics than hetero women, but more than lesbian women.

The Stanford researchers asserted, that they could recognize who is gay. They have used a data base of photos from people, who wanted to express, that they are *not* heterosexual.



These signals are moreover culturally variable. If the signals can be recognized by too many, others will develop with which closeted gays can send out signals. There will be a race between new patterns and the pattern recognition. Wouldn't it be nice, if it wouldn't longer be necessary to hide? The Google researchers will publish their study under the title: "Do algorithms reveal sexual orientation or just expose our stereotypes". I couldn't yet find out when and where.

As you already know from the BrainCandy 36⁶, one can't even reliably deduce emotions from a facial expression. In this respect, I can reassure you, that the hyped up danger of the facial recognition feature of the new iPhones will not be as big, as the media currently tries to make it look. We possess, if at all, very individual physical emotion patterns. No AI will be able to deduce what you feel by looking at your Facebook page. That is of course unless the AI doesn't try to attempt to find a general pattern but rather develop an individual pattern for each Facebook user. That would be too much of an effort though. And as most of the advertisements are boring us as it is – what should one do with this information anyway?

With that in mind – I wish you relaxing and joyful holidays, irregardless of your sexual preference.

Sources:

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2. <https://www.techspot.com/news/70905-stanford-university-ai-can-tell-if-youre-gay.html>
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Book recommendations:

By Ralph Ohnemus:

Markenerleben. Die Strategie im Hyperwettbewerb und Informationstsunami > [order here](#)

Markenstaunen. Gewinnen im Informationstunami > [order here](#)





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