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Emotional AI: A societal challenge

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1. Introduction

Emotional Artificial Intelligence (emotional AI) refers to technologies that use affective computing and artificial intelligence techniques to sense, learn about and interact with human emotional life. Like other technologies built on autonomous decision-making systems, novel forms of sensing and unique means of human-technology interaction, emotional AI requires an answer to the following question: *how can society get the best out of technologies that function in relation to the intimate dimensions of human life?*

The premise itself is controversial, i.e. that technologies can comprehend emotion. What is more, the 'basic emotions' methodology that sits behind much emotional AI has been widely critiqued. For example, the widely read AI Now Report in both 2018 and 2019 debunk it as pseudoscience.

They have a point, some methods are deeply flawed, but their critique is also a limited one: it equates emotional AI and affect-recognition with facial expression detection. It also assumes that the 'basic emotions' methodology is the only game in town. It is not. Simply put, the problem with face-based approaches to gauging emotion is this: they are based on *reverse inference* where an expression is taken to signify the experience of an emotion. For more on this point, see Lisa Feldman Barrett and her team.

The solution, though, for industry does not bode well for society: industry will want more detail on the *context* of the situation to understand the emotion. This requires more data about physiology, bodily reactions to stimuli, location, who a person is with and potentially invasive practices.

Still at an embryonic stage, emotional AI is becoming increasingly present in everyday objects and practices such as digital assistants, cars, games, mobile phones, wearables, toys, marketing, insurance, policing, education and border control. It is also being used to regulate and optimize the emotionality of spaces, such as workplaces, hospitals, prisons, classrooms, travel infrastructures, restaurants, retail and chain stores. In case this seems speculative, consider that a U.K. retail analytics firm (SBXL) uses facial analytics in leading retailers such as B&Q (a hardware and garden store), Boots, TK Maxx and Tesco. The scope of emotional AI to exponentially scale is best appreciated by recognising that leading

[1] The views expressed in this paper are those of the author and do not necessarily reflect the views or policies of the Knowledge Center Data & Society or CiTiP. The paper aims to contribute to the existing debate on AI.

facial recognition systems are also bundled with emotional AI (for example Amazon's AWS Rekognition and Google Vision).

This is a key societal challenge because what emotional AI represent is scope for technologies built on logics of quantity to engage with highly qualitative dimensions of human life. Despite the critical nature of our academic fields, I argue that there *is* scope for good with these technologies. That said, I'm also keenly mindful that the legacy of "big tech" does not inspire confidence. I am also very conscious that jurisdictions in countries beyond Europe enjoy far fewer civic protections.

That said, when the technologies mature, they have scope to assist with important topics such as self-understanding of mental health (longitudinal signal self-tracking) and more frivolous parts of life, such as entertainment. (Anyone for biometric gaming?) Early use cases, however, are showing problems both in application and method. I could examine connections with facial recognition for policing, use at border controls, use in recruitment and hiring processes, use on ongoing workplace monitoring, use in classrooms or development of 'emotoys', but here I will look at advertising.

I first started tracking use of emotional AI in advertising in 2015 when, in London, the advertising agency M&C Saatchi (partnering with Clear Channel and Posterscope) produced an ad that *evolves* unique ads based on people's facial reactions. This analyses audience emotions as people move throughout public spaces. Others followed, such as Ocean Outdoor, a UK out-of-home advertising company, that also target by age, gender and geolocation and have used emotion tracking. By 2017, emotional AI was installed in Piccadilly Circus (London's outdoor ad spectacle) where Ocean Outdoor (and site owners Landsec) analyse expressions of pedestrians to assess facial reactions and customise future content. Cameras also analyse the age and gender of passers-by, as well as the manufacturer, model, and colour of cars passing through the gaze of cameras.

2. Intimacy, law and group privacy

Today, in the 2020s, companies such as Quividi seek to 'Make Digital Signage Smarter' by means of deploying emotion, gender and age recognition in public spaces. Interestingly, especially for legal eyes, they claim not to use personal data. It seems to me there has been an over-emphasis on identification in data privacy regulation and omission of non-identifying soft biometric data about emotional life. This leads me to call for both a new class of data: *intimate* data (that is sensitive without being personal). It also leads me to argue for a group and collective understanding of privacy.

Despite liberal roots in respect for individuality, selfhood, autonomy and control, it is clear that privacy includes these principles but is not synonymous with them. Instead, privacy is not only an individual right, but a group, collective and common good. Further, given what is at stake – bodies, emotions and experience – dignity (for individuals *and* groups) remains especially important as behavioural analytics spill onto the streets,

A body-focused appreciation of privacy is important, because data privacy is rarely discussed as bodily privacy. A dignity-based understanding diagnoses the problems with passive profiling and using big data techniques about emotions for unconscious influence: it is about recognising that human experience is important, innately worthy and should not be appropriated.

Dignity also serves to block conceptions of privacy as an indirect expression of other rights, such as property. Luciano Floridi puts it well saying that the "my" in "my data" is not the same as the "my" as in "my car", because personal, sensitive and intimate information plays a constitutive role of who we are.

Given that many applications, especially in advertising, are based on *not* identifying people, I have been keen to conceive of what precisely are the problems with profiling technologies that do not use – strictly speaking – personal data (or that which singles a person out in some way for special treatment). After all, critics are being forced to answer what the harm is if I, or you, are singled out for unique ad impressions, based on facial expressions (or indeed other bio-signals).

The answer is that especially in publicly owned spaces (taxpayer funded!), *privacy is a common good*. For example, groups of people who move daily through urban spaces, such as commuter-line train stations, will by default become an identifiable group clustered by psycho-physiological emotional reactivity. This will occur through intimate objectification (granular assessment of reactivity) and special treatment distinct from commuters in other parts of a city, based on collection of data that they have no control over. Is this acceptable? Certainly there is scope for discrimination by race, income and other important signifiers but, before these debates, there is a more basic point: do we want it? Does society think this is a good idea? How do we benefit from being profiled?

Certainly in my survey work, UK citizens are not at all keen in the idea. In 2015 I conducted a survey asking how people feel about emotion detection in out-of-home advertising. 50% did not like the idea under any circumstances (whether they were personally identified or not); 33% were OK with it if not identifying; 8% were OK if identifying and 9% did not know. My 2020 data is now in too, which asked the same question 5 years on (along with use in cars, schools, workplaces and political advertising). Results are not published so I cannot give details, but let us say that citizens remain not keen (contact me direct if you need more detail).

3. Conclusion

So how can society get the best out of technologies that function in relation to the intimate dimensions of human life? The answer is logically easy, the reality is not. There is nothing innately wrong with technologies that function in relation to human affect states and emotion. They can serve, assist and entertain, if they are built and deployed in a way that respects the wishes of individuals and groups. The reality however is that this would be a volte-face from the compliance-based approach currently taken by the "big tech" industry that will increasingly deploy these novel modes of profiling and human-agent interaction. I'm an optimist by nature so refuse to end on a doom and gloom note, but feelings on the matter would be much improved by serious attention to the question of emotional AI from Europe's regulators.

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