Chapter 33

Detecting the Risk of Online Harms on People With Social Orientation Impairments:

The Role of Automated Affective Content Screening of Neuro-Response Plasticity

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ABSTRACT

This chapter proposes automated screening of internet and multimedia communications through a combination of neuroeconomics to measure neuro-response plasticity through forensic phonetics, EEG monitoring, and EigenFaces. These measure neuro-response plasticity through facial differences, including through the eyes, differences in EEG pattern, and prosody in the form of tone of voice. Through describing the 'Distress in the Mind Test', a computer program is proposed that can be implemented on any device with a camera and microphone and can therefore also be used to diagnose social orientation impariments, such as autism and social phobia. Further development would prevent people with social orientation impariments or whom are otherwise at risk from online harms being exposed to them through automated content filtering.

INTRODUCTION

The convergence of media content is posing challenges in terms of protecting the vulnerable while also protecting free speech (Wright & Javid, 2019) . Government film rating agencies are inefficient and overly bureaucratic. Regulating abusive online media content, such as Internet trolling, has not been suited to this 'before-the-fact' model. Basing rating on subjective judgements of age appropriateness is also ineffective for the online world, as people will have different maturity for different content at different ages. Internet trolling as a concept has transformed in definition in recent years from classical trolling, which was the posting of messages in a friendly way, to Anonymous Trolling, which is posted to harm others (Bishop, 2014b). Internet trolling messages posted to entertain others can be seen as 'kudos trolling' and that designed to harm others can be seen as 'flame trolling' (Bishop, 2012). But this does not mean all flame trolling is 'bad' and should be punished, nor does it mean all kudos trolling is 'good' and should be allowed. In some forums on the Internet, flame trolling is encouraged, such as the criticism of politicians, bankers, or other people who may be part of a group with dislikeable qualities. The consensual nature of these forums it could be argued should not mean their abusive comments should be prosecutable. Equally not all kudos trolling is designed to be in the interests of people. For instance, a type of online community user called a chatroom bob, will often post friendly comments in order to seduce others, such as a pervert looking to coax naked pictures out of the person, or a sex predator trying to groom a child or other young person (Bishop, July 19 2012).

It is therefore necessary to have a more technical way of looking at online harms through means such as Internet trolling, which could make it easier to regulate online content, so that mature users know what to expect, and Internet security software providers can better produce software with parental controls to avoid the corruption of the minds of those lacking in maturity, or those at risk adults with social orientation impairments such as autism and social phobia. Such people may or may not have been exposed to severe or traumatic content in the past, but either way they less able to cope with it.

The Role of 'Knol' in Calculating the Risk of Harm to People with Social Orientation Impairments from their Attitudes and Affective Responses to Media Content

The extent to which someone can withstand or effectively use media sources can be measured in 'knol.' In the context of the human mind, knol technically refers to the amount of pressure on parts of the brain that acts as a restriction to synaptic flow and thus the plasticity of the mind to efficiently process the requests made of it consciously by the actor, or forced on them by the environment. Those pressures, or 'impressions' imposed on the actor may include traumatic event such as abuse of violent videos on television, which have the effect of reducing their ability to process information, measured as a 'knol.' The most researched part of the brain in relation to the calculation of knol is the prefrontal cortex (Bishop, 2019; Bishop, July 19 2012; Bishop, September 10 2011). This part of the brain it is believed is responsible for many of the social interactions humans have with one another. It is hypothesised that if the prefrontal cortex has a high or optimal knol of 0.81 then the flow of information, or neuro-response plasticity, is likely to be greater than the level of involvement required to utilise that part of the brain. To explain how attitude to media content, in this case the arts, have an impact on knol, the remainder of this section will apply nuroeonomic equations (Bishop, 2019; Bishop, July 19 2012; Bishop, September 10 2011) to show the variation in knol and how to calculate it.

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