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Proposed question for Independent Inquiry: Are portrait artists suitable consultants for the development of facial recognition technology?

In the following proposal there will be three lines of enquiry surrounding three keywords that will converge to a single line of questioning.

Portraiture has always been a prominent aspect of my practice and in recent years, with the development in technology such as facial recognition, I have become interested in the connections between art and science. I would like to investigate how the two can be developed to benefit each other, how they can be used and the moral and ethical issues of technology in modern society e.g. data protection and privacy, especially concerning facial recognition.

My three keywords are recognition, portraiture and technology.

Recognition

Collins English Dictionary and Thesaurus (2013, p.226) defines “Recognize” as “identify as (a person or thing) already known...”. Our ability of recognition has always played a big part in our development, both individually and as a collective, and is synonymous with memory. Jarrett and Ginsburg (2017) wrote that identity would not exist without memory. Remembering ourselves, other people and places we have visited is dependent on memory and therefore recognition. With our brain’s complexity and development, they have also noted that the amount of information we can store could be limitless but recalling that information is “a whole other question”.

Many know the terms ‘Long-Term Memory’ and ‘Short-Term Memory’. Long-term memory (LTM) provides a “...lasting retention of information and skills. Theoretically, the capacity of long-term memory could be unlimited...” (McLeod 2010). McLeod also wrote that STM (short-term-memory) lasts anywhere between fifteen and thirty seconds and is only able to retain approximately seven items.

Our ability to remember and identify things is only one side of the coin, as with this ability also comes our potential to forget. Sometimes what we forget is too insignificant to worry about, especially if it falls in the short-term memory category. However, there are several ways in which people's lives can be negatively affected by instances of or prolonged periods of damaged memory recall. What can cause concern are possible medical issues like Alzheimer's disease and the dementia it causes, resulting in memory loss and diminished recognition abilities. Another is unreliable statements from witnesses of crimes. Award-winning psychologist Elizabeth Loftus has spent almost four decades studying memory, in particular, how effortless it is to manipulate people's memories and make them believe false information (Jarrett and Ginsburg, 2017). Many experiments have been carried out that involve potential misleading questions given to witnesses. For example, instead of asking if the perpetrator wore a hat, asking what colour hat the perpetrator wore would plant a false memory of a hat that was never there. As Loftus said in 1996 to *Psychology Today* magazine, "The truly horrifying idea is that what we think we know, what we believe with all our hearts, is not necessarily the truth."

Approximately eight-hundred and fifty-thousand people in the UK have dementia (Alzheimers.org.uk). The National Institute of Aging (2019) notes getting lost in places previously known to the person, an inability to follow instructions, and being disoriented about places and people are some of the symptoms people with dementia display.

The disorientation connected to people is closely linked to memory and recognition. Close relatives and people who would usually be familiar without a second thought become strangers, which takes its toll on families. Memory, recognition, how we experience it, and exactly how it works can feel abstract and often emotional. The feeling associated with it can be difficult to express, but many artists have used their practices to convey their experiences.

Polish artist Lucasz Wodynski whose work focuses on “...man and the deep existential background associated with it.” (Wodynski *unknown date*), created a series of oil paintings in a collection called “Machinations of Dementia”.



Figure 1 (left)

MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas

Figure 2 (top-right)

MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas

Figure 3 (bottom-left)

MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas

Figure 4 (bottom-middle)

MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas

Figure 5 (bottom-right)

MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas

By painting with high contrast on the subject, with both colour and light, against the black background, Wodynski's paintings are striking. Then considering the visuals of blood and the naked human body, he has created a feeling on vulnerability and pain. There is also

an element of loneliness and isolation with the use of a single subject in a dark space. These come together to present his perspective of dementia, which many people may be able to relate to, either from first-hand experience, or by watching family members experience the disease.

Other artists including Jenni Dutton and William Uterwohlen have used their practices to express their feelings of the disease.



Figure 6

Dutton, J. 'Mum Resting Her Head on Her Hands' H130 x W90cms. 2014

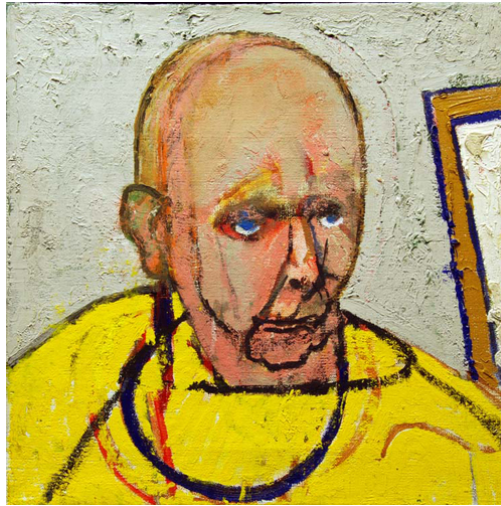


Figure 7

Uterwohlen, W. Self-Portrait. 1997. oil on canvas, 35.5 x 35.5

Uterwohlen's series of self-portraits are notable because they were created over the years while he developed dementia himself.

Portraiture

A portrait is a "picture of a person; lifelike description" according to the Collins Dictionary and Thesaurus (2013, p.210). As dictionaries aim to be concise, it is no wonder that definitions may appear too basic. At first glance it makes sense, but West (2004) wrote of the complexities of portraiture, that it goes beyond likeness and seeks to explore identity of people in specific places and times in history.

Italian painter Leonardo da Vinci is responsible for the famous Mona Lisa portrait, as seen below (Heydenreich 1998).



Figure 8

Da Vinci, L. 'Mona Lisa' Oil on wood panel. circa 1503-1519

Although considered one of the most famous paintings worldwide, the Mona Lisa appears to be relatively simplistic in nature, displaying a subject with very minimal extra visuals. Her posture is regal, as was most portraits, and the close-up aspect of the painting suggests Da Vinci focused on character above material possessions, either by request or of his own volition.

In contrast to the Mona Lisa, Hans Holbein's painting of George Gisze, from the same century, shows a different approach to a portrait.



Figure 9

Holbein, H. 'George Giszze' 1532

Surrounding Giszze is a multitude of objects; on the table, in his hands, on the shelves and on the wall. It is a busy painting, unlike the Mona Lisa, and asks more of the viewer. It takes longer to consider what the story of this portrait is, due not only to the quantity of individual items, but the various symbolic meanings each one can hold - a “cluttered and oppressive” space (West 2004, p.10).

In essence, portraits do not only display a person’s face, but can depict a moment or a period of a subject’s life. That is not restricted to material possessions however, as portraits can also serve to convey a person’s “inner life”, as West (2004) mentioned, as seen with the Mona Lisa. Artists did not always need to portray this “inner life”, as “Most portraits exhibit a formal stillness, a heightened degree of self-composure, that responds to the formality of the portrait-making situation.” (Brilliant, 1991, p.10). Brilliant expands on his observation by

describing a general intention among those commissioning a portrait of themselves to be provided an image that portrays them in the best light possible. This could include being wealthy, respected, educated, etc. They knew the paintings would be seen by the public, either at the end of the painting process or one day in the future, and ensured they would be seen in the way they dictated.

There is an interesting comparison to be made between the intentions of those subjects and present-day photographs. Social media platforms that support image-based content like Facebook and Instagram host extensive collections of photographs of people. Many of them are “selfies”, a term to describe a photograph taken by the subject in them. Whether they are labelled amateur or professional is irrelevant. Many of these selfies are meticulously constructed and manipulated to portray exactly what the subject intends; wealth, respect, education, etc. A notable difference between modern-day selfies and painted portraits throughout history, is the relationship between the maker and the subject. Portraits, that were not self-portraits, were painted by a commissioned artist, a separate person. Selfies, on the other hand, are created by the very subject they are displaying – there is no separation between maker and subject. This could be problematic as the extent to which the maker-subject deceives the intended audience is possibly limitless. Brilliant (1991) also mentions “...the tendency to conceal the individual’s personal idiosyncrasies and expose only those features that are known to make the best impression.”. We see this is still relevant today.

Technology

There is no doubt technological advancement has aided in the advancement of humans throughout history. As the Collins Dictionary and Thesaurus (2013) states, it is the “application of practical or mechanical sciences to industry or commerce; scientific methods

used in a particular field.”. The very nature of it is to support and help develop many, if not all, aspects of our lives.

Maria Skłodowska, known by the world as ‘Marie Curie’, “...helped to invent the field of atomic physics...” (Mcphee 2016, p.78). Mcphee goes on to explain how Curie’s research and discoveries led to the development of medical technologies involving radiation. She was incredibly hands-on in her approach to work as “Throughout World War I, Marie Curie, with the help of her daughter Irène, devoted herself to the development of the use of X-radiography. In 1918 the Radium Institute, the staff of which Irène had joined, began to operate in earnest, and it was to become a universal centre for nuclear physics and chemistry.” (Augustyn, A. et al. 1998).

American inventor, Thomas Edison, is another notable scientist. Josephson, M. and Conot, R. E. (1998) described his contribution to modern electricity as “critical” as many things we use daily originated with Edison’s research; telephones, microphones, lamps, generators, etc.

Recent history has seen a leap in technological advancement not only for research and industrial purposes, but widely accessible technology used by the general public. What we know today as the ‘internet’ was only available for academic and research purposes until 1993. Its origin lies in tensions between the Soviet Union and the US in the late fifties. A Soviet Union satellite launched in 1957 triggered a response from the US to begin building a small network for themselves in the event of a nuclear attack, in which they would need to preserve channels of communication (*The Little Book of History*, 2018, p. 193).

The number of internet users worldwide currently stands at approximately 4.57 billion people (Clement, J. 2020) as shown in the graph by *Statista*.

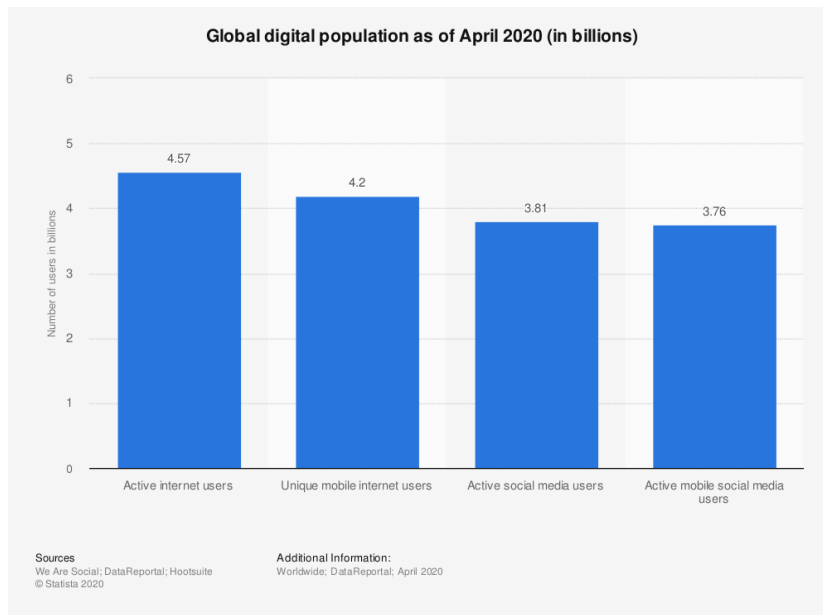


Figure 10

Clement, J. 2020. *Statista*

Present-day use of the internet is led mainly by advertising and consumerism, which is not surprising when we consider the following statistics;

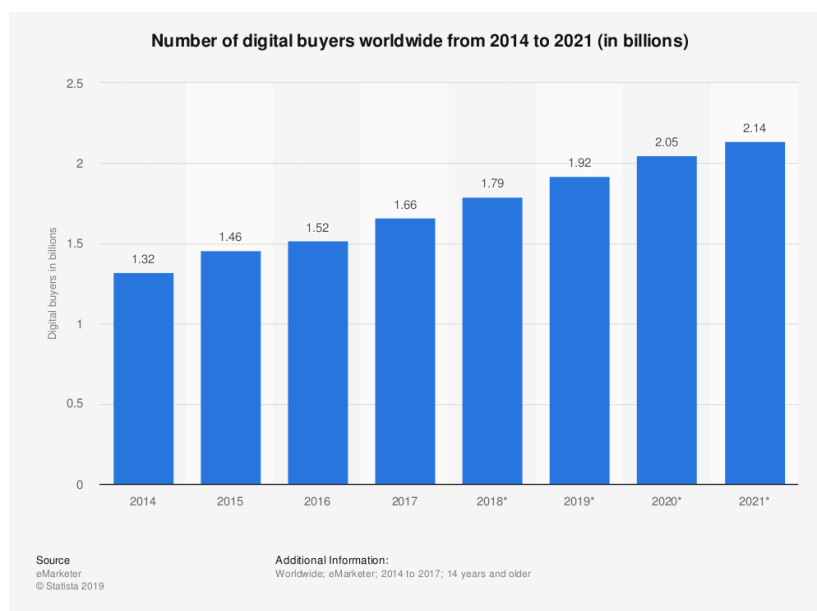


Figure 11

Clement, J. 2019. *Statista*

One reason why the internet has become so accessible is due to the increased production and use of mobile phones. With this amount of online traffic at every hour of the day, it is also not surprising that companies collect data on individuals browsing their websites in order to profile users, most of the time with the intention of adjusting their marketing methods. E-commerce is only one facet of internet use, however. Social networking, entertainment (tv, films and music) and world news are also massive components that make up the internet that we know today.

Around the same time as the US began improving their networking capabilities, Microsoft Corporation cofounder Bill Gates was writing code for computer software at just 13 years old (Augustyn, A. et al. 1998). Computers and computer software are sold worldwide for personal and business use, and many need to be kept updated as technology develops. Studios in the entertainment industry constantly push the boundaries of digital media, and therefore need the highest quality equipment. Our ever-increasing population means a higher demand on infrastructure like computer servers, and more crime, which requires the development of better forensic technology. As our populations grows, so must our capacity for technology. This may be due to the fact that every person requires resources in their lives that are primarily received from technology, whether that be medical, educational or recreational.

One type of technology that is used both for aiding criminal investigations and for personal use is facial recognition technology. As a consumer, the technology is used as a security measure in many mobile phones, in particular the iPhone (Pavelas 2018). As Pavelas also states, this type of security for mobile phones has been available for over ten years and is

“the most secure.”. In a policing setting, it is used to locate suspects of “serious and violent” crimes (BBC 2020).

Facial recognition technology lies within the fields of science and tech. This means that many upgrades to the systems will be made by the scientists working on them. However, it is a technology that measures facial features, primarily in a 3-dimensional form, using different methods of scanning, and is constantly being improved. This is not unlike portraiture. When drawing or painting faces, we use measuring techniques and refined observation skills to scan and record the face we see in front of us. Painters will translate a 3-dimensional form to a 2-dimensional surface, while sculptures keep their work 3-dimensional. Through the practice of life drawing, artists hone their observation and spacial-awareness skills to become better recorders. Many portrait artists spend significant portions of their lives studying faces in a variety of environments, from every angle imaginable. Andrew Festing, for example, is said to have an “extensive knowledge of portrait painting over the last 400 years.” and became a full-time portrait painter in 1981 (TheRP *unknown date*). The Royal Society of Portrait Painters also notes that Daphne Todd OBE described herself as “an analytical painter of the seen world.” (TheRP *unknown date*). These are desirable attributes for those wishing to pursue a career as a portrait painter, but could they be desirable for other reasons?

Normally, during the course of a project and/or research, several consultations would be carried out to acquire knowledge from a person whose expertise is relevant to the work, whether they are heavily involved in the project or not, to help push it forward. In the case of facial recognition technology, it is expected that the expertise of a person working with computer hardware and software would be needed, since it is primarily technological. However, the basic concept of the technology centres around the observation and scanning of faces, and who potentially has more insight and knowledge about faces than portrait artists?

This would be an interesting subject to explore further and I propose the following question for an Independent Inquiry: Are portrait artists suitable consultants for the development of facial recognition technology?

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Images

Figure 1 (left) Wodynski, L. MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas <https://www.deviantart.com/lukaszwodynski/art/from-Machination-of-dementia-series-338944232> (Accessed: 05/05/2020)

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Figure 3 (bottom-left) Wodynski, L. MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas <https://www.deviantart.com/lukaszwodynski/art/from-Machination-of-dementia-series-338945017> (Accessed: 05/05/2020)

Figure 4 (bottom-middle) Wodynski, L. MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas <https://www.deviantart.com/lukaszwodynski/art/from-Machination-of-dementia-series-338945274> (Accessed: 05/05/2020)

Figure 5 (bottom-right) Wodynski, L. MACHINATIONS OF DEMENTIA, 2012, 5 x 140 cm / 70 cm, oil on canvas <https://www.deviantart.com/lukaszwodynski/art/from-Machination-of-dementia-series-338944586> (Accessed: 05/05/2020)

Figure 6 Dutton, J. 'Mum Resting Her Head on Her Hands' H130 x W90cms. 2014 <http://www.jennidutton.com/dementiadarningsmumrestingherheadonherhand.html> (Accessed: 05/05/2020)

Figure 7 Uterwohlen, W. Self-Portrait. 1997. oil on canvas, 35.5 x 35.5 <https://www.williamutermohlen.org/index.php/11-artwork/self-portraits/22-self-portraits> (Accessed: 05/05/2020)

Figure 8 Da Vinci, L. Mona Lisa. Circa 1503-1519. oil on canvas.

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Figure 9 Holbein, H. Geogre Giske. 1532. [https://www.hans-holbein.org/Portrait-Of-The-](https://www.hans-holbein.org/Portrait-Of-The-Merchant-Georg-Giske-1532.html)

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