

# Open Schools Journal for Open Science

Vol 7, No 2 (2024)

Open Schools Journal for Open Science - Special Issue -IDEA Conference Proceedings



## Psy-tech Fusion: The psychology behind modern technology

Angelos Vallas, Giannos Tsipotis

doi: [10.12681/osj.39512](https://doi.org/10.12681/osj.39512)

Copyright © 2024, Angelos Vallas, Giannos Tsipotis



This work is licensed under a [Creative Commons Attribution-NonCommercial-ShareAlike 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/).

### To cite this article:

Vallas, A., & Tsipotis, G. (2024). Psy-tech Fusion: The psychology behind modern technology. *Open Schools Journal for Open Science*, 7(2). <https://doi.org/10.12681/osj.39512>

# Psy-tech Fusion: The psychology behind modern technology

Angelos Vallas and Giannos Tsipotis

## **Abstract**

This project examines the psychological tricks used by social media companies to influence users and their impact on mental health. Techniques such as the frequency illusion, Fear of Missing Out (F.O.M.O.), emphasis on the human element, social proofing, exposure effect, and color psychology exploit cognitive biases and emotions, often leading to negative outcomes like social isolation, cyberbullying, reduced attention spans, and technology addiction. Despite these challenges, technology can also enhance connectivity and provide valuable mental health resources. Understanding these psychological strategies is crucial for mitigating their negative effects and promoting mental well-being in the digital age.

**Keywords:** *social media manipulation, mental health, psychological tricks*

## **1. Introduction**

The main focus of this project is to explore as well as inform people and our peers regarding the psychological tricks employed by social media companies to manipulate and lead their viewers.

## **2. Structure**

- Psychological tricks
- Correlation between mental health and the technological impact
- Negative impact of technology
- Positive impact of technology
- Conclusion

## **3. The psychological tricks**

It is no secret that many, if not all, social media companies are constantly using new psychological tricks to try and stay relevant, and as a result maintain their high profits. This of course happens on the viewers expense, with little to no regard to their mental health. The first trick most commonly used is known as the frequency illusion. It is based on the Baader-Meinhof phenomenon, or frequency bias, which states that once you see something new, soon after you start seeing it everywhere. These companies take advantage of our natural tendency to interpret things in a way that reinforces our beliefs. In that way, companies can subconsciously make people believe that what these brands sell is what they need.

Furthermore, a tactic enforced by most companies is based on a psychological phenomenon commonly known as Fear of Missing Out, or F.O.M.O. The term F.O.M.O. describes that feeling when you view an event and fear that you will miss out on it. This is taken advantage of by many companies by offering a time-limited opportunity that triggers this fear. Although this might seem far-fetched, F.O.M.O. can affect anyone, but certain people are at higher risk for F.O.M.O., if they have an underlying mental health condition or have low level of self-esteem.

On top of that, in order for companies to manipulate viewers, they use a trick called "Emphasis on the Human Element". The foundation of this trick is the fact that people connect with people rather than corporations. That is why many brands choose a person, a well-liked

and accepted person by the majority, to be the face or the brands' ambassador on social media in order to create an atmosphere of trust between the company and the customers.

One more tactic used is that of social proofing. The term Social Proofing means that people are considerably more likely to buy a product or use a company's services, if they have seen a positive review on social media. Many brands use this by employing people to lie and promote their product as if they were actual customers. Boosting in that way their online reviews and thus attracting more deceived people, thinking they have just seen a real review by real customers.

Moreover, a strategy used is the exposure effect. This effect is a social media phenomenon, which states that the more a person is exposed to a certain item the more likely they are to develop a preference to it over time. Hence, the fact that many companies blast peoples' social media feeds in order to promote their product.

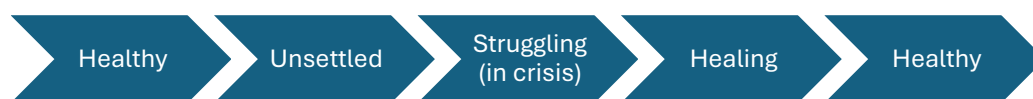
Last but not least, a ploy enforced by almost every single brand is the usage of Colour Psychology in order to promote and push their own agendas and products on unsuspecting people. Colour psychology is a field in psychology that studies how different colours affect human behaviour, way of thinking and emotions. Humans are visual creatures, and social media is a predominantly visual medium.

Consequently, it is clear that companies have used, are using and will, probably, continue to use such schemes in order to manipulate users and boost their profits. Thus, it is important to stay informed and alert when on social media so as to protect our mental and physical health.

#### ***4. Correlation between mental health and the technological impact***

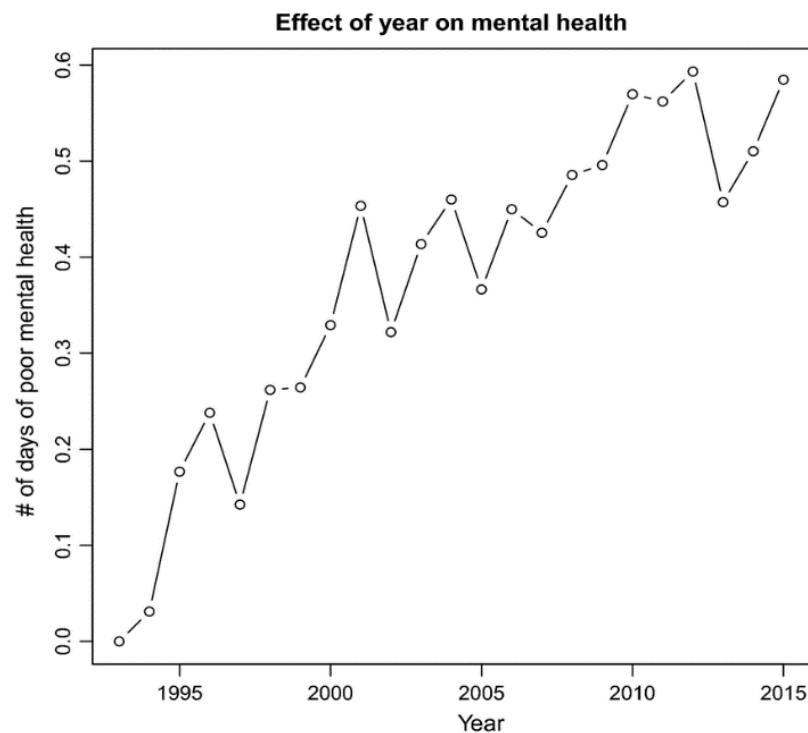
Mental health is a state of mental well-being that enables people to cope with the stresses of life, realize their abilities, learn and work well, and contribute to their community. It is an integral component of health and well-being that underpins our individual and collective abilities to make decisions, build relationships and shape the world we live in.

The mental health continuum is an essential diagram highlighting the stages through which humans pass during their life (*Diagram 1*). Our mental health can change gradually over time. We might start to feel unsettled but move back to feeling healthy in a few days. We might, also, move from feeling unsettled to really struggling. This is when we may need to seek professional support.



***Diagram 1. Mental health continuum***

Many of us will experience a mental health crisis in our lives, but we do not stay in crisis. We will move beyond the crisis into a period of healing and then another healthy period when we have recovered. As we can also see in Diagram 2, mental health cases have increased since 1995.



**Diagram 2.** *Mental health impact*

## 5. Negative impact of technology

Mental health awareness is on the rise, and we are becoming more conscious of how strongly our emotional and physical wellbeing correlates with our working lives. We spend more than a third of our waking hours at work, so it is not surprising that our experiences have such a big impact on our stress levels and cognitive load.

Regarding the negative impacts of technology, social isolation is one of the biggest negative impacts of technology on mental health. It means feeling lonely because an individual is not with other people. This can happen if the individual does not have many friends or family nearby, or if s/he feels like they are left out. Feeling socially isolated can make you sad, anxious, or have low self-esteem. It can even make people sick, like giving them heart problems or making them depressed. Talking to people on the phone or online can help them feel less lonely and better overall.

Moreover, cyberbullying is when people use phones or the Internet to be mean to others, like sending hurtful messages or spreading rumors. It can make people feel sad, scared, or not good about themselves. It can even make it hard for someone to focus on school or make them want to hurt themselves.

Another negative effect is reduced attention span, which means having trouble focusing on things for a long time, often because of using technology too much. Spending too much time on screens and trying to do many things at once can make this problem worse. It can make it harder to get things done and remember stuff. This is also associated with information overload which is bound to be the next theme.

Having too much information from technology can make people tired and less productive. It can also make it hard for them to make decisions or think clearly. Furthermore, this overload can lead to stress, anxiety, and trouble concentrating, which is not good for overall mental health. Of course, there is also a higher chance of believing wrong information. To deal with this, people can try managing their time better and taking breaks from technology to feel better.

Finally, dependency and addiction are very important issues. Many people rely too much on technology and can become addicted to it. Using technology too much can mess up daily routines and how people interact with others. It might even make them forget to do important things and feel bad when they cannot use it. In order to fix this, people need to realize they have a problem, such as setting limits on their tech use, and getting help if they need it to find a better balance in their lives.

## **6. Positive impact of technology**

Firstly, connectivity is enhanced in today's world. Cell phones, email, and social media platforms provide unprecedented connectivity, allowing individuals to maintain connections with loved ones, colleagues, and friends across distances. This increased sense of connectedness can alleviate loneliness and isolation, contributing to positive mental health outcomes.

Another major positive impact is the access to resources. Technology has democratized information and resources, empowering individuals to seek support and learn about mental health issues. Online platforms offer many resources, including articles, forums, and online communities, which can aid in self-help, increase awareness, and destigmatize mental health concerns.

## **7. Conclusion**

In conclusion, social media companies employ various psychological tricks to influence users, often leading to negative mental health outcomes such as social isolation, cyberbullying, reduced attention spans, and technology addiction. Despite these challenges, technology also offers benefits, including enhanced connectivity and access to mental health resources. Understanding these psychological strategies is crucial for mitigating their adverse effects and leveraging technology's positive aspects to promote mental well-being. By staying informed and vigilant, individuals can better protect their mental and physical health in the digital age.

## **8. References**

1. <https://www.theiotacademy.co/blog/negative-impact-of-technology-on-mental-health/>
2. [https://www.researchgate.net/figure/Self-reported-mental-health-appears-to-be-getting-worse-over-time-even-after-accounting\\_fig3\\_331575412](https://www.researchgate.net/figure/Self-reported-mental-health-appears-to-be-getting-worse-over-time-even-after-accounting_fig3_331575412)
3. <https://digitalsalutem.com/technology-in-mental-health-treatments/>
4. <https://www.psychologs.com/how-psychology-plays-an-important-role-in-the-future-of-technology/>
5. <https://bulk.ly/social-media-psychology/>
6. <https://etactics.com/blog/positive-effects-of-technology-on-mental-health>
7. <https://www.linkedin.com/pulse/impact-technology-mental-health-mark-weissburg>

