

Addiction Due to Inventions of Information Technology (Focusing Websites and Gaming)

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Abstract— Using colors in websites and application is definitely a very crucial part. The purpose of this paper is to understand how these companies are making profit by creating addiction with these colors and other brain hacking techniques and to know what actually the most successful companies like Facebook, Pinterest and many more are doing. Companies are using these techniques of which normal people don't even aware about and the effects of using them for longer time. This paper gives an overview of all the color with their terminologies also it briefs about the problem with addiction due to these colors. Furthermore, some real-life examples have been discussed when addiction have become a disease-causing health issue which is a matter of concern and WHO has recognized and added addiction in mental disorder category. Further we will also give some recommendation as a solution for the problem of the addiction which can be implemented in websites and gaming apps.

Keywords— Colours, Effects, Companies, Brain-Hacking, FAD and CCGA.

I. INTRODUCTION

A normal human being can distinguish up to 10,000 colours of which some colours are the most effective and those are proven to give a certain type of effect on the human thinking process [1].

“Colours Speak Louder Than Words Do”.
-Quote

In content marketing, colour is an emotional cue. The most used applications today are not those which are best but those which are most addictive. People are becoming addicts of these apps, then it becomes a problem because it may grow further and can cause mental disorder problem.

Brain Hacking is a term used to refer customize our phones, apps and social media to hook us into spending more and more time on their products [2].



Fig 1: Brain Two Parts Working
Left – Logical Thinking
Right – Creative Thinking

II. COLOUR EFFECTS

Every colour has some kind of effect on human brain and it will spike a certain feeling inside the brain, this thing is considered as a effect of that colour which may be good or bad [3].

1. BLUE: PRODUCTIVITY

Blue stimulates creativity and can help you achieve a state of calm and relaxed. In excess, it may encourage feelings of depression. Blue also enhance performance on a creative task [3].

The brands use this colour to make a false thinking in their sub-conscious mind because of this colour perception by the users, e.g., Facebook uses this colour most and as this colour possess power of

making feel depressed when seen in excess and as people are addicted to it they will definitely see this color more than usual, overall it is causing a bad effect on the minds of addicts [3].

2. YELLOW: HAPPINESS

Yellow in small amount can make us feel happy. However, if seen excessively it can lead to feelings of stress, which may be the reason why it is so often used as the colour for warning messages. Many Organizations use this color excessively in their logo, e.g., King Limited (Candy Crush Company) [3].

3. PURPLE: STIMULATOR

Purple gets our attention and may stimulate sexual attraction. This colour also has association with royalty and usually give impression for the finest possible quality. Organizations that uses this color excessively in their logo, e.g., Yahoo [3]

4. RED: ENERGIZER

Red is one of the most powerful colours used for showing power, strength, masculine nature, energy, excitement etc. This colour has the ability to identified from long distance very easy because of the longest wavelength [3].

Red stimulates the adrenal glands. However, when used in conjunction with repetitive or detail-oriented tasks, red also appears to improve focus and performance. Organizations use this color excessively in their logo, e.g., Coca-Cola and Red bull [3].

Colours help us memorizing certain information by increasing our attention level. The more attention focused on certain stimuli, the more it has chances to go in our permanent storage, that's the reason why we remember some brands by their colours rather than by their names [3].

III. Companies Techniques

These are few powerful techniques followed by brands to make their products addictive.

1. Facebook



Fig 2: 3 Basic steps used by Facebook to make a habit in their users to use their products [3].

- Facebook Have Designed Their every product in a way that you will at least visit more than one time in a day to them. But the reality is that users are spending an average of 50 minutes a day just on Facebook. This is up from 40 minutes a day just a year ago [3].
- The Clever Use of Colours on their website and application gives Message to the brain that this is happiness, this is safe, this is trustworthy etc [3].

2. King Limited



You may have played Candy Crush at least once or one of its many versions. The main reason for considering this company is that, this company using color psychology greatly in their products and their products are enough addictive for 2.73 billion downloads Since 2012 to 2018 and counting goes on [4].

In 2018 Candy Crush revealed that total no. of rounds played in all their games is more than 1.1 trillion, so you can think the level of addiction this brand was able to create in their users with just a game [4].

- **The Basic Strategy of this company is to make use all colours in a way to make user feel happy.**
- **If You Observe Closely the most used colours in their games are red, blue, violet, green and yellow. These all are making a brilliant effect overall in the brain of the user.**
- **If Said Scientifically releases a chemical called dopamine to make it a habit of using the application regularly [5].**

E.g. Candy Crush Screenshot.

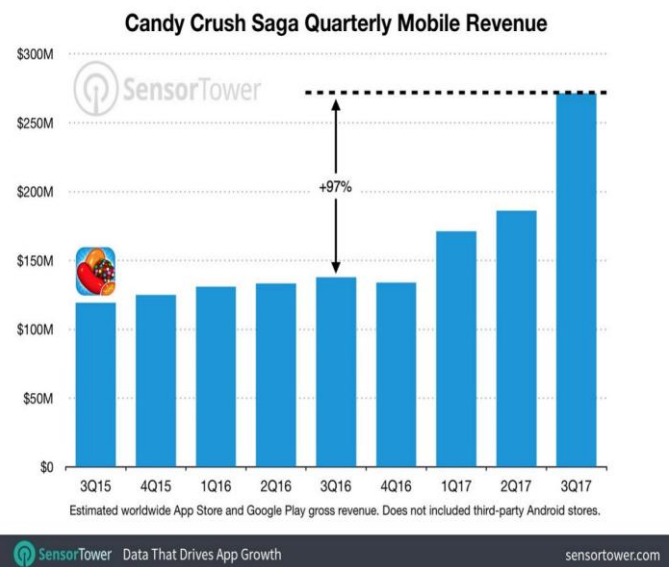


Fig 3: Showing Candy Crush Saga revenue from App store and Google Play

IV. DISCUSSION

These are only two examples of what most of the companies are doing today by playing with our brains with many techniques in which color psychology plays a big role, many companies take helps of psychologists to understand human psychology so they can trigger the most vulnerable part.

If we talk about games we are tapping into the conscious and unconscious mind: -

“We have two decision-making systems”. System one is subconscious and intuitive (quick) and system two is more methodological and considered (slow), games which incorporate both will produce the best gaming experience, in my opinion, as they will mirror what the player cognitively engages with in the real world [5].

“So, quick decisions like: 'Stand and fight or run and hide?' are exciting system one decisions, whereas those involving questions like, 'How will I earn enough money to buy that jewel-encrusted fluffy horned helmet?' are pleasing, as they give us a sense of purpose and achievement, which is more about system two. Skyrim (PC Game) does this quite well, as does PUBG” [5].

V. EFFECTS OF ADDICTION

When a habit or doing something becomes a need it is considered as addiction, there are many cases when this addiction to social network, specific apps, even internet etc. have affected the mind of the teenagers and adults.

Mental Diseases due to Extreme Addiction: -

1. Facebook Addiction Disorder: -

This Disorder was firstly discovered in 2007 in a teenager, he was so addicted to it that he wasn't able to stop him to use no less than 5 – 6 hours per day even in his exam time. “A casino website mentioned that Facebook is providing a atmosphere like casino so its very hard to leave it”.

According to US Psychologist, there are an estimated 350 million Facebook users around the world have admitted to being addicted to Facebook [6].

According to a case study on FAD it was found that Facebook is affecting most to the child of 7 – 10th

class, they forgot doing their assignments and projects because of Facebook. The most common problem was they continue to use the Facebook during class and other important activities [6].

2. Gaming Disorder: -

This type of disorder is recently added in WHO 11th revision of ICD as a pattern of gaming behavior characterized by impaired control over gaming, increasing priority given to gaming over other activities to the extent that gaming takes precedence over other interests and daily activities, and continuation or escalation of gaming despite the occurrence of negative consequences [7].

“Video game addiction is real, rare, and poorly understood”.

-German Lopez

According to Statista, the number of active gamers worldwide will rise to more than 2.7 billion people in 2021, up from 1.8 billion in 2014 and 2.3 billion in 2018 [8].

The great majority of these people will not become addicted to video games. Based on some of the best research, 1 to 3 percent of gamers are at risk [8].

People who are suffering from the gaming addiction also takes helps of platforms like CCGA (Computer Gaming Addicts Anonymous) which provides online meetings, face to face interaction support groups, meetups, hotline etc [9].

V. RECOMMENDATIONS

Any habit is generated in any person if that thing is repeated over a span of time. Repetition is giving the right environment to develop that habit which becomes an addiction later. So, our recommendation is to: -

1. Setting a time limit on websites and gaming apps. The limit should be based on IP address. It

may be violated with the help of VPN, but according to human nature it always tries to do easy task. So, it will definitely decrease the time of usage and ultimately it will lead to reduction of addiction.

This thing is now in practice by the Tencent Games for the very popular game PUBG in India.

V. CONCLUSION

The main reason behind these kinds of addiction is that we don't know most of the time where we are actually investing our time and energy and these companies are taking benefits from this. The addiction is just a habit which later becomes a need. It can be solved by avoiding exposure to these things for some time and by using our energy in some other way like making more social interaction rather than virtual.

The main reason for any kind of addiction is we are trying to find happiness (because they feel alone inside) by running away from our real life. Most people of today's generation don't try to communicate face to face rather they prefer virtual platforms to talk, this also gives a boost to your initial stage addiction.

By engaging more in real life activities, we can reduce our addiction to our virtual life easily.

Mediation is also another great way to overcome many health problems as well as addiction too and last as I mentioned above CCGA platform which is great for gaming addicts to cure their problems [10].

Addicts needs our help and we can reduce their addiction by making them more connective because

**“The Opposite of Addiction Is Not Sobriety,
The Opposite of Addiction Is Connection”.**

-Johann Hari

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