Case study of an addictive software

Name of software: Flappy Bird
Name of dev: Dong Nguyen

Software birthdate: May 2013
Software death: January 2014
Autopsy: Killed due to its addictive nature

Reasoning: The game was a simple concept, tap the screen for the bird to go up, let go of the screen the bird would automatically go down. The bird would automatically move forward.
It was a game that was easy to learn but it had a cruel sense of dissatisfaction for its users.

Users were never happy with their high score due to it usually being a low number(single digit).

People had heavily criticised him over social media and blamed him for causing patterns of addiction.

Why is software addicting?

- Software is easy to learn

- We are social creatures so we seek out interactions to maintain friendships, relationships etc...

- Software provides us with dopamine(the feel good chemical).

- It provides us with a way to escape reality(through filters, playing games to destress etc...)

- Seeking competition from others - online games, playing against friends etc...

What exactly are we looking at when we say addictive software?

Addictive software is an umbrella term, it can come in many different forms:
- Gambling addiction
- Gaming addiction
- Social media addiction
- Online shopping addiction
- Smartphone addiction
- Internet addiction

Symptoms of Software Addiction

This includes behaviour such as:
- Excessive use
- Compulsive/Impulsive effects
- Mood modification
- Withdrawal symptoms
- Relapse intervals
(Jiang & Phalp et al 2015)

The Stats:

24 MILLION internet users in Indonesia between the ages of 6-19 meet the internet addiction criteria(Sediyono & Ariwibowo 2017).

30% of users feel anxious if they haven't checked Facebook in the last two hours(Humane technology n.d.).

54% of teenagers says it would be difficult for them to give up social media(Humane technology n.d.).

The Art Of Addictive Software: The Digital Narcotic

How you're training your brain when using software?

B.F Skinner was a psychologist that had created an experiment which had involved the use of rats and they were confined to a box, they were given two different conditions where when they press a button it would either reward them or they would be punished.

It had shown that the rat was more likely to react in random intervals to a reward and was more likely to press the button again.

This can be applied to social media as we are actively seeking rewards constantly by going onto social media to fill in for the boredom we recieve and we are training our brain to form a habit.

Reward prediction error(RPE)

This is a tactic that keeps users coming back for more, its used to engage users with content because of a hint of unpredictability.

We come back for more after we struggle through something, because we seek a reward.

This is where we require a balance of negative and positive emotions because the user wants to seek a challenge in some way.

The Dopamine Effect

Dopamine is a chemical produced by the brain and it targets three different pathways in the brain and when dysfunctional can lead to addiction. This can be heavily linked to social media as we constantly check our phones for a sense of dopamine activation as we crave more entertainment (Hartley 2018).

- We are losing quality sleep
- we are getting higher rates of depression
- Gradually lowering our attention span due to our ill habit forming with the use of technology (humane technology n.d).

Designing safer systems

- Reduce the number of notifications unless its urgent(meaning life or death).

- Be transparent with the users usage
  - Encourage the user to look at their analytics for software

- Encourage better usage of their time - don't demand their time

- Use designs that focuses on the user NOT manipulation designs that demands the users time.

- Keep addiction as a consideration THROUGHOUT THE DEVELOPMENT
  - from the starting point and throughout production

- Bring in psychiatrists, addiction experts for better help on how to reduce the impact of addiction for users overall

- Ask yourself - have I done all I can to reduce the effects of addiction?

Is "Gamification" good or bad?

Gamification is not necessarily a bad thing but when abused it can cause addictive symptoms. Gamification is the idea of making something more engaging for its users by adding game like desings to the software.

Humans primal instinct is to seek competition, gain achievements and reap the reward, the use of this in software allows us to virtualise this effect with no real reward being achieved.

Gamification can be used to help motivate individuals to do the right thing, to get them to form better habits(Ali 2018).

Creating addictive patterns of software

- Target notifications/content
  - One method of getting our engagement is social media pages engaging us with content they know we take interest in
    - for example sports, if we are interested in politics, fashion etc...
  - Social media sites are known for using our data and pushing out content using algorithms according to our interests.

- Endless loops of scrolling
  - Notice how efficient it is to receive new content and we don't have to actively seek new content.
    - This is because they make scrolling so efficient as they dont want you to know how long you are engaging in content.

- Habit forming designs

Call for action!

For further information these links are heavily recommended for extra reading:

- The Social Dilemma documentary

- https://www.humanetech.com/brain-science
  - the psychological explanation of how our brain is affected by social media.

- https://www.ted.com/talks/tristan_harris_how_better_tech_could_protect_us_from_distraction
  - The answer on how we can better spend our time using technology, shifting the goalpost of how technology gets our attention.

- https://medium.com/thrive-global/how-technology-hijacks-peoples-minds-from-a-magician-and-google-s-design-ethicist-56d62ef5edf3#.cu1bui9js

UX code of conduct redesigned

- Create user centred and safe designs for users

- Be clear with your user on the risk of addiction.

- Take responsibility of your design! Make your design safe for your users! Protect them from harm as they are investing their time by using your application.

- Gain feedback from your users
  - check analytics and see if there are any ways to reduce the effects of over usage in software.

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