Reconnecting with our thoughts - How technology addiction impedes human thought: some proposed interventions

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We have a new addiction problem, screen addiction. The infamous 5 min break on social media that turns into an hour before anyone realizes that they just fell into a bottomless pit. The uncontrolled use of technology can cause addiction in an individual. It has all the signs and symptoms that any drug-based addiction has on a person. Research has shown that screen addiction has harmful mental and physical effects (Arooj, Munir, & Yasmeen, 2022). Here we are taking a look at how technology is making us lose connection with our thoughts.

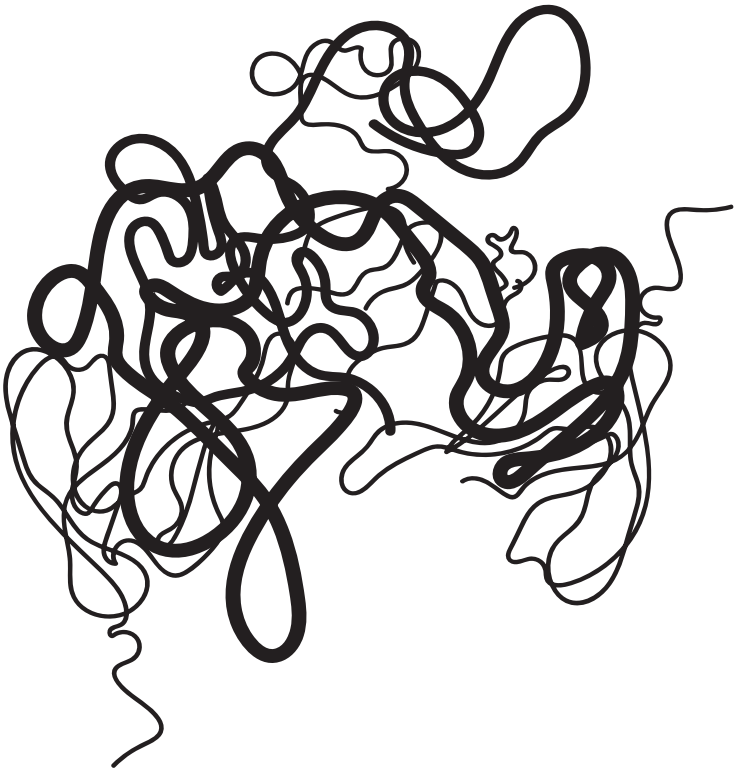

Figure 1:
'The Thoughts in your Brain', An abstract illustration representing thoughts in your brain. The thinner lines represent your brain and the thicker lines represent thoughts, Karthika Baiju.

Attention, Concentration, Thought

Differentiating what attention, concentration, and thought means is an important aspect of this work. Their differences are often confused and these terms get used interchangeably.

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Figure 2:
'Absorbed by Light', The installation depicts people fixated with their smartphones, Gali May Lucas, Amsterdam Light Festival, 2018. Credit: Design Bridge & Gali May Lucas

Attention

"*attention (to something/somebody): the act of listening to, looking at or thinking about something/somebody carefully; interest that people show in somebody/something" - Oxford Languages*.

Attention refers to acting upon or listening to something. It can be listening to your thought or it can be some external factor. Attention can be good or bad. For this research question, thought is a part of attention but not the whole.

Concentration

"*the action or power of focusing one's attention or mental effort" - Oxford Languages*.

Concentration is the higher level of attention when one is only thinking of one thing and everything else is out of the mind.

Thinking

"*the process of using one's mind to consider or reason about something" - Oxford Languages*.

Attention and concentration are not what is being discussed when talking about thought. Thought is the building block of attention and concentration.

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"All truly great thoughts are conceived while walking."

- **Friedrich Nietzsche**, Twilight of the Idols

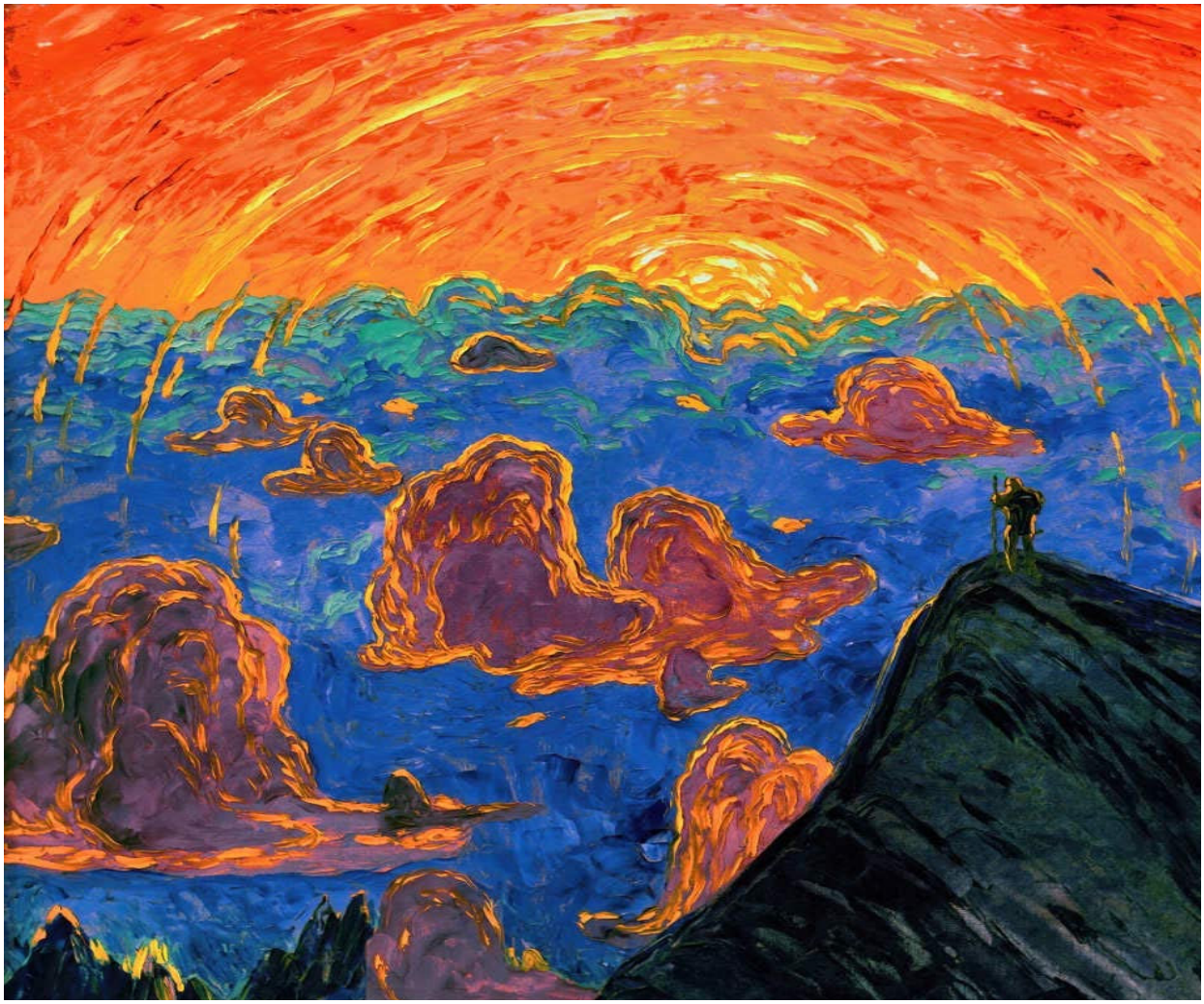

Figure 3:
The lone figure on the mountain. Wenzel Hablik, "Mont Blanc Sunset" (1906), oil on canvas, 96 x 96 cm (© Wenzel-Hablik-Stiftung, Itzehoe)

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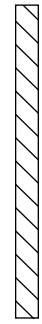
Our state right now

The screen-life version of the self has become more real to people than the real-life version of the self (Rotondi, Stanca, & Tomasuolo, 2017). Society has become a place where people are more comfortable having their heads down and distracted by the screen than exploring the world around them and reflecting on the world inside them.

While thinking, the brain goes into its default mode network. This is the part of our brain that allows us to daydream, take time to reflect, maximize the moment of being in the now, think about the future, and create a sense of self that frames the word "I" (Buckner, Andrews-Hanna, & Schacter, 2008). The default mode network is at work when we let our mind wander without any external stimuli to respond to (Mason, et al., 2007). It allows for the creation of new ideas. When Friedrich Nietzsche said, "All truly great thoughts are conceived while walking," in Twilight of the Idol, he was referencing the essence of creating ideas when the mind has the time and space to think.

A 2014 study shows that people would rather administer an electric shock to themselves rather than be alone with their thoughts for 15 mins (Wilson, et al., 2014). For the untrained mind, being alone with their thoughts is not an easy thing (Quandt, n.d.). Technology does not make this better; it provides more distractions than ever before. The increased use of social media has led to a decrease in the ability of people to be mindful and reflect on their thoughts, actions, and surroundings (Sriwilai & Charoensukmongkol, 2016). If measuring the impact that screens have on people, just having a screen in the line of sight is enough to cause distraction (it doesn't even have to be on) (Ward, Duke, Gneezy, & Bos, 2017).



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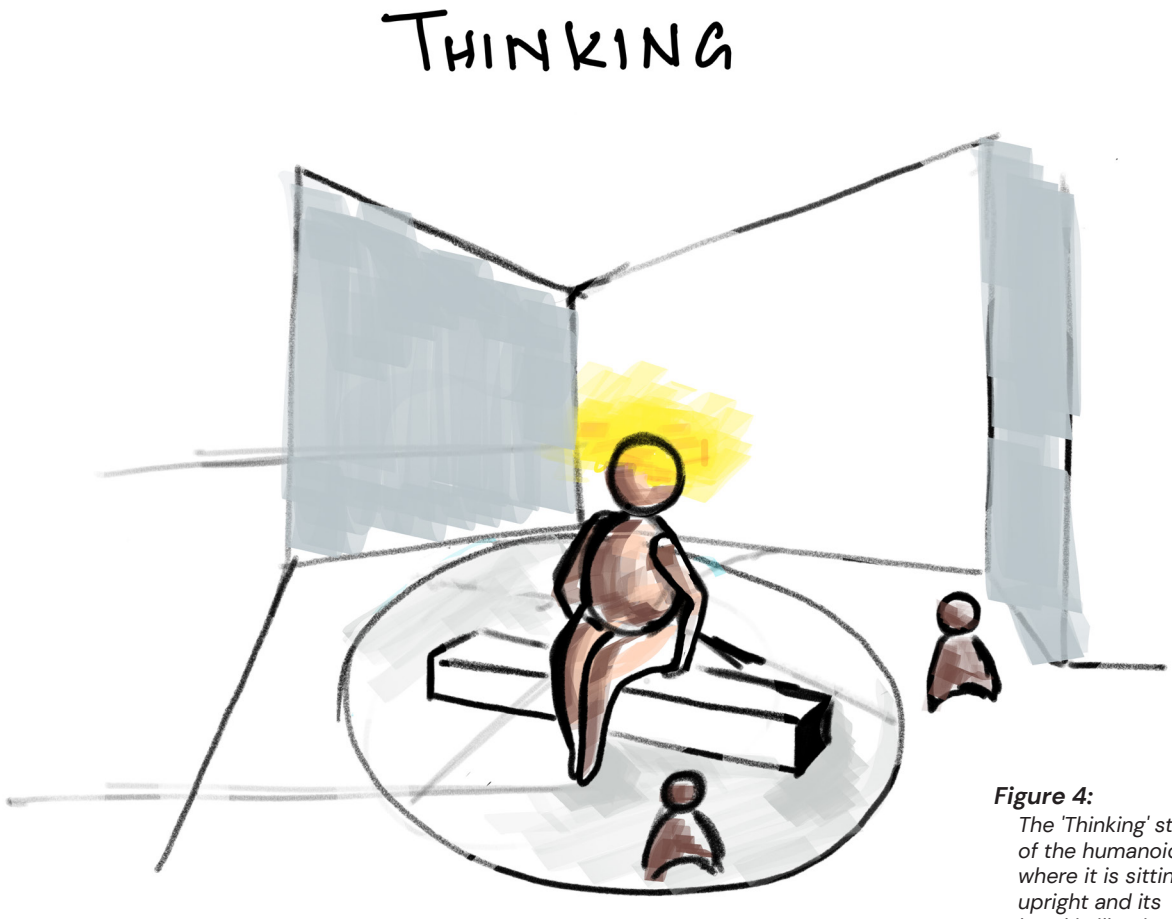

Figure 4:
The 'Thinking' state of the humanoid where it is sitting upright and its head is illuminated yellow to represent thought, "Default", Conceptual Sketch, Karthika Baiju

Intervention 1 – Art Installation: "Default"

Calling attention through an interactive art installation called "Default".

An interactive Installation of an abstract humanoid figure which is 3 times the size of a regular human. It has its head illuminated and pulsing with yellow light to represent thought. The humanoid will have an exclusion zone around it. If someone with a screen walks into the exclusion zone, the figure hunches into the "I am on my phone" stance, holding a phone. The hand with the phone

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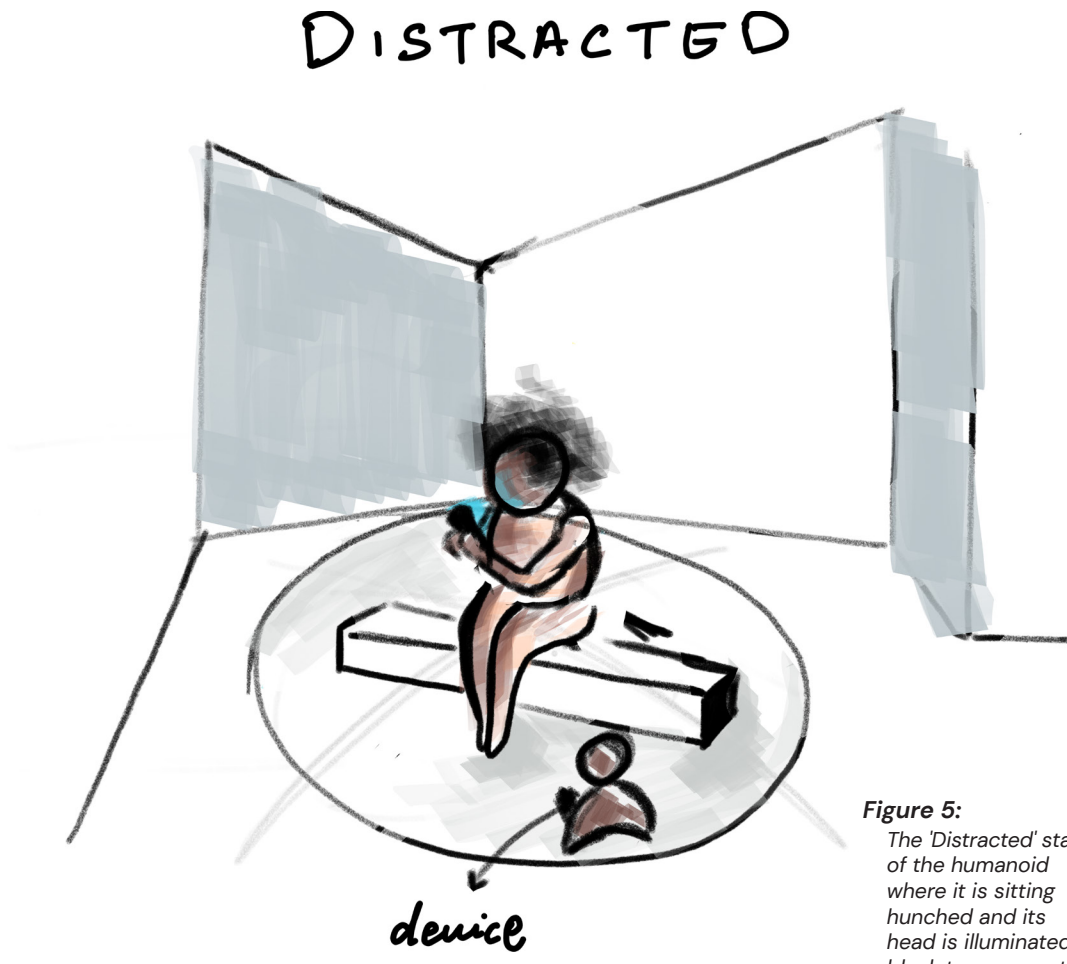

Figure 5:
The 'Distracted' state of the humanoid where it is sitting hunched and its head is illuminated black to represent loss of thought, "Default", Conceptual Sketch, Karthika Baiju

starts glowing blue light that is reflected on the humanoid's face. The light in the figure's head turns black to represent the loss of thought due to the distractions of the phone. The audience can see the figure up close only if they leave their device behind and enter the exclusion zone.

The purpose of the installation is to call attention to the fact that having a screen in sight is enough to cause distraction. This distraction leads to the loss of thought and the beginning of the mindless scrolling and consumption of information.

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"I share, therefor I am"

– **Sherry Turkle**,

Reclaiming Conversations

In her book "Reclaiming Conversation" (Turkle, 2015), Sherry Turkle claims that people feel they need to share their thoughts or feelings over posts, messages, or texting in order to think. She also writes about how people get too anxious and/or bored when they are alone without their phones. People are always connected and sharing, leading to the loss of their ability to be alone with their thoughts, to think, and reflect. Screens have been constantly providing the next information, the next entertainment, or the next hit of connection, and a moment of solitude or rest is considered non-productive. Just scrolling through apps without opening any app is better than having a dull moment. Phones keep the mind occupied all the time that a moment of 'silence' is equated with being bored and unproductive (Smith, 2015).

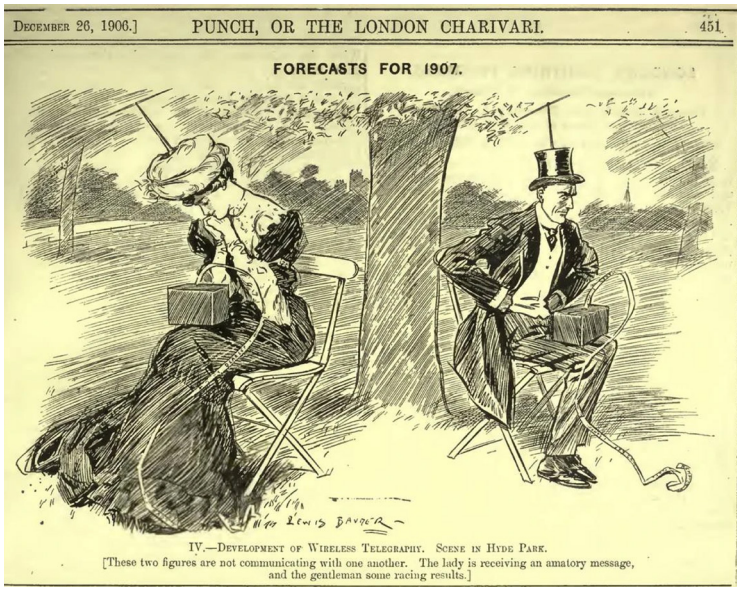

Figure 6:
Forecasts for 1907. IV. - The Development of Wireless Telegraphy. Scene in Hyde Park. These two figures are not communicating with one another. The lady is receiving an amatory message, and the gentleman com racing results. Technology has a deep history of keeping us hooked. Punch cartoons by Lewis Baumer. Credit: Punch

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Intervention 2 – Quantify Thought: "Thought Doodle"

People are so accustomed to being busy or keeping themselves busy that a moment for reflection feels like they are doing nothing and just wasting time. Bringing back the notion that taking time to think and investing time for mental rest is not equal to doing nothing through the 'Thought Doodle', a device that helps quantify thought.

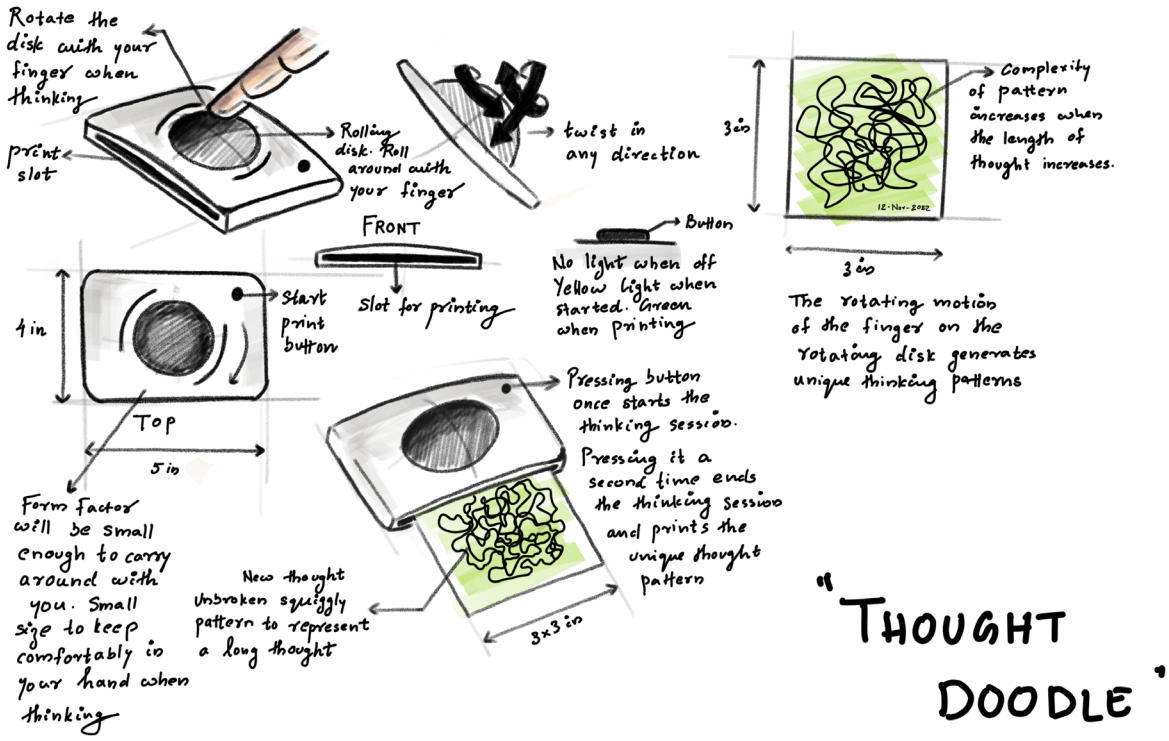

Figure 7:
Product sketch of "Thought Doodle" device. Karthika Baiju

Thought Doodle is a compact portable device with a disk at the center that people can use to fidget with when thinking. The device does not have any function other than to create unique patterns as you fidget with the disk and print the pattern at the end. The printed thought pattern helps to quantify the thinking session.

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"Screens have become a way for me to turn off my brain (thoughts)."

– **User Insight, John Brechbill**

Screens have become a way for many people to shut down their thoughts and pass the time by consuming content. While conducting user research on this study, people were asked to reflect on their week. 80% of the people said they feel like they have had very few instances where they were alone and connected with their thoughts. During the times they feel like they might be idle, like when sitting on the BART, waiting in line, or having lunch; they mentioned they migrated to consuming content or being distracted by their screens.

"We have become a society optimised for attention rather than impact"

- Aza Raskin

Technology is designed to hack into human vulnerability and the brain's reward system. Society values capturing the attention of the people rather than the impact on the people and their lives. Attention is the new currency since each person has a finite amount of attention to give. The companies that succeed today are the ones that have learned to monetize attention successfully. The success of many new technologies is measured by the amount of engagement that it generates (Raskin, 2021). It doesn't matter what sort of engagement. Even negative engagement is still engagement. When the mindset of the technology industry is like this, how can we expect new technologies to be mindful of human nature, let alone be mindful of an unmeasurable quantity like our ability to connect without thoughts?

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Intervention 3 – Adoption of Slow Technology

Technology and its relationship with human interaction need to be redesigned. Technology should exist to augment human activities, not as a skinner box. Attention should not be something that is monetized and thought should not be something that gets destroyed as a result. Instead, new technology design should aim for reflection, mental rest, and support a long-term connection between humans and technology (Odom, Stolterman, & Chen, Extending a Theory of Slow Technology for Design through Artifact Analysis, 2022).

Slow technology is a new area of research that creates technology and technological interactions in a meaningful way. It brings forth the concept that technology should not be designed to integrate seamlessly and without friction into everyday life but should be designed for moments of reflection and mental rest (Hallnäs & Redström, 2001). It advocates for designing for long-term and mindful interactions between humans and technology rather than for the short term. It enables us to be more aware of the

Figure 8:
Manual Reader by Ishac Bertran: The project tackled the concept of information overload and the overconsumption of information. One would have to move the tiny screen manually to display more of the message. It brings consciousness back into our concept of information consumption. Credit: www.ishback.com

Figure 9:
Memory Device by Ishac Bertran: It's a project that prompts reflection on the current trend of tremendous data collection and data retrieval. We are collecting so much data that the value associated with them is lost. The Memory Device allows you to record a line for any event without providing any other context. It honors the right to forgetting, something that technology of today is not designed for.. Credit: www.ishback.com

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Figure 10:
OLO radio by Will Odom: The radio plays music that you have listened to in the past 24 hours, Month (Jan – Dec), or Years ("Birth" till now"). It allows for exploration and deep listening of songs from your digital library by using a slider to slide through time (Odom & Duel, On the design of OLO Radio: Investigating metadata as a design material, 2018). Credit: http://willodom.com/

technology we are using and be more intentional with the actions that we perform with technology.

Over the years, slow technology has evolved to include designing for slowness, solitude and for technology to be used across multiple generations (Odom & Duel, On the design of OLO Radio: Investigating metadata as a design material, 2018). Adopting slow technology is a great way for people to get the time away from distraction to effectively connect with their thoughts.

Conclusion

Technology that we have today has a lot of benefits. It helps us get things done quicker; it lets us get connected to people across the world, and get all the world's information at our fingertips. It's time we start a serious discussion about what the overuse of technology is doing to us and how technology designed now negatively impacts human behavior and ability to think. People are in a state of wanting to be available online always and everywhere. This want has resulted in people becoming impatient when replies and updates are delayed. Even though we feel connected all the time, in reality, we are never fully present at any moment (Smith, 2015). Technology is here to stay and as designers, it's up to us to redesign how we bring technology into a person's life.

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