

ORIGINAL ARTICLE

Technology, Boredom and Intellectual-Spiritual Lethargy: Exploring the Impact of Technology on the Mental Well-being of Over-Stimulated Millennials

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ABSTRACT

Introduction: Generally, it is considered that boredom is a product of low arousal and can be addressed by the availability of stimulating activities and choices. This study helps see the connection between anxiety and boredom on the one hand and technological hyper-stimulation and boredom, on the other. We define existential boredom as the mood of anxiety about the uncertainty of human life and eventual death. This feeling is positive if it leads one to contemplation or deeper understanding. The hypothesis behind this paper is that in the absence of right resources in the current world, to face and deal with existential anxiety, boredom becomes a negative way where such thoughts and feelings, when encountered, are suppressed through technological distractions. **Methods:** We chose interpretive interviews because they allow the interviewee to have a reflective conversation about their state and allow themselves to become more aware of the nature of distractions and their impact on their mental and spiritual health. More technological stimulation means more boredom since the cause of boredom has not been addressed. **Results:** Our results indicate that lingering boredom has a relationship with technological overstimulation. **Conclusion:** Technology impacts our experience of boredom in complex, non-linear ways that cannot be understood without a philosophical and phenomenological analysis of both boredom and technology. **Implications:** Once we have understood this dimension of boredom and its harmful impact when young people try to suppress it through over-engagement with technology, we hope experts could come up with more effective ways of dealing with it.

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INTRODUCTION

A cursory glance at the gadgets people use today versus the gadgets that we had access to 20 years ago makes us think about where modern technology is heading to and the increasing speed with which new technologies emerge today(1). The pace of technological development is such that the difference in technological impact is evident today even within the same generation. Benjamin Butler (2), a futurist and founder of the Emerging Future Institute predicted that in the next 5 years, we will have

32 times improved technologies and this improvement will be a 1000 times better in the next 10 years.

These technologies are astonishing and have often successfully removed the human barriers that we faced earlier and have impacted us in disparate ways. While earlier technologies used to be produced with a certain end in mind, modern technologies today have reversed the very relationship of means producing ends (3). Technological means have become human needs and we adapt our lives accordingly. For example, cell phones are not just valued for their functional aspect—that they help us communicate, rather they are valued for several other uses they can be put to and we build our life styles around their use.

It is almost impossible to isolate one technology and look at it alone. It is both necessary and important to look at the whole network of technology. The Internet is one such technology which has shaped many other technologies. Our dependence on the Internet and the amount of time we spend on smart phones have led to the idea that in the Abraham Maslow Hierarchy of needs, the Wi-Fi and battery are to be placed under the most basic needs along with other physiological needs such as food and sleep.

Technology not only has shaped individual lifestyles, rather it has altered the social structures of our society. In his article titled 'Do Artifacts have Politics', Langdon Winner (4) discusses how technical things have political qualities in two ways. The very nature of design and characteristics of a particular technology or device provides a convenient way of establishing patterns of power and authority in a given setting and secondly certain technologies require an operating environment where certain social conditions are met.

The 'routinization of novelty' has psychological impact on our minds. The constant need for change, innovation, creativity and an interaction with electronically over-stimulated virtual world has transformed the culture that the millennial generation lives in. Most kids today play electronic games and these are not constant for instance there was Candy Crush craze followed by Pokémon Go craze and new games continue replacing these old ones (56). Another example is that of selfie addiction and how just taking selfies was not enough rather people wanted to have unique selfies.

Boredom is defined as "a state of weariness or ennui resulting from a lack of engagement with stimuli in the environment. It is generally considered to be one of the least desirable conditions of daily life and is often identified by individuals as a cause of feeling depressed" (7). Boredom is treated as something which needs to be removed as soon as it is felt because it leads us to think. We are so uncomfortable as humans to just sit with our thoughts that according to one study, participants were so averse to being alone with their thoughts for 15 minutes that they chose to put themselves under electric shock which they abhorred earlier (8).

John Eastwood, a researcher at York University has been researching on boredom since more than a decade. According to him, someone who is bored is not short of activities to engage themselves, rather they are unable to be stimulated by any of those activities and engagements (9). Most of these definitions understood boredom in terms of external stimulation and did not identify internal factors to be causing boredom; they also don't converge on one thing that could be termed as the essence of the experience of boredom.

Boredom has largely been treated as a nuisance or a negative state of experience which positively correlates with detrimental psychological and social factors such as pathological gambling and depression (10), anxiety (11), and aggression (12). It negatively correlates with purpose in life (13), and self-actualization (14).

Nevertheless, recent research increasingly shows that boredom can direct us towards prosocial self-beneficial behavior. Wijnand A. P. van Tilburg and Eric R. Igou very recently published their study in which they found that the state of boredom serves an important function for regulating the self. When one does not find any purposeful activity to engage in, one looks for interpersonal interaction. In searching for meaning in relationships, individuals tend to become prosocial (15).

Heidegger investigated the mood of anxiety and understood it as a positive awareness of existential status and believed that it should not be deprecated. (16p. 491). To abandon this feeling of anxiety and to treat it negatively by suppressing it through distractions, such as technological over-stimulation, is to embrace nihilism according to Heidegger. To face the burden of anxiety, to face the uncertainty of life by living real experiences is not dangerous, rather, the avoidance of doing so is a nihilistic refusal of the realities of life.

It is often believed that new and stimulating experiences could remove dissatisfaction and boredom from one's life. Paradoxically, this tendency has resulted in demanding more and more novel activities. This is a particularly relevant feature in the 21st century as the technologies of today provide constant novelty and this is shaping how humans adapt to situations. A Hungarian psychologist, Csikszentmihalyi Mihaly commented whether the continuous supply for novelty has become a burden rather than a blessing for us humans" (17).

Still, there is no research specifically on boredom and technology. John Eastwood, who has been studying boredom since 2001 said in an interview in 2016 that: "There is something about the use of media that makes people more prone to boredom...Researchers have begun to connect boredom with the over-stimulation we experience in our technology driven society" (9). It is this tendency of boredom associated with modern technology that we have attempted to explore in this study.

Our technological age is characterized by the mood of boredom and contemplation is a rarity. More technological stimulation means more boredom since the cause of boredom has not been addressed. Once we understand this dimension of boredom faced by the millennials and Gen Z and the harmful impact it creates when they try to suppress it through over-engagement with technology, we hope experts could come up with more effective ways of dealing with it.

The Islamic (Maqasidic) Perspective on Technologically Instigated Boredom

Spiritual lethargy is specific to our postmodern condition where individuals perpetually seek technological innovation. Although this innovation spurs economic growth, it is reflective of deeper boredom, with the human condition as a whole. Postmodern world is bereft of any deeper meaning to human life and struggles and here boredom assumes the form of an existential boredom referred to as ennui. People are not bored because of excess leisure but rather because they have lost the traditional religious ideals and practices to counter this boredom. A proficient means of combating boredom in postmodern technological culture is through conspicuous consumption of technological products (19).

This boredom is a reflection of existential anxiety that deeply affects postmodern life due to the inability of postmodern beings to find meaning in their contingency and finitude. Anxiety is an authentic human condition produced when one contemplates on human contingency and tries to encounter and address that by finding a meaning behind that contingency (20). Boredom is conversely, an inauthentic state, a nihilistic refusal and avoidance to engage in such contemplation. The absence of meaning and purpose is no longer experienced as a loss. Nihilism represents profound boredom with a world from which human beings have ceased to extract meaning and this is where modern technology plays its role. Modern technology cashes in on this mood of boredom while removing the alternative life forms that could help overcome the boredom and associated anxiety.

Both the act of innovation and the consumption of innovative products push back the existential anxiety. This anxiety otherwise allows one to question the purpose of their life. Technological hyperactivity helps us escape the boredom resulting from the absence of serious life objectives. Ontological questioning is avoided and evaded through technological applications that distract and overstimulate at the same time. These activities act more as time-killing mechanisms and are meant to conceal the lack of moral purpose and the ensuing boredom. Thiele (16) and Borgmann (21) provide the example of video games to showcase how modern technology capitalizes upon postmodern nihilism and vice versa.

The technological drive acts both as the symptom of, and contributing cause to, the acceptance of human purposelessness. The philosophical and cultural nihilism informs and shapes the ideas of the CEOs of transnational technological corporations. These tech giants then design specific technologies that shape the society according to that nihilistic philosophy. In this scenario "spiritual nomadism and the constant flux of innovation replaces the patient task of discovering and

caring for a temporal abode in the world" (16 p. 492). Eventually, the heightened technological activity cannot and does not quench the existential- spiritual thirst for meaning and purpose.

Contemporary technological development driven by innovation, only sustains what is to be considered as inauthentic human lives from an Islamic perspective. The character of modern technology is such that it is bound to prevent self-reflection and rectification of the current state of affairs. A paradigm of technology, informed by Islamic worldview, should reinforce sustained reflection (tafakkur) and teleological thinking (tadabbur), self-awareness and God consciousness (taqwā). It should be able to help design technology that prevents overstimulation and distractions and translate the Islamic ideas of compassion, community building, care and cooperation, putting them into effect in everyday routine actions and social transactions (mu'āmalāt).

Quran considers human beings as spiritual entities, not homo fabers (Quran 91:7-10). Modern technology bars deep thinking by making life trivial. The result is loss of richness and depth to analyze human purposes and aims. The negative effect engendered by technology, in addition to specific environmental, social and health problems, is the fostering of consumerism, providing a plethora of mindless and trivial pursuits and distractions. Human beings no longer consume in order to bring ease, but for consoling their psychological distress resulting from spiritual-intellectual emptiness.

Rather than seeing boredom as positive or negative, this study highlights the functional purpose of boredom and it serves the quest for re-establishing a sense of meaning in life (22-26). The findings of this study can further be understood or substantiated by the fact that lack of challenge and meaning are distinguishing features of the boredom experience and this differentiates it from other negative affective experiences such as anger, sadness and frustration (27-28). These earlier studies follow a quantitative method of inquiry by asking participants to either fill out surveys or putting them under experimental conditions while in the present study we explored qualitatively how boredom is associated with seeking meaning and meaningful engagement in life.

This study aimed to find answers to the following questions:

- How can Existential Boredom be understood?
- What experience do they undergo when young people exclaim that they are bored?
- Is boredom a potential byproduct of high arousal, in addition to low arousal?
- Is there a need to redefine boredom; is there a need in current scholarship to include a new kind of boredom?
- How can we better grasp the concept of boredom completely when we measure it qualitatively?

- What is the relationship of emergence of boredom and the incessant use of internet technologies?

MATERIALS AND METHODS

The key concepts used in this study are boredom, distraction, technological over-stimulation, and routinization of novelty. For the purpose of this research, Interpretative Phenomenological Analysis (IPA) was carried out. This is a qualitative research method in Psychology and has been developed by psychologist Jonathan Smith (29). IPA is a methodology that has an idiographic focus rather than a nomothetic one i.e. it emphasizes on the unique, subjective experience rather than generalized experiences that are applicable to all. So it serves as an insightful, in-depth source of data. It is an attempt to explore the meaning-making process that participants go through and aims to interpret how a person makes sense of a particular phenomenon in a specific context and hence is based on the concepts of hermeneutics and phenomenology.

We chose this methodology because we wanted to particularly examine how the users of technology themselves make sense of their experience. Technology is a human creation so ultimately the human beings are responsible for the negative impacts of technology. Although we do blame those responsible for misusing these technologies, the designers, producers and those who commercialize these technologies seldom assume the responsibility.

The ideal number of participants for an IPA range from 3-15 but 3 is a good number (30). This was a study to break new grounds with respect to the gathering of data to see a relationship between existential boredom and technology, we did three interviews and hope the future research to build upon our methodology.

Inclusion Criteria: Since the purpose of this study was to explore how the experience of boredom has evolved over the years with the advancement in technology and what it meant to the participants, the participants from 20-25 age bracket were interviewed. There were two female university students and one male university student. Younger participants were not interviewed since IPA requires an in-depth understanding of what one experiences and to be able to communicate that experience mature participants are preferred. Additionally, in the Pakistani cultural context, people of this age have experienced the sudden boom in technology at teenage. The interview schedule is appended to familiarize the reader with the way the interviews were structured.

The sample was gathered through purposive sampling. It is from the shared experience of the participants that they were able to provide valuable insight into the given areas of research. Although IPA uses interviews,

focus group, and diary keeping, this study adhered to individual semi-structured interviews mainly to desist participants from getting influenced by the presence of others and also to clarify what exactly participants meant when they said something. The stance while conducting the interview was not interrogative; rather it was an open-ended inquiry and there was flexibility in allowing the participants to take charge of the conversation. The interview schedule included both open-ended and close-ended questions and short, possible prompts were identified that are usually part of an IPA, prior to the interview. These helped the interviewees to elaborate further. They were asked to describe their interaction with technology, smartphones, tablets/iPad and laptop or other technologies related to entertainment, gaming and communication, as they grew up. How did they feel about this interaction with technology, what boredom meant to them, has their relationship with technology changed their experience of boredom, if they ever tried to live without technology and what purpose of life meant to them.

The prompts used were what games you played as a child? Did your parents allow it, were there any restrictions? How much physical activities you were involved in? At what age you got access to Wi-Fi/Internet? At what age you started using a smartphone/tablet/laptop? What gadgets you own currently? How many hours you spend on them? For what purposes you use them? Specific pattern in using technology? Do you feel like it controls you? Do you use it as you planned? Is the use goal-oriented? How is the experience like? How did it make you feel? What makes you bored? What strategies you used to deal with it? Imagine a person who has never experienced boredom and then explain what it means to you. Is it useful, useless or neutral? What is our natural response to it/what do you want to do most when you are bored? Do you use technology when you feel bored? If yes, how does technology impact boredom? How does technology relate to the antecedents to boredom? How it impacts the experience of boredom itself? How does technology impact the strategies used to deal with boredom? Do you feel the need to change it? Would you want to change it? Have the methods you used been effective? How was the experience like? What did you feel and think? Was it good/bad/neutral? Would you repeat the behavior? Was it difficult or easy? What made it possible to live without technology? Do you have a purpose in life? Do you feel the need to have one? How does it feel/what do you think about having or not having one? Do you think purpose in life will impact your relation with technology and your experience of boredom?

Ethical Approval

The Research Ethics Committee (REC) of the Institute of Business Administration (IBA) granted the ethical approval for conducting research with human participants, dated March 15, 2022.

RESULT

The three interviewees' response provided a rich primary source on which an in-depth analysis could be made and insights gathered from the viewpoint of the users of technology themselves. This section details a number of emergent themes that were found from the analyses of the transcriptions. These recurrent themes were found across all three interviewees but sometimes they manifested differently. We have analyzed these themes and will be discussing them in light of our earlier discussions.

a. Temporality

The concept of time is important in the experience of boredom and its relation to technology as it gets mentioned 157 times during the interview. It can be understood by further breaking it down into various components.

1. Being Alone with Our Thoughts or Selves: Technology as an Existential Escape: Ali highlights how he uses his mobile phone or iPad a lot at time because he feels so bored. One of the exceptions to not feeling bored are the lunches where he is with his friends because then 'you are conversing in real time'. Upon further cross questioning, it is found that it is boring to just eat and not be thinking something. It's almost like 'you want to keep yourself busy or entangled in something' while you eat, so conversing in real time stops A3 from being bored because he is in the moment talking and thinking while eating. On the other hand, surprisingly it is very uncomfortable to be left alone with our thoughts. He exclaimed:

It is uncomfortable to be free and think [] being alone with your thoughts is very hard to do in this age. How would you even imagine to be alone with your thoughts? You have to be in the zone thinking about something or anything. It is hard for even sit for 10 minutes straight and that is why I think even in class we feel like our attention is getting diverted [] a lot of us use laptops in class []. If someone says here is a challenge to sit for 30 minutes straight, I would actually fail because it is very hard to do.

It has been shown in various studies that people would prefer to administer electric shocks to themselves rather than just sit free with their thoughts. So for A3, he uses his iPad specifically at night until he is almost asleep which indicates the extent to which we don't want to be left alone with our thoughts. Our technology use further makes us uncomfortable in sitting with our own thoughts because firstly it is designed in such a way that you keep going back to it and secondly because is difficult to focus our attention on one thing and as a result it gets diverted. So for example in class settings, we can't resist checking our cellphones as we are not able to focus on just the lecture. We try to get involved in a lot of things simultaneously and that just results in a superficial focus

on whatever we keep 'switching' about.

2. Active or Passive Thinking: Another way to look at time is how we use it in relation to technology. While we are using our gadgets, we tend to move to passive thinking rather than active thinking. Technology subsidizes active thinking. When I asked A3 about contemplating on life in such a technological age, he agreed that contemplation is very important. He also stated: 'I think it requires a lot more active thinking rather than passive thinking which technology subsidizes'. So when we get bored we entertain ourselves and think passively. This means that either we aren't at all engaged or even if we are, we are not actively engaged in the process of contemplation. It isn't getting the focus of attention that it deserves to get and so it cannot be benefited from as well. For contemplation to work, you need to be thinking in real time, actively.

Another way in which this works is that technology pushes all other thoughts, even important ones at the back of our mind. So for example A1 felt like even though she knew at 'the back of her head' that talking to strangers isn't right, she still talked to them. Similarly, A2 highlighted how she used illegal streaming websites to download videos and as she said this, she gave a faint embarrassed smile. So even though they know, merely knowing is not enough, we have to actively think about it.

3. Division of time: Time is divided in various ways in relation to technology and boredom.

Micro division of time: The Internet initially resulted in A1 and A2 dividing their time on the Internet with their siblings because they just had one desktop computer at home. Later the dynamics changed. A1 described her current relation with technology in the following words: 'I just basically switch through different apps in a very short amount of time but I just keep switching', this switching is unconscious for her and as she said this she picked up her phone and fiddled with it. It was only after a moment that she realized she was giving an interview and then she kept her phone aside. In doing so she micro divides her time in an attempt to visit some of the multiple avenues available which are all updated through an Internet connection. When I inquired if she felt bored as she fiddled with her phone, she replied that she did. This is interesting because it implies that we have started to feel bored even though the only constant in technology industry (31) is change or novelty.

She also stated that people are reading more now because of the Internet because information is presented in snippets and so it takes less time to read it. She gave the example of a tweet which has been reduced from 280 characters to 140 characters so "you read as many tweets as there are in front of you because you feel like I'll get through, but if there are like 9 paged long essays in a book or in a magazine it would be like,

Oh! Who has the time for that or I will find some time later and then you end up never doing it". This raises further questions as to does reading more and gathering snippets of information about a wide variety of subjects more useful than reading an in-depth piece about something and this basically comes to the whole quality over quantity debate.

The reduced tweet characters are an example of micro blogging. This is part of an approach of which other examples include mobisodes and micro-advertising, and it is increasingly seen as part of the very design of technology.

4. Infinite choices but finite time: We not just have the tendency as humans to fill in our free time, it seems to be the case now that our options are so unlimited that time itself has becoming the limiting factor. We can always watch videos on YouTube, play games on our mobile phones, or read something on the Internet but we are limited by the finite amount of time we have available. For A3 who was addicted to playing console games, he could have continued playing them but he had to stop playing because he had to use his time to study for the upcoming exams. He planned his time in the sense that he would study for the amount of time as required and would spend the rest of time playing. This also reduced the time that he spent in outside activities as a teenager. For A1 she has to stop getting distracted and watching videos on YouTube while using her laptop because she needs to complete her undergraduate thesis.

Another way of looking at how we spend out finite time is by looking at how much time the three interviewees spent on technology. A2 laughed and said that she spent 12 hours on her phone alone which was more than healthy. For A1, she and her sisters wanted to spend maximum time on the Internet and that it would be easier for her to describe how much time she does not spent on the Internet which she defines as when she is sleeping or eating! For A3, iPad is always with me when I am at home so its constant [] so it's hard to define how much time I spent because almost all the time...so for example I am sitting here, I have my smartphone on me I can check it maybe I will check it for five minutes or maybe I will check it for 10 minutes so it's a skewed ratio which I am not able to describe. A better way to put is that I can't stay away from my phone for a long time.

This basically highlights how it is difficult for us to separate time from our technology because we spend almost all the time on it. Thus he also mentions there is a need to 'reclaim our time' which I will talk about in detail later. Being connected all the time is seen as something necessary because of the way in which the Internet has become an all-encompassing phenomenon today, a medium that generates further mediums. Internet has become necessary even for things that

previously could be done without it. We feel like we are 'supposed' to be connected to a lot of people and 'supposed' to have social media. It is used for multiple purposes and everything seems to become part of it such as news, entertainment, gaming, communication, education, social media, information, learning musical devices. Ali felt that as a student his grades depended on his gadget use and as a professional too, 'every minute counts'. We also see Internet as a very credible source so A1 believed that certain information she had about a character must be true because she got it from the Internet.

b. Technology Creating Boredom

Leisure time creates boredom but at the same time the technological means available helps us to move past that state of boredom too. An example of this was found when A± talked about how with the advent of Internet, user-generated content evolved and grew rapidly. She herself created a YouTube channel in which she posted lyric music videos she had made on Windows Movie Maker. These videos basically used TV shows, anime series, and cartoon series, and superimposed them onto songs and made different narratives from the music videos. The idea behind this again seems to point to novelty since the same content is presented in different and unique ways.

Technology also helps create boredom as A2 noted: "I think I am bored now most of the time rather than some of the time because it's usually doing those things (spending time on phone) and I think those things make me bored and anxious at the same time". She also feels like her experience of technology is like 'going through motion' and that 'my brain doesn't really count that as activities' and it is in this experience that she also feels bored.

Some people now argue that technology is killing our leisure time because we don't use it up creatively or efficiently. Who defines 'efficient' use of time is also important because society would define it differently, technology producers would define it differently and religion would define it differently. Further discussion on this will be made in the last theme on purpose in life and religion.

c. Affective Experience

The interviewees defined their affective experience of technology and boredom in different ways. A2 believes boredom is an 'awful' state to be in while A3 thinks that boredom is hard and uncomfortable because it is 'uncomfortable to be free and think' and 'does not give you a positive feedback'. For him boredom is when you can't derive pleasure from your surroundings while for him our technology use is based on the pleasure-seeking principle which can also explain why we use technological means to suppress our boredom.

All three interviewees offered different insights into the concept of boredom. A2 felt that boredom was now more of an outside phenomenon rather than an inside one as she noted 'I think now boredom means to me that I am not getting enough interesting things to think about. It's more of an inside thing now before that it was about activity'. This points to the fact that we have shifted from lack of engaging in physical activity to perhaps lack of engaging in contemplation.

A3 also noted that if you are on your own, definitely you would feel bored. He specifically feels bored while he eats and needs some kind of external stimuli to deal with boredom because for him 'if you are on your own, of course you are going to feel bored'. This again shows an aversion to contemplation. As discussed earlier, boredom for him entails getting pleasure and not satisfaction while contemplation is a state that gives satisfaction rather than pleasure.

For A1, boredom is uneventful but it allows for 'self-reflection and self-discovery', and it also allows you to entertain thoughts that you don't feel the need to entertain. It is important to question why we don't entertain these thoughts. Maybe we term them as unimportant but then that doesn't mean they actually are unimportant or maybe they are stress inducing and it's a natural tendency to suppress those things that create stress. It may be the case that other things are more interesting and they don't leave room to worry about more things because 'you already had something on your plate'. She also feels bored specifically when she can't get into her headspace but being with her thoughts is not uneventful for her and so it's not boring. This explains why contemplation is good because when we are bored, we can't think and so we don't want to stay bored. Thus we might not contemplate while bored but boredom can definitely lead to contemplation.

d. A Change in Selfhood

The Internet has changed our idea of the 'self' as it is difficult to separate ourselves from technology. So A1 said 'you know technology in that way has...is one in the same like I do not exist separately from technology. I feel like my existence is sort of with it'. A3 also noted: 'I think you cannot start to dissociate yourself from...because smartphone is integral to me I can't live with keypad phone because when if I need to google something and I don't have the device on me so it's like a secondary brain for me. It is my calendar, it is my communication tool, it is everything and it is just a small device and it allows us to do so much more'. Thus our smartphone use is becoming a part of who we are as a human. Technology is increasingly enmeshed with our personality, with our sense of self.

A1 also narrated an incident where she was talking on her phone and simultaneously searching for it until a friend pointed out that she was talking on it. Similarly,

she once had a friend's phone in her hand and was going to that friend to come take her phone not realizing that the friend cannot read the message because she does not have the phone! So we see our smartphones as part of our self in a way because we always keep it with ourselves.

e. Purpose in Life and Religion

The most interesting responses came when I asked participants about their purpose in life. All three interviewees belonged to Muslim families and identified themselves as one too. A2 felt that her purpose in life was 'to live this life somehow that I am not completely disappointed in the afterlife'. She felt like this purpose impacts her relationship with technology because it makes her feel guilty about being connected to such an extent that it disrupts her ability to achieve her purpose in life. She also felt that she should not feel bored because 'I have all those things that I need to do which ultimately connects me to my purpose in life but you know I am bored'. This assertion supports the fact that our technology use is stopping us from practicing our religion and so strengthening our religiosity can be used to navigate our way through this technological age. Things that she needs to do to achieve her purpose in life can be done but when she is bored, she isn't motivated or interested enough to do them so she feels bored. Additionally, she doesn't even get to contemplate because she gets distracted by technology.

For A3, he does not have a purpose in life yet but he sets short term goals so 'you don't try to over achieve or oversee and see yourself after 20 years. Since he is short term goal oriented, it can explain why he believes that it is first important to just acknowledge that he has a distorted relation with technology as this is the 'new normal' for him. His next goal could be to try and improve it because he also believes that technology should be shut down sometime and we should also take out time to contemplate because it is necessary. However, the use of the word 'normal' here implies there is no need to change it. It also raises the question that if something is so widely practiced does it become normal? Ultimately we stop seeing something problematic as problematic then.

A1's purpose in life is to go to heaven and not be tormented in grave. She acknowledges that she does not have a very good relationship with God right now but she loves whatever it is and she loves her religion because of the fact that there is something bigger and something immortal that she can rely on and that will take care of her.

She recalls that she was in a very 'Muslimy phase' a few years ago. She had a friend who really inspired her to pray and recite the Quran and she described herself in the following words
I became a very good person very disciplined person

and I felt so happy in those day of my life I did not feel the need to rely on technology at all.

The fact that she did not felt the need to rely on technology points to the fact that religion can be a more powerful force than technology if we practice it and thus is can help repair our skewed use of technology.

Technology stops us from fulfilling our religious rituals. One of the reasons why she stopped praying was because of technology although she accepts it was her fault to let technology do that. Before the Internet, she recalls that she had conversations with God and she felt so comfortable that she could talk to Him. The Internet has stopped us from developing our relation with God because it distracts us with so many things that are pleasurable to do but only while we are doing them. They aren't beneficial to our long-term purposes. So she also said 'I feel like if I do something that lasts in the world it would reflect badly on me on my hereafter'. This points to the fact that whatever we do in this world needs to be dictated by how we want our afterlife to be. She recognizes that she should spend less time on technology and pray more often and even when she is bored, she should

I can't think about myself obviously but when I am bored and I have nothing to do except for wasting my time then I could go recite the Quran or help my sister's out or be a good person in general because being a good human is very important and extremely important part of being a Muslim so if you are too into yourself if you are too into your technology you don't give other people the time you owe them.

Technology stops us from thinking about anything else other than ourselves and our choices and so it disrupts our ideal use of time while boredom can be useful to achieve our purpose in life. Although she is aware and thinks about this, it seems like she has accepted the situation and she feels like she has no control on it

I think about it often. I have become, I shouldn't be ok with it but I am just like this is my life now [] hopefully Inshallah Inshallah I will get hidayat (an Arabic word meaning guidance. It has a specific connotation in Islamic belief) or something will force me to be a better Muslim just before I die so that I will enter Heaven which I know is a terrible thought but this is the point I am at right now in life.

She feels like it's all right to delay what is important to her as her purpose in life and spend time on something that she knows will not get her successfully through this world to the next. She does this despite the fact that understands and thinks about this often.

This section analyzed the interviewees responses using the concepts discussed earlier. Through this discussion of emerging themes and various subthemes, we can rightfully assert that today's technology impacts not just

our experience of boredom but also how it proves to be a hurdle in getting closer to our purpose in life and in practicing our religion.

Typologies of Boredom

Researchers have developed different typologies for boredom. These include Ordinary vs. Pathological boredom and Situational vs. Existential boredom (32). The findings of this research add new dimensions to it. Pathological boredom is associated with serious mental health problems while ordinary boredom is experienced by everyone including animals. It seems to be the case that because of technology, not just ordinary boredom is increasing rather boredom is leading us to a pathology-one where we adapt inefficiently to our existential needs. On the other hand, situational boredom is related to feeling bored in a particular situation and is short term but existential boredom is an aspect of existence itself and is long term. Existential theories state that the experience of boredom includes a sense of emptiness, meaninglessness and an immobilized agency. This kind of boredom is what technology is fostering further as it distracts us from achieving our purpose in life which ultimately gives our life a meaning. Furthermore, we experience a kind of immobilized agency where we feel like technology controls us, yet we also know that we have agency.

DISCUSSION

Technology leads to existential boredom, as hypothesized in this study, but this lack of engaging in a meaningful activity is ultimately tied to a disruption in fulfilling our religious purpose in life. We see a routine in life as monotonous and not engaging yet it is in this routine that we fulfill our religious obligations and it can lead to spiritual growth if we attach it to a goal and sense of direction (33). We had intended to study how boredom is experienced by young people due to excessive use of technology and it emerged in the interviews that spare time is felt as burden especially if one has to be alone. Instead of considering free time to be a blessing where one can think, contemplate and reflect on the direction of one's life in general, and specific choices, decisions and actions in particular, it is considered something to be gotten rid of. The very reason, as we hypothesized, appears to be a lack of right spiritual and intellectual resources and training to think about the meaning of life and to relate the various negative and positive experiences of one's current life to that meaning and purpose. With the constant supply of audio-visual stimuli through their ubiquitous phones, young people are also habituated to be always listening to or watching something. So it becomes also a matter of habituation. High arousal in this case appeared to lead to monotony and hence increasing the threshold where audio-visual stimuli succeeds in bringing the desired level of excitement. This habitual cycle cannot be broken without a deeper reflection on why one does

not want to be alone with one's thoughts.

Constant distractions through the use of internet and social media networks, is shown to be affecting people's ability to focus and pay attention to anything for longer duration. There are strong connections between heightened use of technology and anxiety, depression and other mental health disorders such as apathy and antisocial traits, which have been found in quantitative studies (34-35). This qualitative study conducted via interpretive interviews helped us understand how a deeper existential anxiety and boredom has a role to play in making individuals engage constantly with technology as a suppressing mechanism. This will in turn allow future researchers and medical practitioners to work with religious scholars, philosophers and thinkers to understand and address the core issue of lack of meaning and purpose that leads to harmful levels of technology use, in turn causing the various cognitive and behavioral issues. Future research on attention deficit and loss of focus will find this study useful.

Internet technologies such as social media networks cause a hindrance for active thinking. The individuals become so entangled and engrossed in their activities that they feel incapable to think about the rightness or wrongness of their actions. Other than having a direct impact on one's ethics, there are social and political ramifications too. By not distancing oneself and thinking acutely about what one is doing or saying to someone over the internet, one loses critical self-awareness. It is easy to manipulate such an individual for wrong social and political ends either by the individuals, organizations or large corporates. Apart from personal health and well-being, social well-being is also threatened due to this passive or uncritical reception of digital information and entertainment.

This study also highlights the nature of human being. Other than having an innate desire for purposeful life, the participants did not find constant change and novelty to be absolutely good. Conversely, a definite, unchanging purpose in life emerged as the constant that is sought after in order to give sense to the multiple changes brought about in one's life through technologies.

Our hypothesis that the novelty created in life through technology that presents the same content in different ways has been corroborated by the participants' experience who pointed out how these various videography and moviemaking activities that are meant to address boredom, in the end create more boredom and anxiety. This supports our idea that the category of existential boredom that is related to the meaning and purpose (or its lack thereof) of life, would help understand the kind of boredom experienced by people who use technology excessively, especially for entertainment. Previously not having any activity to do resulted in becoming bored but even now while we have a lot of

activities to do, we are bored. Being bored is not related to how many activities you have rather it depends on whether that activity stimulates interest and this relates to the debate of quality over quantity 36. Abundance of activities has fostered the development of boredom because eventually none of the activities seem interesting anymore.

Mindfulness is not just beneficial generally to people devoid of any religion but it also has a specific connotation in Islamic discourse and is known as *Murāqabah*. It is defined by al-Tuwayjirī as "the constant knowledge of the servant and conviction in the supervision of the Truth, glory be to Him, over one's outward and inward states" (37,38). The religion of Islam has three important components according to the famous Hadith Jibrael: *Īmān*, *Islam* and *Iḥsān*. *Murāqabah* is an important aspect of *Iḥsān* but this ability to contemplate and reflect is being disrupted by technology. Imam Al-Haddad wrote a chapter on regular devotions in his 'Book of Assistance' and talked about how the *baraka* in time is made manifest when we use it in regular acts of worship. By changing the content of *dhikr* (remembrance), we prevent ourselves from feeling bored (39,40). There are countless ways to perform *dhikr* and the content varies from using different names of Allah, to different *āyahs* from the Quran and different *du'ās*. In addition, there is so much depth especially in the former two that one is least likely to feel bored when doing it.

Thus one of the ways in which we can bring back balance in our lives with regards to technology is through religion and a cultural re-emphasis on *Murāqabah* within Islamic society. We practice a kind of psychological slavery by becoming subservient to modern technology (41). In order to achieve true freedom, this needs to be changed because our slavery should be for the Creator of this world only. Thus religion has the power to correct our current distorted relationship with technology because it gives us a purpose in life which can direct our use of time. Furthermore, it is through spiritual contemplation that we can understand the magnificence of God and connect our entire existence to His Being. This is what ultimately empowers over everyone and anything else and technology is just a human creation. Instead of seeing it as something perfect and reliable, one will eventually be able to see how it is currently flawed both in its design and in its use. Our current gadget use specifically smartphones, tablets and laptop along with the Internet, considerably needs to be assessed and rectified (42). Further research will help us understand this phenomenon better as we need to question the tools we use to assess boredom.

Implications for further research

The insight gathered from this research can also help critique the Boredom Proneness Scale (37) which is the only used scale in Psychology to measure boredom. It is

not just restrictive in that it does not provide an in-depth understanding of boredom but it also does not account for how boredom proneness is heightened because of our current need for over stimulation. The scale highlights that repetitive tasks are always monotonous and thus boring and this might not be the case as discussed in the next section. What is meaningful for one may not be for the other and that meaning may not actually be meaningful in the context of, for example a purpose in life. If you see yourself as being easily entertained, then that does not necessarily imply that you do not feel bored. Rather technology easily entertains us but it does not stop us from feeling existentially bored. Technology is also making us want more challenging stuff because of the increasing number of choices it gives us. This list is only a non-exhaustive one and further weaknesses can be highlighted.

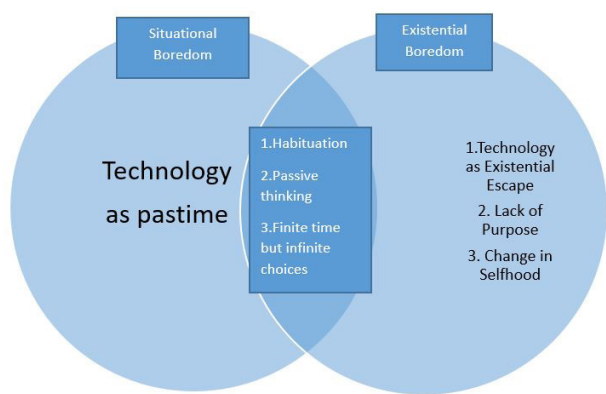


Fig 1: The list is only a non-exhaustive one and further weaknesses can be highlighted.

CONCLUSION

Early studies of boredom in the 1920s and 1930s focused on it as a synonym for monotony which resulted out of repetitive work in the newly industrialized factories where specialization and division of labor were practiced. Such boredom resulted out of monotony, the feeling of fatigue and the lack of novelty after repeating the same task for months. In contrast, today it is intriguing to observe that although the choices we have available to ourselves have increased so much and there is so much novelty around us, yet it still fosters a new kind of boredom.

This can be attributed to the pace with which new technologies evolve today and to the specific design orientation of these technology producers. Millennials have had a peculiar experience in this regard as their childhood involved physical activities such as cycling, and their adulthood involves the use of gaming gadgets like Xbox 360. Such a technological advancement has created an impact on human behavior, thoughts and feelings. Millennials have experienced both the worlds: with and without the Internet; and they do have nostalgia for the latter.

As discussed in this study, technology impacts our experience of boredom in complex, non-linear ways and this impact cannot be understood without a philosophical and phenomenological analysis of both boredom and technology. Millennials feel that amongst the obvious uses of technology is to curtail the feeling of being bored; technology serves a ‘way out’ in one’s life. Even if one is not employed or pursuing studies, one can simply spend time on the Internet. This ‘obvious’ use of technology was not one of the intended consequences of producing these technologies, and is an inauthentic and an incomplete way of living life.

It is through the reorganization of our daily lives that we will be able to save up some time to contemplate. This is not just important for us intellectually, but spiritually too. Rather than suppressing our anxieties and distracting ourselves with technology, we need to experience these moments and allow ourselves to look internally to achieve freedom from recurring boredom.

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