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BRAIN ROT: OVERCONSUMPTION OF ONLINE CONTENT (AN ESSAY ON THE PUBLICNESS SOCIAL MEDIA)

BEYİN ÇÜRÜMESİ: ÇEVRİMİÇİ İÇERİĞİN AŞIRI TÜKETİMİ (SOSYAL MEDYANIN KAMUSALLIĞI ÜZERİNE BİR DENEME)

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ABSTRACT

The term "brain rot" first appeared in 1854. But it has evolved to define a modern concern about how it will shape our digital lives. Anxiety and despair about the expected negative effects because of overconsumption of online content are of increasing interest both in academia and among policymakers to investigate the causes and consequences of this behavior. Based on the public goods feature of information and speech, I think that social media also has a public good feature. Because the starting point of social media is talking and sharing information. Brain rot, which emerges as a negative externality because of excessive consumption of social media (which I call dirty consumption), is the tragedy of the commons. It should be the subject of public solutions on a global scale and should be seen as a global public good.

Keywords: *Brain Rot, Social Media, Global Public Goods, Digitalization*

JEL Codes: *H41, H87, D83, D85*

ÖZET

"Brain rot" terimi ilk olarak 1854 yılında ortaya çıkmıştır. Ancak, dijital yaşamlarımızı nasıl şekillendireceğine dair modern bir endişeyi tanımlamak için evrim geçirmiştir. Çevrimiçi içeriğin aşırı tüketimi nedeniyle beklenen olumsuz etkiler hakkında duyulan kaygı ve umutsuzluk, hem akademik çevrelerde hem de politika yapıcılar arasında bu davranışın nedenlerini ve sonuçlarını araştırmak için artan bir ilgi konusu olmuştur. Bilgi ve konuşmanın kamu malı özelliği temelinde, sosyal medyanın da bir kamu malı özelliğine sahip olduğunu düşünüyorum. Çünkü sosyal medyanın başlangıç noktası konuşmak ve bilgi paylaşmaktır. Aşırı sosyal medya tüketimi nedeniyle ortaya çıkan "brain rot", benim "kirli tüketim" olarak adlandırdığım bir olgu, ortakların trajedisidir. Bu durum, küresel ölçekte kamu çözümlerinin konusu olmalı ve küresel bir kamu malı olarak görülmelidir.

Anahtar Kelimeler: *Beyin Çürümesi, Sosyal Medya, Küresel Kamusal Mallar, Dijitalizm*

Jel Kodları: *H41, H87, D83, D85*

1. GİRİŞ

The idea of writing this article started when I watched the news and heard the announcer say, "Oxford Dictionary has chosen the word 2024: Brain Rot". "And the Oxford Word of the Year 2024 is... brain rot" I read on Oxford's website. Brain rot: Supposed deterioration of a person's mental or intellectual state, especially viewed as a result of overconsumption of material (now particularly online content) considered to be trivial or unchallenging. Also: something characterized as likely to lead to such deterioration (WEB_1). I couldn't believe what I read. I've learned from the kids and teens around me that the brain rot is used as a joke and humorous meme in their online language.

In today's world, what it means for brain rot has changed. People waste so much time on the internet with their digital devices that their emotions fluctuate steadily. According to October 2024 data on the https://www.statista.com/statistics/617136/digital-population-worldwide/ website, there are 5.52 billion internet users worldwide, corresponding to about 67.5 percent of the world's population. Of these, 5.22 billion, or 63.8 percent of the world's population, use social media. Underlying that "user IDs" may not represent unique individuals, Kemp (2024) in Digital 2024: October Global Statshot Report notes that 256 million new user IDs were added last year, increasing the global total by more than 5 percent. It also emphasizes that social media time is decreasing but adoption is increasing.

Spending long hours in front of screens overloads our brains with digital information, which can have widespread negative effects on individuals' mental and physical health, social interaction and companionship, and well-being of people. In collaboration with the WHO Regional Office for Europe, the Health Behaviour in School-aged Children (HBSC) study is a large school-based survey conducted every four years. The HBSC study surveyed nearly 280,000 young people between the ages of 11, 13, and 15 in 2022 across 44 countries and regions in Europe, Central Asia, and Canada. Results are published in reports. From these reports, Cosma et al. (2024) state that the COVID-19 pandemic has changed the way adolescents communicate, and with the increasing popularity of social media, it has turned peer violence into cyberbullying rather than face-to-face. In another report, Rakić et al. (2024) emphasize the importance of limiting the time spent on social media so that the marketing of unhealthy foods and beverages is reduced.

The concept of 'brain rot' first emerged in 1854. Over time, however, its meaning has evolved to address a pressing contemporary issue: the potential impact of excessive digital consumption on our lives. Concerns about the adverse effects of overindulgence in online content—such as anxiety, cognitive decline, and a sense of despair—have gained growing attention from both academic researchers and policymakers. These groups are increasingly focused on uncovering the underlying causes of this behavior and assessing its far-reaching consequences.

From my perspective, social media carries attributes like public goods due to its foundation in communication and the sharing of information. As its origins lie in fostering dialogue and facilitating the free exchange of ideas, social media serves a broader societal purpose. Yet, the overconsumption of this digital resource has given rise to what I term 'dirty consumption,' resulting in a phenomenon known as brain rot—a detrimental externality stemming from excessive engagement with social platforms. This phenomenon represents a modern-day 'the tragedy of the commons (Ostrom, 1990),' where an overused resource leads to collective harm.

Addressing this issue requires coordinated public solutions on a global scale. Brain rot, as a worldwide concern, should be recognized as a global public issue that demands collective action. By treating it as a public problem requiring protection, we can develop strategies to mitigate its effects and safeguard the societal value of digital media.

2. CONSEQUENCES OF OVERCONSUMPTION OF SOCIAL MEDIA: BRAIN ROT

The Oxford University Press (OUP) conducts a yearly global survey for the word-of-year election. Brain rot is one of the most used words this year due to the effects of digitalization. According to OUP, this is the first time the term has been used in this year's records. However, OUP does not hesitate to provide the following information. Brain rot was first mentioned in Henry David Thoreau's 1854 book Walden or Life in the Woods (Chappell, 2024).

No doubt those who, like me, were interested in Thoreau's book did a digital read of it immediately. Here are the advantages of living in the digital age. We aim to have a hand in this by avoiding the use of low-quality content, which is the main cause of the brain rot that is our subject.

Thoreau apologizes to his readers for turning it into a book because of his neighbors, who wondered how he lived and made a living in a town so far from the city. Thoreau, who criticizes the luxurious life by emphasizing that people love and attach themselves to life excessively, the drawbacks of constantly working for materiality, and the importance of keeping up with nature, describes spirituality using metaphors. He even used the phrase 'brain rot' in the following way. *"...While England endeavors to cure the potato-rot, will not any endeavor to cure the brain-rot, which prevails so much more widely and fatally?..."* (Thoreau, 1854: 348).

We are all concerned about how technology affects our brains, especially internet-based devices. If someone spends a lot of time on social media, they may feel tired. The more we stay online, the more we worry about how our mental health and ability to focus will be affected. But we can't give up. Reason?

In fact, OUP is trying to give us the answer to this question. According to OUP, Gen Z, and Gen Alpha have recently started to talk about brain rot a lot on social media platforms such as TikTok. And if we quote verbatim "*... in 2024, 'brain rot' is used to describe both the cause and effect of this, referring to low-quality, low-value content found on social media and the internet, as well as the subsequent negative impact that consuming this type of content is perceived to have on an individual or society..." (WEB_1).* This situation shows us that the children and young generation are aware of social concerns. On the other hand, we observe that it is used as a humorous term in online language. I wonder if they are really serious or just joking. Whatever the answer, the term has now reached parents like me. Now, this joke needs to be the subject of deep research.

The Newport Institute (03 December 2024) is of the opinion that screen time is a crucial factor in the explanation of brain rot. As the duration increases, mental confusion, drowsiness, decreased attention span and cognitive decline occur. In addition, doomscrolling (searching for negative and sad news on the internet) is a brain rot behavior. Browsing the internet can make scrolling a behavioral addiction by increasing the neurochemical dopamine, which produces feelings of satisfaction and pleasure.

The excessive consumption of online content has led to the formation of a literature that examines the causes and consequences behind this behavior. This consumption, which is gradually increasing, is evolving into a kind of addiction. Television (İlhan and Ulusoy, 2013), Facebook (Chakraborty, 2016), smartphone and internet (Yayan et al., 2019; Sahu et al., 2019), technology (Turel et al., 2011), Instagram (Ballarotto et al., 2021), Youtube (Klobas et al., 2018), TikTok (Balcı et al., 2024; Qin et al., 2022), online gaming (Beranuy et al., 2013) addictions, which can lead to dangers just like alcohol, cigarette, and drug addictions, can also cause behavioral disorders, especially in children and young people.

In this context, the Relationship between Social Networks Use Disorder (SNUD) and Fear of Missing Out (FOMO) is among the most discussed topics. There is a reciprocal relationship between SNUD and FOMO and it leads to more cognitive impairment (Montag and Markett, 2023; Çetinkaya et al., 2021; Aygar et al., 2019; Dadiotis and Roussos, 2024).

Digital technology has had a profound impact on the cognitive process of decision making. It has influenced the way we gather, process and evaluate information to make decisions. These influences have implications that are both empowering and potentially disruptive (Shanmugasundaram and Tamilarasu, 2023). Drawing attention to digital distraction, Liu (2022) states that digital content, users and technology, that is, the digital reading environment, should be handled within the scope of e-reading. In other words, when the degree of dependence on social media is high, an increase in the intensity of social media use can suppress or slow down the development of critical thinking ability (Cheng et al., 2022).

There are moments when we feel saddened seeing people around us absorbed in their screens. Children who stare at screens for long periods of time are affected by their executive functions as well as concentration and focus (Betteridge et al., 2023). As the time spent on social media increases, the probability of self-harm increases in the 14-year-old age group (Hartas, 2019). Loneliness, narcissism, impulsivity and shyness is significantly correlated with Facebook (Rajesh and Rangaiah, 2022).

Hutton et al. (2020) investigate the relationship between screen-based media usage and the integrity of white matter tracts in the brain that support language and literacy development in preschool-aged children.

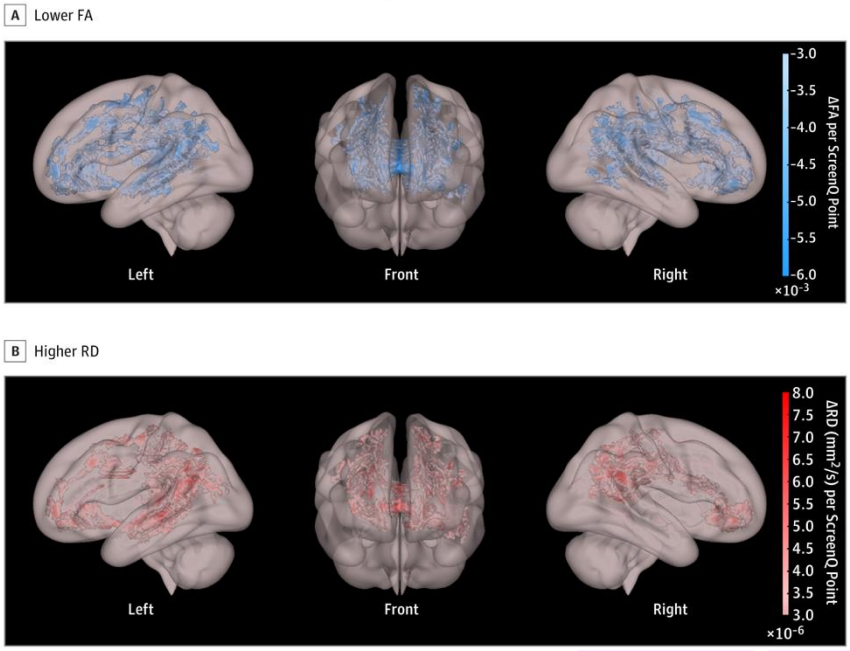

Figure 1: Diffusion Tensor Imaging (DTI) Parameter Maps for Whole-Brain Analysis (Hutton et al., 2020).

Figure Legend: White matter regions show a statistically significant relationship between screen-based media usage (ScreenQ scores) and reduced fractional anisotropy (FA; A) as well as increased radial diffusivity (RD; B) in a whole-brain analysis. These associations remain significant after controlling for child age and household income ($P < .05$, corrected for familywise error). The color scale represents the gradient or strength of the correlation, illustrating changes in DTI parameters with each point increase in ScreenQ scores.

As shown in Figure 1 above, the study by Hutton et al. (2020) involving 47 preschool-aged children found that higher levels of screen-based media use were linked to reduced microstructural integrity of brain white matter tracts responsible for language, executive functions, and emerging literacy skills. These associations remained significant after adjusting for the child's age and household income.

3. SOCIAL MEDIA AS A PUBLIC GOOD

There are many social media platforms, including Facebook, YouTube, Instagram, TikTok, WhatsApp, Facebook Messenger, and Telegram, as well as various social network producers and messenger applications. Big Tech companies such as Microsoft, Amazon, Apple, Google, Alphabet, and Meta are also prominent in the development of these platforms. These are private companies that aim to maximize profit. Since the study focuses on social media consumers, we will overlook the producers.

In this study, which examines online content that cannot be considered independently from digitalization and technology through the lens of social media platforms, we first need to discuss what kind of good this product is. When we look at the literature, there is very little research on topics such as information as a public good (Stiglitz, 2021), social media and public epistemic goods (Handfield, 2024), social media and public goods alignment (Hong et al., 2015), social media as free goods (Gal and Rubinfeld, 2016), social media as common

goods (Pomeras et al., 2020), and social media as a public sphere (Fuchs, 2014; Çela, 2015; Collins et al., 2020).

From D. Hume to Adam Smith, and from E. Sax to K. Wicksel, the theory of public goods has been discussed, and Samuelson's definition has gained general acceptance (Göker, 2008). Samuelson (1954) approached goods in terms of 'non-rivalry' and 'non-excludability'. According to him, the distinction between private and collective consumption goods is based on consumption. Goods that individuals benefit from collectively and whose consumption by one individual does not diminish the consumption of another are called collective goods. Goods that can be divided among individuals are considered private consumption goods. Musgrave and Musgrave (1989) emphasized the non-excludability characteristic of public goods. Selen (2020) categorized the common criteria used in defining public goods into five groups: non-rivalry, free riding, the subsequent acquisition of utility, collective consumption, and externalities.

When examining the market mechanism, it is observed that many public goods exhibiting Samuelson-type non-excludability, non-rivalry, and consumption-oriented characteristics can be produced. Television and radio broadcasts are among the most common examples of this situation. Although broadcasts are not sold directly, their financing is provided through advertising revenues, and advertisers can be excluded. Various theoretical approaches have been developed to address the publicness problem; however, in today's digital economy-based new world order, markets are particularly shaped around the axis of innovation (Özpençe and İdikut Özpençe, 2011). In this context, digital public goods acquire their publicness characteristic based on consumption/use features and the number of users. In other words, unlike digital private goods, although they are priced (due to production costs) only at the point of initial sale to the end consumer/user, their consumption/use and the number of consumers/users cannot be limited (Özpençe, 2014).

Technology and digitalization are determinants and influencers of the publicness characteristic of goods and services. While technology and digitalization give rise to different types of goods and services, they also profoundly affect how existing goods and services are offered and consumed. As a result, the characteristics of these goods as private or public can also change. Now, digital products such as big data, artificial intelligence, IoT, ICT, software, blockchain, cloud computing, robotics, cybersecurity, etc., have emerged as new public goods and services (Mınynat and Cüre, 2023).

According to Stiglitz (2021), the media produces information, which is a public good. In this sector, Gresham's Law (which holds that bad money may drive out good money) is applicable, and eventually, the best ideas will prevail. In our opinion, this situation does not hold true, especially considering that brain rot is often a form of joking (meme) among adolescents, making Gresham's Law inconsistent and not very coherent in social media. Stiglitz (2021) states that the media market is filled with market failures, which necessitates regulation, and on the other hand, he notes that the media market is not competitive. Social media is not transparent because, in well-functioning markets, no one can engage in trolling. Furthermore, he argues that social media threatens the traditional economic model, free-rides off other media, and most importantly, due to the lack of competition in social media, it should be regulated as a utility.

Social media is a public good because people can consume this good for free as much as they want. It is sufficient for them to purchase a private good (such as a computer, tablet, smartphone, etc.) that allows access to social media. In other words, social media possesses

the characteristics of non-rivalry and non-excludability, just like public goods. The consumption of one individual does not reduce the amount available for others. It is nearly impossible to prevent anyone from consuming it. Our aim here is to highlight that low-quality online consumption on social media leads to negative externalities. In the internalization of negative externalities, the public has significant responsibilities.

According to Gal and Rubinfels (2016), social media is a free good. Abstractly, goods with a zero social opportunity cost and whose supply is not less than demand are referred to as free goods. Goods that are not evaluated under market conditions (for example, the air on the surface of the Earth is a free good, while the air underwater or in mines is not a free good) can be used by all users as much as they want (Steedman, 1989).

From this perspective, free goods and services have gained increasing interest with the advent of the Internet. Most of the valuable goods and services offered today are available for free in the market. Examples include social media networks and platforms (YouTube, Facebook, Instagram, etc.) and Wikipedia's online encyclopedia. Given that the marginal cost of providing an online digital product can be close to zero, this is not surprising. Free goods can also create externalities (Gal and Rubinfeld, 2016), which is why they attract public interest.

According to Pomeras et al. (2020) social media is common good. They emphasise that the COVID-19 pandemic has enabled the digitisation of every conceivable sector and that connectivity and other essential digital services are cross-cutting technologies that have become common goods. Additionally, due to digitalization and connectivity, social media possesses non-rivalrous and non-excludable characteristics and is available almost everywhere.

In one study by Frye (2022) internet trolling, pornography, and ideology are toxic public goods. According to him, a toxic public good is a public good because it creates negative externalities when consumed and possesses all its characteristics. Even toxic public goods are typically information goods.

The overconsumption of social media (which we consider to be 'polluted consumption') is giving rise to new social issues, such as brain rot, that are on our agenda. In the previous section, we emphasized the need for rapid and effective policy solutions to address these issues, particularly those observed in children and adolescents. Today, the concept of "*social acceleration"*, which encompasses our topic, is one of the issues that policymakers should focus on. Rosa (2013: 71-81) addresses social acceleration in three dimensions: technological acceleration, the acceleration of social change, and the acceleration of the pace of life. According to Kersbergen and Vis (2022), social acceleration is the rapid decrease in the amount of time required for our social actions and experiences at an increasing rate. From this perspective, it is appropriate to restate that policymakers should be more effective and faster in their decision-making mechanisms by rethinking social acceleration.

As a result of social acceleration, there is evidence of excessive social media consumption. Table 1 presents the number of active users and organic traffic for the 35 most popular social media websites.

Table 1: Top 35 Most Popular Social Media Websites (August 2024)

Ranking	Social Media Network	Monthly Active Users	Monthly Organic Traffic	Ranking	Social Media Network	Monthly Active Users	Monthly Organic Traffic

1	Facebook	3.06 billion	13,1 billion	19	Kuaishou	370 million	12.7 million
2	YouTube	2.70 billion	73 billion	20	Bilibili	336 million	1.0 billion
3	WhatsApp	2.40 billion	3.9 billion	21	Microsoft Teams	320 million	1.7 billion
4	Instagram	2.35 billion	6.7 billion	22	Linkedin	310 million	1.9 billion
5	TikTok	1.67 billion	2.7 billion	23	Quora	305 million	1.1 billion
6	WeChat	1.31 billion	6.1 million	24	Vimeo	260 million	81.7 million
7	Messenger	1.10 billion	253.7 million	25	Line	230 million	286.5 million
8	Telegram	900 million	615.1 million	26	Xiaoshongshu	200 million	76.3 million
9	Viber	820 million	17.3 million	27	Discord	200 million	1.0 billion
10	Snapchat	800 million	189.3 million	28	ShareChat	180 million	11.0 million
11	Douyin	752 million	209.8 million	29	Threads	174 million	109.3 million
12	Baidu	676 million	1.6 billion	30	Josh	151 million	540 hundreds
13	Qzone	615 million	473.9 million	31	Twitch	140 million	1.7 billion
14	Spotify	602 million	725.1 million	32	Tumbir	135 million	216.9 million
15	X	600 million	4.4 billion	33	Medium	100 million	215.6 million
16	Sina Weibo	588 million	136.6 million	34	VK(Vkontakte)	80 million	1.1 billion
17	Pinterest	518 million	974.5 million	35	Rumble	50 million	94.6 million
18	Reddit	430 million	5.5 billion				

Source: Howarth, December 3, 2024, https://explodingtopics.com/blog/top-social-media-platforms.

When examining Table 1, we can see that the top five most popular social media networks are included. The increasing number of users each day demonstrates how integrated these networks are into our daily lives. In fact, Howarth (2024) states that with 3.06 billion users, Facebook means that 37% of the world's population uses Facebook at least once a month. This data is both surprising and, as a parent, concerning. This situation indicates that, as mentioned in the definition of brain rot, if it contains low-quality and low-value content, there is a need for transnational regulation. "Brain rot", which is the dirty consumption of social media that requires very rapid intervention, is just like *"the tragedy of the commons"* in common property goods.

The brain rot considered the tragedy of the commons, requires transnational public intervention. It is clear that to address this global social issue, brain rot should be classified as a global public good, necessitating transnational regulation. To be recognized as a global public good, it is essential to examine the scope of the benefits it creates. Whether it is a private good or a public good, it is important for all types of goods to be offered according to consumer preferences. Due to globalization, it is necessary to reassess market failures and negative externalities from a global perspective (Karayılmazlar, 2006). In the internalization of

externalities, market creation and strengthening, as well as the use of taxes and fees, can be pursued (Yusufoğlu and Özpençe, 2015).

The overconsumption of social media creates negative externalities, leading to social issues such as brain rot. To prevent this, the idea of making social media paid may come to mind. Theoretically, pricing a product that generates negative externalities can eliminate the resulting negative externality. Therefore, the pricing or charging of such goods that cause brain rot should not be seen as the only solution. Therefore, there is a need for public solutions. There are those who oppose the regulation of social media. Stiglitz (2021) also counters criticisms regarding the restriction of freedom of expression in the context of social media regulation. According to him, speech is always regulated. No one can, for example, curse in front of a crowd at an opera or disseminate child pornography.

Social media platforms are mostly free for users, with their revenue primarily coming from advertisers. These companies act as attention-driven platforms, offering content to users while collecting data for targeted advertising that businesses pay for. To be successful, they must engage a significant number of the right users to maintain demand for ads. This requires them to curate appealing content that keeps users on the platform longer. Consequently, it is essential to determine whether the responsibility lies with social media companies or their users as the least-cost avoiders. Incorrectly assigning this responsibility could harm societal welfare by either reducing the advantages of social media or increasing unaddressed negative externalities (Sperry, 2024).

4. CONCLUSION

Digitalization and technological advancements have become integral parts of our daily lives and will continue to do so. From computers and laptops to smartphones, smartwatches, and even cars, all these digital tools serve as our reference guides in work, communication, access to information, and every aspect of our lives. Especially digital media and its reflection, social media, which includes online content applications. So, are we managing them correctly? Are we using them effectively and efficiently? While the benefits of these advanced technologies and their reflections are countless, their drawbacks and negative consequences are also numerous. The products we use for our emotional, mental, and physical health can also be harmful. In our opinion, the main cause of the problem here is the amount and intensity of consumption. As mentioned in the definition of ‘brain rot,’ excessive consumption and the lack of awareness about when to stop are among the most significant issues.

The term 'brain rot,' which started as a joke among young people and has gained increasing interest, is now being seen as a problem in society. The solution should start with individuals first, followed by public regulations. When making regulations, the rights of social media consumers should be protected. Because it should be noted that data science has emerged from this, and that data is now as important as oil. Our data serves as the most vital information network and attracts the interest of companies. The rights of companies must also be protected because they are not the sole ones responsible.

Another point that should be mentioned here is that the brain rot caused by overconsumption of social media is a big problem that needs to be solved. When all these issues are evaluated, it can be clearly stated that social media is a global public good considered in terms of its features. Indeed, due to the low-value and low-quality content that finds widespread consumption on social media, brain rot is a case of the tragedy of the commons.

The openness of a widely used content creator to individual content production, and the absence of any restrictions on this production, leads to a culture of 'dirty consumption' among other users. This situation coincides with the concept of the tragedy of the commons expressed by Ostrom (1990) in his study. Moreover, such a situation is a blatant example of negative externality. These content platforms, whose consumption has reached a global scale, need a global regulation for the internalization of externalities.

REFERENCES

Aygar H, Goktas S, Akbulut Zencirci S, Alaiye M, Onsuz MF, Metintas S. (2019). Association Between Fear of Missing Out in Social Media and Problematic Internet Use in University Students, Dusunen Adam The Journal of Psychiatry and Neurological Sciences, 32, 302-308.

Balcı, Ş., Akgül, T.E. and Astam, F.K. (2024). University Students Addiction Adventure beyond the Screen: The Relationship between TikTok Usage Motives and Addiction, Journal of Erciyes Communication, 11(2), 715-737. https://doi.org/10.17680/erciyesiletisim.1442074.

Ballarotto, G., Marzilli, E., Cerniglia, L., Cimino, S., and Tambelli, R. (2021). How Does Psychological Distress Due to the COVID-19 Pandemic Impact on Internet Addiction and Instagram Addiction in Emerging Adults? International Journal of Environmental Research and Public Health, 18(21), 11382. https://doi.org/10.3390/ijerph182111382.

Beranuy, M., Carbonell, X. and Griffiths, M.D. (2013). A Qualitative Analysis of Online Gaming Addicts in Treatment, International Journal of Mental Health and Addiction, 11, 149-161.

Betteridge, B., Chien, W., Hazels, E. and Simone, J. (5 September 2023). How does Technology Affect the Attention Spans of Different Age Groups?, OxJournal, https://www.oxjournal.org/how-does-technology-affect-the-attention-spans-of-different-age-groups/.

Chakraborty, A. (2016). Facebook Addiction: An Emerging Problem, American Journal of Psychiatry Residents' Journal, 11(12), 7–9. https://doi.org/10.1176/appi.ajp-rj.2016.111203.

Chappell, B. (2024). Writer Thoreau Warned of Brain Rot in 1854. Now it's the Oxford Word of 2024. NPR. https://www.npr.org/2024/12/02/nx-s1-5213682/writer-thoreau-warned-of-brain-rot-in-1854-now-its-the-oxford-word-of-2024 (Accessed, December 02, 2024).

Cheng, L., Fang, G. and Zhang, X. (2022). Impact of Social Media Use on Critical Thinking Ability of University Students, Library Hi Tech, 42(2). https://doi.org/10.1108/LHT-11-2021-0393.

Collins, B., Marichal, J. and Neve, R. (2020). The Social Media Commons: Public Sphere, Agonism, and Algorithmic Obligation, Journal of Information Technology & Politics, 17(4), 409-425. https://doi.org/10.1080/19331681.2020.1742266.

Cosma A, Molcho M, Pickett W. (2024). A Focus on Adolescent Peer Violence and Bullying in Europe, Central Asia and Canada. Health Behaviour in School-aged Children international report from the 2021/2022 survey, Volume 2. Copenhagen: WHO Regional Office for Europe; 2024. Licence: CC BY-NC-SA 3.0 IGO.

Çela, E. (2015). Social Media as a New Form of Public Sphere, European Journal of Social Sciences Education and Research, 2(3), 126-131.

Çetinkaya, A., Kırık, A.M. and Gündüz, U. (2021). Fear of Missing Out and Problematic Social Media Use: A Research Among University Students in Turkey, Bilişim Teknolojileri Online Dergisi, 12(47), 12-31. https://doi.org/10.5824/ajite.2021.04.001.x.

Dadiotis, A. and Roussos, P. (2024). Relationship Between FoMO, Problematic social Media Use, Self-esteem, Negative Affectivity, and Physical Exercise: A Structual Equation Model, Journal of Technology in Behavioral Science, 9, 313-324. https://doi.org/10.1007/s41347-023-00340-3.

Fuchs, C. (2014). Social Media and the Public Sphere, 12(1), 57-101. https://doi.org/10.31269/triplec.v12i1.552.

Frye, B.L. (2022). Toxic Public Goods, Law Faculty Scholarly Articles, 715, 74(1), 1-14. https://uknowledge.uky.edu/law_facpub/715.

Gal, M. and Rubinfeld, D. (2016). The Hidden Costs of Free Goods: Implications for Antitrust Enforcement, Antitrust Law Journal, 80(3), 521-562.

Göker, Z. (2008). Kamusal Mallar Tanımında Farklı Görüşler, Maliye Dergisi, 155 (Temmuz-Aralık), 108-118.

Handfield, T. (2024). Regulating Social Media as Public good: Limiting Epistemic Segregation, Social Epistomology, 38(6), 743-758. https://doi.org/10.1080/02691728.2022.2156825.

Hartas, D. (2019). The Social Context of Adolescent Mental Health and Wellbeing: Parent, Friends and Social Media, Research Papers in Education, 36(5), 542-560. https://doi.org/10.1080/02671522.2019.1697734

Hong, Y., Hu, Y. And Burtch, G. (2015). How does Social Media Affect Contribution to Public versus Private Goods in Crowdfunding Campaigns?, Thirty Sixth International Conference on Information Systems, Fort Worth 2015, https://yuhenghu.com/paper/icis15.pdf.

Howarth, J. (December 3, 2024). https://explodingtopics.com/blog/top-social-media-platforms (Accessed December 5, 2024).

Hutton JS, Dudley J, Horowitz-Kraus T, DeWitt T, Holland SK. (2020). Associations Between Screen-Based Media Use and Brain White Matter Integrity in Preschool-Aged Children, JAMA Pediatr., 174(1): e193869. https://doi.org/10.1001/jamapediatrics.2019.3869.

İlhan, V. and Ulusoy, A. (2013). Television Addiction and Audience: is it Possible not to Watch TV?, International Journal of Social Science, 6(5), 1127-1154. https://dx.doi.org/10.9761/JASSS1443.

Karayılmazlar, E. (2006). Uluslararası Kamusal Mallara İlişkin Kavramsal Sorunların Kamu Maliyesi Perspektifinden Tartışılması, Vergi Dünyası, 25 (300), 148-159.

Kemp, S. (October 2024). Digital 2024: October Global Statshot Report. https://datareportal.com/reports/digital-2024-october-global-statshot.

Kersbergen, K.V. and Vis, B. (2022). Digitalization as a Policy Response to Social Acceleration: Comparing Democratic Problem Solving in Denmark and the Netherland, Government Information Quartely, 39(3). https://doi.org/10.1016/j.giq.2022.101707.

Klobas, J,E., McGill, T.J., Moghavvemi, S. and Paramanathan, T. (2018). Compulsive YouTube Usage: A Comparison of Use Motivation and Personality Effects, Computers in Human Behavior, 87, 129-139, https://doi.org/10.1016/j.chb.2018.05.038.

Liu, Z. (2022). Reading in the Age of Digital Distraction, Journal of Documentation, 78(6), 1201-1212. https://doi.org/10.1108/JD-07-2021-0130.

Mıynat, M. and Cüre, M.F. (2023). Dijitalleşme Sürecinde Kamusal Politikaların Oluşumunda Paradigma Değişimi: Dijital Kamusal Mallar, Turkuaz Uluslararası Sosyo-Ekonomik Stratejik Araştırmalar Dergisi, 5(2), 41-63.

Musgrave, R.A. and Musgrave, P.B. (1989). Public Finance in Theory and Practice, New York: McGraw-Hill Education.

Montag, C. and Markett, S. (2023). Social Media Use and Everyday Cognitive Failure: Investigating The Fear of Missing Out and Social Networks Use Disorder Relationship, BMC Psychiatry, 23(1), 872. https://doi.org/10.1186/s12888-023-05371-x.

Newport Institute (03 December 2024). https://www.newportinstitute.com/resources/co-occurring-disorders/brain-rot/. (Accessed December 03, 2024)

Ostrom, E. (1990). Governing The Commons, Cambridge University Press, Cambridge, 0-521-40599-8.

Özpençe, Ö. ve Özpençe, A. İ. (2011). Dijital Kamusal Mal ve Dijitalizm, Uluslararası 9. Bilgi, Ekonomi ve Yönetim Kongresi. https://www.researchgate.net/publication/312495403_Dijital_Kamusal_Mal_ve_Dijitalizm.

Özpençe, Ö. (2014). Digital Public Goods, Sosyoekonomi, 2, 140203, 57-80.

Pomeras, J., Ortega, A. and Abdala, M.B. (2020). Digitalization as a Common Good, Global Solutions Journal, 7, 148-154, https://www.cippec.org/wp-content/uploads/2020/11/Global-Solutions-Journal-7-Pomares-Abdala.pdf.

Qin, Y., Omar, B. and Musetti, A. (2022). The addiction behavior of Short-form Video App TikTok: The Information Quality and System Quality Perspective, Frontiers in Psychology, 13: 932805, 1-17. https://doi.org/10.3389/fpsyg.2022.932805.

Rajesh, T. and Rangaiah, B. (2022). Relationship between Personality Traits and Facebook Addiction: A Meta Analysis, Heliyon, 8(8): e10315. https://doi.org/10.1016/j.heliyon.2022.e10315.

Rakić JG, Hamrik Z, Dzielska A, Felder-Puig R, Oja L, Bakalár P et al. (2024). A Focus on Adolescent Physical Activity, Eating Behaviours, Weight Status and Body Image in Europe, Central Asia and Canada. Health Behaviour in School-Aged Children International Report from the 2021/2022 Survey, Volume 4. Copenhagen: WHO Regional Office for Europe. Licence: CC BY-NC-SA 3.0 IGO.

Rosa, H. (2015). Social Acceleration A New Theory of Modernity, Columbia University Press: New York.

Sahu, M., Gandhi, S. and Sharma, M.K. (2019). Mobile Phone Addiction Among Children and Adolescents: A Systematic Review, Journal of Addictions Nursing, 30(4), 261-268, https://doi.org/10.1097/JAN.0000000000000309.

Samuelson, P.A. (1954). The Pure Theory of Public Expenditure, The Review of Economics and Statistic, 36(4), 387-389. https://doi.org/10.2307/1925895.

Selen, U. (2020). Global Public Goods & The Sovereignty Responsibility Approach, Equinox, Journal of Economics, Business & Political Studies, VII (2), 193-213.

Shanmugasundaram M. and Tamilarasu A. (2023). The Impact of Digital Technology, Social Media, and Artificial Intelligence on Cognitive Functions: a Review. Frontier Cognition, 2:1203077, 1-11. https://doi.org/10.3389/fcogn.2023.1203077.

Sperry, B. (2024). A Law & Economics Approach to Socail Media Regulation, International Center for Law & Economics, https://laweconcenter.org/resources/a-law-economics-approach-to-social-media-regulation/.

Steedman, I. (1989). Free Goods. In: Eatwell, J., Milgate, M., Newman, P. (eds)General Equilibrium. The New Palgrave. Palgrave Macmillan, London. https://doi.org/10.1007/978-1-349-19802-3_17, p.138.

Stiglitz, J.E. (2021). The Media: Information as a Public Good, the Pontifical Academy of Social Sciences, Casina Pio IV, Vatican City, May 10-12, 2021.

Thoreau, H.D. (1854). Walden; or, Life in the Woods, Boston: Ticknor and Fields, Boston Stereotype Foundry.

Turel, O., Serenko, A. and Giles, P. (2011). Integrating Technology Addiction and Use: An Emprical Investigation of Online Auction Users, MIS Quarterly, 35(4), 1043-1061.

WEB_1: https://corp.oup.com/word-of-the-year/ (Accessed December 02, 2024).

https://www.statista.com/statistics/617136/digital-population-worldwide/ (Accessed December 02, 2024).

Yayan, E. H., Dağ, Y. S., Düken, M. E., and Ulutaş, A. (2019). Investigation of Relationship between Smartphone Addiction and Internet Addiction in Working Children in Industry, Journal of Human Sciences, 16(1), 143–154. Retrieved from https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/5397.

Yusufoğlu, A. and Özpençe, Ö. (2015). A Solution Proposal for the Arising Problems of the Presentation of Global Public Goods, International Journal of Human Sciences, 12(1), 15-35.