

DIGITALIZATION AND SOCIO-LEGAL CHALLENGES

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ABSTRACT

Based on six major technologies the Internet of Things, robotics, biometrics, persuasion technology, virtual & augmented reality, and digital platforms we address the social and ethical challenges that digitization raises. Our research of the scientific literature on the dominating technologies reveals six repeating themes: privacy, autonomy, security, human dignity, justice, and. In this paper, we emphasize the numerous changes in the digitizing society that seem to be at contradiction with these themes. harmony of power.

This study demonstrates how the recent digitization surge is stressing these common values. Stakeholders must be fully aware of these challenges in order to properly build the digital society in a socially and morally responsible manner. The largest advancements in supervision have been made in the fields of data protection and privacy. Regarding other moral concerns raised by digitization, such as discrimination, autonomy, human dignity, and an unfair power structure, there is less organisation in the supervision.

INTRODUCTION

Digitization and information and communication technology (ICT) are pervasive in contemporary culture. Nanotechnology, biotechnology, and neurotechnology are just a few of the various technologies that are connected to ICT. Since the late 1990 this so-called NBIC convergence has been more and more obvious. Every part of our life has been infiltrated by technology, which resides within us (for instance, through brain implants) and between us (for example, through social media like Facebook). Technology also continuously learns about us through big data and techniques like emotion detection. Less like us (robots and software exhibit intelligent behavior and can mimic emotions). This is the "intimate technological revolution," according to Van Est. The societal transition to digitization pushes the limits of human capacities and creates a wealth of opportunities, but also tests the limits of human morality. On the basis of six prominent technologies—the Internet of Things, robotics, biometrics, persuasive technology, virtual & augmented reality, and digital platforms—we discuss what social and ethical challenges arise as society gets more digital in this article.¹

Robotics and the Internet of Things (IoT) primarily affect our physical environment, including our homes, workplaces, and public spaces. IoT is built on a global network that blends the real and virtual worlds of a website. The development of IoT has put us on the on the cusp of a new era where people and things in the physical world can automatically communicate information and be tracked. Can automatically share information.

In this way, the alarm clock does more than just wake us up. It also turns on the coffee maker so we can have fresh coffee with our breakfast, notifies us when a product has expired in the

¹ Nedyalkova, Plamena; Andreeva, Andriyana; Yolova, DIGITALIZATION AND THE NEW LEGAL AND ECONOMIC CHALLENGES TO EMPLOYERS IN IMPLEMENTING INTERNAL CONTROL.(Economic Studies . 2021, Vol. 30 Issue 5, p158-175. 18p.), 2021 web.p.ebscohost.com/abstract?site=ehost&scope=site&jrnl=02053292&AN=151242998&h=JtYMPTr7HtwhFZ9Nsu%2bYREFJyDupDhVch%2fY8inB5gW9vvg1Pz9x197P4Jia5DBDBaBMdву60qHkakAzGfG%2bhdg%3d%3d&crl=c&resultLocal=ErrCrInoResults&resultNs=Ehost&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d02053292%26AN%3d151242998

fridge, or changes the lighting in the room to match the action taking place in the video game we are currently playing.

Many IT firms anticipate that IoT will permeate every aspect of our daily life in the future. The augmented reality glasses that use the Internet to provide users with additional information about their environment in real-time or a biometric camera that can be connected to an online database to recognise faces are just two examples of the many IoT technologies we discuss in this article. Robotics and IoT development are closely related. Robots, like IoT devices, are typically outfitted with sensors to read their environment. They are becoming more connected to the cloud to share and analyse data and to perform independent actions based on such assessments. Robotics consequently raises a unique set of ethical problems, even though some of them overlap.

The increased usage of ICT also implies that interactions between individuals and between individuals and organisations are being digitised through augmented and virtual reality and digital platforms. Therefore, digitalization permeates our social and cultural world: we do more and more of our purchasing, transactions, music listening, friend-contacting, taking action, and dating online. Communication has changed significantly as a result of the rise of social media and other internet services in the late 1990s and the new century.²

IoT allows for the interchange of an increasing amount of personal data about us without our knowledge or consent. The privacy statement that comes with your smart TV from Samsung informs you that the company logs where, when, how, and what time you turn on your TV. The TV also includes a microphone for speech recognition and a camera for face recognition. Please be aware that if your spoken words contain personal or other sensitive information, such information will be among the data gathered and communicated to a third party, according to a warning in the Samsung TV's handbook. taken and forwarded to a third party. This caused

² Nedyalkova, Plamena; Andreeva, Andriyana; Yolova, DIGITALIZATION AND THE NEW LEGAL AND ECONOMIC CHALLENGES TO EMPLOYERS IN IMPLEMENTING INTERNAL CONTROL.(Economic Studies . 2021, Vol. 30 Issue 5, p158-175. 18p.),
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quite a stir. The illustration demonstrates how consent is unintentionally granted when consumers are unable to comprehend the entire manual or experience "consent fatigue" as a result of the numerous permissions they must obtain about the usage of data that devices acquire. This begs the question of who is ultimately responsible for this process should the user be expected to carefully review the terms of use for every single device? Or is there also some blame to be placed on these devices' manufacturers? They ought to guarantee a certain reasonable expectation of privacy, don't they?

We can actually be tracked everywhere thanks to IoT, which can result in a great deal of openness at the expense of our privacy. The majority of the time, the manufacturer, not the user, is the owner of the data collected by smart appliances like washing machines, thermostats, televisions, and toothbrushes. Because IoT devices may be used inside of our homes to monitor household functions, the home which we traditionally think of as our private domain becomes transparent. As the walls and drapes no longer shield the house from prying eyes, the line separating inside and outside is becoming more and more hazy. Koops and Prinsen make the case for safeguarding citizens from this digital eavesdropping and for granting them both physical and digital privacy in their homes. This should offer security from outside technical assistance-enhanced observation, allowing citizens to enjoy a space where they can be most authentically themselves.

Biometric technology has a double-edged sword in terms of privacy. It can be used to safeguard privacy by just requiring the bare minimum of data to decide if someone is allowed to do anything, like enter a building or purchase alcohol. On the other hand, since biometrics may recognise sensitive information, managing what happens to that information may be challenging, particularly now that the technology has advanced to the point where it can be used in a wide range of devices and circumstances.³

³ Nedyalkova, Plamena; Andreeva, Andriyana; Yolova, DIGITALIZATION AND THE NEW LEGAL AND ECONOMIC CHALLENGES TO EMPLOYERS IN IMPLEMENTING INTERNAL CONTROL.(Economic Studies . 2021, Vol. 30 Issue 5, p158-175. 18p.),
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Digitization also brings about significant criminal issues, such as hacking or DDoS (Distributed Denial of Service) assaults that render websites or systems inoperable.

The Internet or devices connected to the Internet can potentially be the target of criminal activity. Experience has taught us that almost any digital system may be compromised. For instance, in 2012, University of Texas researchers showed the US Department of Homeland

Security how comparatively easy it was to hack into and take over control of a military computer system. They accomplished this via a method known as spoofing, which involves impersonating the person in possession of a device in order to gain unauthorised access to it. In fact, there is a concern about cyber terrorism in policy circles. terrorism online in government circles.

Sensitive information can also be accessed by hackers, and if it does, it might fall into the wrong hands. The precise times of day or week when we turn down the heat and are obviously not home could be known to robbers by using a smart metre that has been compromised. Criminals have the ability to take control of smart gadgets in addition to extracting information that is important to them. This gives the security issue a physical component. A security researcher showed how easy it is to hack the Cayla doll, making it quote lines from *The Silence of the Lambs*' fictitious psychopath Hannibal Lecter and the sexual novel *Fifty Shades of Grey*. The hacking of the doll is a pretty innocent example, but New Zealand hacker Barnaby Jack demonstrated how to hack his friend's insulin pump.

DIGITAL MEDIA TYPES

Since we are aware that the notion of digital media is too broad to be adequately defined in a brief definition, we may at least attempt to comprehend its range by being aware of its presence in many forms:

Videos: There are billions of videos already online, and billions more are being added to the internet every second. By virtue of videos, digital media develops into visual digital media. Digital media fully exploits the idea that something may be understood more easily in a visual form than in other form. For instance, YouTube and Netflix are two of the most well-known internet platforms in the video sector.⁴

Fun Facts: In the visual market, YouTube, which launched only a decade ago, has grown to such a size that more than 500 hours of videos are uploaded there every single minute and more than 5 billion videos are seen their daily. The process of trying to comprehend the scale and influence of digital media has just begun.

Audio: Due to the variety of ways that audio is made available through digital media, it is currently just as popular as videos. Now it's as simple as unlocking one's smartphone and playing their favourite music, as opposed to the past when one had to wait for someone to request a song they liked or for the radio jockey to play something appropriate for the mood. In India, audio platforms like Google Play, Apple Music, and Spotify are quite popular since they quickly meet the needs of music enthusiasts while also offering podcasts, radio services, audiobooks, and other services.

Endorsement: The same is true of advertisements in digital media. Digital media marketing is currently popular since it offers a variety of marketing possibilities and makes it easy to reach the target audience, or, let's call them potential customers. The skippable and unskippable ads, pop-ups, and banner ads are created for each platform in a way that strikes a delicate balance between the needs of the marketer and the needs of the user. Thanks to the development of digital media, browsing the classifieds in the yellow pages seems to be a thing of the past.

⁴ R Sai Gayatri, All you need to know about digital media and the legal challenges involved in it, pleader intelligent source, (june 2 2021), <https://blog.iplayers.in/need-know-digital-media-legal-challenges-involved/>

Social Media: Can you imagine not having access to social media today? Seems to be impossible, no? We have all become enmeshed in the web of social media, whether deliberately or unknowingly, for a variety of reasons. For instance, you can use Twitter to voice your opinion, Instagram to share photos, LinkedIn to make it simpler to get a job, Facebook to connect with friends, and so on. Every social media network promotes one of its own important goals in order to bring users to it. Why would you turn down the chance to keep in touch with the people you care about with just a few simple finger taps? A lot of these outlets have been made possible by digital media. Social media should, however, be utilised with prudence because, after all, a bee shouldn't drown in honey.⁵

Literature: It's been stated that some hobbies are difficult to give up, and reading is one of the most well-known pastimes in the world. By integrating technology and digital media, readers' requirements have been met through the creation of e-books, e-magazines, and other products. With the aid of digital media, there are many platforms made available for readers to access millions of books, periodicals, or magazines for free or with a subscription. The pupils have also found the e-books and VR to be beneficial because they offer a lot more information than the typical paperback books.

Legal Issue: Digital media is a dynamic and ever-evolving notion that incorporates many different circumstances where people, businesses, designers, and others are exposed to many hazards that frequently result in legal disputes. Tell us more about the difficulties and legal restrictions posed by digital media.

INTELLECTUAL PROPERTY

Intangible commodities are the subject of intellectual property. Symbols, designs, words, thoughts, and inventions all fall under this category. Because it has audio and video components that may be downloaded from the internet, it also deals with digital media. The following are a few examples of digital media-related intellectual property rights.

⁵ **R Sai Gayatri**, All you need to know about digital media and the legal challenges involved in it, pleader intelligent source, (june 2 2021), <https://blog.ipleaders.in/need-know-digital-media-legal-challenges-involved/>

Trade Mark and Digital Media

Numerous corporations and businesses are developing trademarks for themselves in the online space as a result of the fierce rivalry in digital media. Because digital media is viewed as a consumer-rich platform, marketing companies strive to use the internet medium to connect with the right customer at the right moment. As crucial as it is to expand your business, it's also crucial to protect it, and one way to do that is by registering a trademark for it. The trademark enhances brand recognition and goodwill in addition to providing company protection. Even if it is virtual, digital media marketing puts businesses closer to their customers, increasing both sales and profits. As a result, it is critical to be active on digital platforms to compete in the market. Therefore, if you want to safeguard the value of your brand and goodwill from unauthorised parties, you should have registered a trademark for your company. The Trademarks Act of 1999 regulates trademark law in India.⁶

Copyright and Digital Media

According to the Copyright Act of 1957, which governs copyright law in India, producers of musical, dramatic, artistic, or literary works as well as those who make sound recordings or make movies have an exclusive right to preserve their work, known as copyrights. These rights may include the ability to translate the work of such a creator or producer and to adapt, reproduce, and communicate it to the public. When all of these rights are combined, they take the shape of copyrights, although the extent to which they will be applied depends on the inventor or producer's work.

In the world of digital media, there is a vast amount of content that may or may not be protected by the owner's copyright. The worrying aspect about this situation is that people continue to copy other people's work, whether or not it is protected by copyright. Such violators now have a channel through which to violate the copyrights of the real creators of the work thanks to digital media. An owner must establish that he is the legitimate owner of that specific work and the source of the liability in order to demonstrate that his copyrights have been violated.

⁶ R Sai Gayatri, All you need to know about digital media and the legal challenges involved in it, pleader intelligent source, (june 2 2021), <https://blog.iplayers.in/need-know-digital-media-legal-challenges-involved/>

Patents and Digital Media

An invention is granted a patent, which is an exclusive privilege. In technical terms, an invention like this usually refers to a tool or a process that makes a new way of accomplishing something or a fix for a problem possible. A patent offers its owner twenty years of protection. The Patents Act of 1970 governs patents in India. Digital patents are those that deal with computer-related inventions, particularly those that have to do with how software is used. Any person who violates a patent by using the exclusive rights of the holder without the holder's consent is guilty of patent infringement. Sections 104–114 of the Patents Act of 1970 deal with patent infringement.

Deformation and Digital Media

The internet offers many platforms via which one can freely express one's views and beliefs. Nevertheless, this media is also employed to disseminate falsehoods about another person that harm their reputation. According to Section 499 of the Indian Penal Code, 1860, the act of a person who states or publishes any matter regarding any person with the intention of defaming that person or knowing or having reason to believe that such statement or publication will defame that person's reputation is said to constitute defamation against that person.⁷

For a statement to be considered defamatory, it must be both false and harm someone's reputation. It is simple to invent and create false information on specific people thanks to the widespread and easy access of information on digital media, not to mention the vast creation of false accounts with the intention of spreading defamatory claims. Consequently, it becomes significantly more challenging to find each of the offenders in this case. Even the media promotes such unfounded presumptions and ideas in order to achieve high TRPs, which does not harm the offenders but has a tremendous negative impact on the lives of the targeted individuals. Defamation is thus a crucial legal concern in relation to digital media.

According to Section 500 of the Indian Penal Code, 1860, defamation is punishable by a simple sentence of up to two years in prison, a fine, or both. Rajiv Dinesh Gadkari filed a lawsuit against Smt. Nilangi Rajiv Gadkari in the case *Rajiv Dinesh Gadkari v. Smt. Nilangi Rajiv*

⁷ R Sai Gayatri, All you need to know about digital media and the legal challenges involved in it, pleader intelligent source, (june 2 2021), <https://blog.iplayers.in/need-know-digital-media-legal-challenges-involved/>

Gadkari after getting a divorce letter from him for constantly harassing and defaming her through offensive photos. Accordingly, the defamation offence has been recorded.

PRIVACY INVASION

One of the most valued aspects of the online world is privacy. Nobody wants their private affairs to be used as a source of mockery or judgement. There is a limit to how much of oneself they wish to reveal with others, and this limit is individual to each person. Nobody can be made to divulge information without their consent. We frequently see adverts for products relevant to the items we search for online. Cookies and IP addresses are responsible for this. Cookies are text files that keep track of and record information a user has viewed on his or her device, and an IP address reveals a user's location.

The majority of online marketers cleverly gather user data through cookies and IP addresses. Many digital media sites attempt to harvest user data without the user's consent for their own gain. A person's personal information—which they would prefer not to share—is taken without his or her agreement and used for business or other similar objectives. This is known as an invasion of privacy. In other instances, such data is also utilised to target a person and obtain illegal advantages.

Every person has the right to request privacy in specific situations. The right to privacy is a basic right, according to the Supreme Court of India, and is inextricably linked to Article 21 of the Indian Constitution. As a result, any invasion of privacy that results in a person can be contested in court. Digital media should not be used to violate people's privacy or unjustifiably compile data from databases.⁸

⁸ R Sai Gayatri, All you need to know about digital media and the legal challenges involved in it, pleader intelligent source, (june 2 2021), <https://blog.iplayers.in/need-know-digital-media-legal-challenges-involved/>