

REVIEW PAPER

The Value of Analog in a Digital World

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ABSTRACT

In the digital age, more technologies and services are entering existing markets than ever before, and new markets are emerging. This does not only mean “creating something new,” but also that by adding a slightly different perspective, a new path can be created. For example, a phenomenon currently taking place in the U.S. is that analog records are once again creating a market in the United States. Despite the age of Napster and Spotify, where music is data, vinyl records in the U.S. are now selling over 12 million copies a year, up more than 120% from the previous year, mainly among enthusiasts and young adults. The market, which was thought to have been completely replaced, is regaining momentum. Considering this, it is important to recognize the value of analog and to view it from a different perspective. Of course, if there is no value in the existence of analog, it will truly disappear, so it is important to be discerning about this, but even so, if we remove the existing concept of “analog” in the digital age (old and outdated), we can gain many different perspectives. This will be the same trend in various fields. It is difficult to understand the effect of looking at analog alone in a straightforward manner, but if we can visualize its value by making full use of digital and look at it from a broader perspective, the value of analog in the digital world will be enhanced

Keywords: Digital age, Analog Value, Human senses, Evolving technologies

In today's world, digital technology is advancing rapidly, and everything from information processing to communication to entertainment is becoming more digital. However, on the other hand, there are an increasing number of situations where analog value, that is, the unique appeal that cannot be experienced digitally, such as “touch” and “feeling,” is being reevaluated^[1]. This paper examines the value of digital and analog, and in particular, explores how analog value continues to exist in the digital age and how the fusion of these values is creating new value.

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DEFINITION AND CHARACTERISTICS OF DIGITAL AND ANALOG

What is digital technology?

Digital technology is a technology that expresses information in binary 0 and 1 and processes, stores, and transmits it. Digitization converts any data, including audio, images, text, and video, into a numerical form that can be processed through a computer or network^[7]. Due to this characteristic, digital technology has the advantage of being able to handle large amounts of information quickly and accurately, while reducing the deterioration and change of information.

What is analog technology?

Analog technology is a technology that deals with physical continuous signals and data. It is characterized by the representation of information such as audio, video, and temperature in a continuous waveform and recorded on a physical medium^[5]. Because of its continuity and physical nature, analog often gives a sense of warmth and depth to information, and has had a particularly strong influence in the world of music and video.

DEVELOPMENT OF DIGITAL TECHNOLOGY AND ITS IMPACT

Innovations in Communication Technology

Digitalization has accelerated the development of the Internet and mobile phones, and has dramatically improved the speed and efficiency of information transmission. This allowed people from all over the world to connect in real time, and the flow of information became very fast.

Digitalization and Efficiency

Digital technology transcends physical constraints to enable efficient data management and processing. Digitized data can be easily copied and transferred, and can be processed with high accuracy even when handling large amounts of information, making it possible to improve efficiency in all fields such as business, science and technology, and education^[9].

THE VALUE OF ANALOGUE AND ITS CULTURAL AND SENSORY ASPECTS

Aesthetics of the Analog Experience

The value of analogue goes beyond mere mechanical performance and is deeply related to the sensory experience. For example, the sound of a record has a warmth that is different from that of a digital sound source, and a film photo taken with a camera has a unique texture that is not found in digital photography. Analog technology requires physical intervention and manual work, so the “imperfections” and “coincidences” that arise in the process can be attractive as art^[11].

4.2 Analogue and human senses

Analog experiences are more appealing to the human senses, including sight, hearing, and touch. For example, the movement of the hands of an analog clock or the writing of a letter by hand give a deeper sense of time and space. In a digitalized world, such sensory connections can be diminished, but analog experiences have a “presence” that digital does not have.

CONVERGENCE OF DIGITAL AND ANALOG

Digital Convenience and Analog Depth

At first glance, digital and analog seem to be opposites, but in reality, they complement each other^[9]. The biggest advantage of digital technology is its convenience. In terms of information processing, retrieval, and transmission speed, digital technology has an overwhelming advantage. Analog, on the other hand, provides the “depth” and “warmth” of information. For example, in music, digital sound sources pursue precision and uniformity, while analog records have subtle fluctuations in sound and rich sound quality. Digital music seeks perfection, but analog music can find beauty in its imperfections^{[4],[6]}.

Aware of these differences in characteristics, many methods of combining the two have been practiced^[10]. For example, in music production, there is a way to add “warmth” to the sound by using analog equipment and effects pedals while using digital recordings. Thus, the fusion of digital and analog is becoming increasingly important as a way to simultaneously pursue efficiency and emotional depth.

The intersection of digital and analog in music and art

In the world of music and art, too, the convergence of digital and analog is remarkable. The proliferation of digital music has given producers and artists a greater range of expression, but many still value the unique sound of analog equipment and the subtle textures that can be projected on film.

For example, just as some artists prefer “analog recording” in music, analog equipment is still used in music production. Also, in the world of video, you can give your digital work an analog feel by shooting it using digital technology and finally finishing it in an analog way. In this way, digital and analog influence each other and create new value.

THE SIGNIFICANCE OF ANALOG VALUE IN THE DIGITAL AGE

Exquisite handiwork and craftsmanship

In the digital age, the value of handicraft and craftsmanship is being re-evaluated. People give higher praise to handmade and painstaking products than to mechanized, mass-produced products^[1]. For example, analog clocks, handmade record players, and hand-woven fabrics are infused with the “spirit of craftsmanship” and give consumers a strong impression.

Even in today’s world where digital technology has developed so much, the demand for the value and beauty of “things made by human hands” continues to exist. These analog products have a “warmth” and “individuality” that cannot be reproduced by machines, and they deeply move people.

The Importance of Analog Experience

We also can't overlook the importance of the analog experience. In a digital environment, information is readily available, but in an analog world, the process can be meaningful^[11]. For example, taking a photo with a film camera is different from shooting with a digital camera in that it gives the photographer time to "ponder." Even after shooting, memories and emotions are deeply involved in the process of developing the film. This kind of experience is still important in the digital age, and is one of the reasons why analog value is being reevaluated.

WHERE ANALOG VALUES ARE CONVERTED TO DIGITAL

Examples of digitizing analog (e.g., vinyl records' digital sound sources)

An example of analog music being digitized is the process of converting recorded music into digital sound sources such as CDs and MP3s. The important point here is the issue of how much of the "warmth" and "depth" of analog sound sources can be reproduced in digital sound sources. With the latest digital technology, it is possible to faithfully reproduce the sound of analog records, but it is difficult to completely reproduce the "temperature of the sound" and "fine fluctuations"^{[2],[14]}. Still, digitization has made it easier to store and distribute music, making it easier for more people to enjoy the benefits of analog.

Transition from digital to analog (revival of analog equipment)

On the other hand, even in the digital age, analog equipment is attracting attention again. In particular, record players, analog clocks, and handmade artworks are gaining popularity again. This can be said to be the result of digital creating a world that is so efficient and "inorganic" that as a reaction, a familiarity and nostalgia for analog things has developed^{[3],[4]}.

The revival of analog devices is not just a matter of nostalgia, but a new trend that seeks sensory value, such as the "flow of time" and "touch" inherent in analog experiences.

THE FUTURE OF DIGITAL AND ANALOG

How do they coexist in evolving technologies?

How will digital and analog coexist in the future? The evolution of technology is accelerating, and while digitalization is going to increase, analog value will also become more and more important. It is predicted that the two will coexist as complementary entities rather than opposites^[12]. For example, in music production, digitization allows for more avenues of expression, while adding the unique sensations that analog equipment brings will create more depth^{[5],[7]}.

Reassessing the Value of Innovation and Analogue

As digitalization progresses, the reevaluation of the value of analog is also a reaction to technological innovation. While digitalization is making our lives more efficient and convenient, the "humanness" and

“sensory depth” of analog experiences will be emphasized again^[13]. This trend is expected to accelerate further in the future.

CONCLUSION

The value of digital and analog is a relationship that can complement each other while having different characteristics. While the development of digital technology has greatly improved efficiency and convenience, the analogue experience and value, especially the sensory depth and beauty of handiwork, will continue to play an important role in the future. The fusion of digital and analog will be an important key to further enriching our lives and creating new creativity.

REFERENCES

1. Baker, S. 2019. *The Analog Revival: How Vintage Technologies Are Shaping the Modern World*. Routledge.
2. Chyon, M. 1994. *Audio-Vision: Sound on Screen*. Columbia University Press.
3. Gitelman, L. 2006. *Always Already New: Media, History, and the Data of Culture*. MIT Press.
4. Jenkins, H. 2006. *Convergence Culture: Where Old and New Media Collide*. New York University Press.
5. Kenichi Okada. 2016. The Current Situation and Future of Analog Circuit Design. *Journal of the Institute of Electronics, Information and Communication Engineers*, **99**(9): 895-900.
6. Kottke, J. 2013. The Analog vs. Digital Debate: How the Two Are Interwoven. *Journal of Technology and Culture*, **14**(3): 121-135.
7. Nakamura, L. 2007. *Digitizing Race: Visual Cultures of the Internet*. University of Minnesota Press.
8. Sterne, J. 2012. *MP3: The Meaning of a Format*. Duke University Press.
9. Jenkins, H. 2006. *Convergence Culture: Where Old and New Media Collide*. New York University Press.
10. Hassan, R. 2004. The Digital Media Revolution: From Analog to Digital to Virtual. *Journal of Communication*, **14**(2): 99-112.
11. Harris, T. 2016. The Craft of Analog Photography: A New Renaissance. *Photography Journal*, **22**(1): 34-48.
12. Ichiro Yamada. 2011. From Analog to Digital: How the Evolving Digital Faces the Analog World. *Journal of the Japan Society of Mechanical Engineers*, **114**(1112).
13. Ong, W.J. 1982. *Orality and Literacy: The Technologizing of the Word*. Routledge.
14. Shuichi Maeda. 2004. The Transition from Analog to Digital Society and the Role of Paper. *Media Journal of the Image Society of Japan*, **43**(4).
15. Yamamoto Haruka *et al.* 2020. Aoyama Design Conference (Vol.176) *The Value of Analog Reconsidered in the Digital Heyday*. Brain. 60(12)=725:2020.12,p.50-59. <https://ndlsearch.ndl.go.jp/books/R000000004-I030718050>

