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THE ECOSYSTEM CONCEPT IN DIGITAL ADVERTISING, THE IMPORTANCE OF GOOGLE AND METAVERSE ECOSYSTEMS IN ONLINE ADVERTISING

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DİJİTAL REKLAMCILIKTA EKOSİSTEM KAVRAMI, GOOGLE VE METAVERSE EKOSİSTEMLERİNİN ONLINE REKLAMCILIKTAKİ ÖNEMİ

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Abstract

As the internet has developed, the increasingly influential online-based digital media has driven the transformation of digital advertising. While the core nature and objectives of advertising have not fundamentally altered, digital advertising has begun to occupy a larger role in consumers' lives compared to traditional advertising channels. Leveraging the opportunities offered by the internet, digital advertising has redefined and repositioned consumers, shifting them from being passive recipients of messages to becoming active participants capable of engaging in two-way communication.

In this digital environment, consumers now have significantly enhanced opportunities to exercise their right to critique, making them more independent and less prone to manipulation by brands. As a result of these advancements, brands have discovered ways to closely track consumer trends and behaviors, gain valuable insights into their audience, ensure that advertisements exert a strong influence on consumers, and maintain constant communication with them, independent of time and location.

Digital platforms such as websites, blogs, forums, social media platforms, music and video-sharing sites, online newspapers, podcasts, and dictionaries are now viewed as essential tools for reaching target consumer audiences and are being utilized as cutting-edge advertising channels.

In the current landscape, digital advertising, shaped by the unique nature of the advertising industry, operates in a competitive arena both regionally and globally. By taking advantage of the infrastructure provided by internet technologies, brands have been able to reach global markets with effective promotional strategies in a relatively short time frame. From this point forward, digital advertising channels are regarded as advantageous options for brands in terms of time, cost, and interactivity.

When compared to advertisements in traditional media, digital ads are not only faster and more cost-effective but also allow for quick and effective adjustments in response to consumer feedback, demands, expectations, and complaints.

Keywords: *digital advertising, metaverse, online media, google and advertising.*

Öz

İnternetin gelişmine bağlı olarak giderek güçlenen online temelli dijital medya beraberinde dijital reklamcılığın gelişimini beraberinde getirmiştir. Reklamın tabiatı ve hedefleri temelinde değişmemiş olsa da geleneksel reklam mecralarından farklı olarak tüketicilerin yaşamında günden güne daha çok yer etmeye başlamıştır. İnternetin sağladığı olanaklarla gelişen, dijital reklamcılık tüketiciyi, sadece iletilen mesajları alan, pasif halinden çıkararak, karşılıklı iletişim kurabilir halde yeniden konumlandırmış ve tanımlamıştır.

Tüketicilerin, eleştirme hakkı bu mecrada oldukça geliştirilmiş olanaklara sahip olduğundan, tüketiciler markalar karşısında özgür ve maniplasyonu daha zor hale gelmiştirler. Markalar tüm bu ilerlemeler neticesinde tüketicilerin eğilimlerini ve nabzını birebir tutmabilmenin, onlar haklarında bilgi sahibi olabilmenin, reklamların tüketicilere ulaştırılırken etkileme gücünün yüksek olmasını sağlamanın, zaman ve mekândan bağımsız olarak her an tüketici ile iletişimde kalmanın çarelerini bulabilmektedir.

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Web siteleri, bloglar, forumlar, sosyal paylaşım platformları, müzik ve video paylaşım siteleri, internet gazeteleri, postcastler, sözlükler gibi dijital mecralar, tüketici hedef kitlelere ulaşmanın bir aracı olarak görülmekte ve yeni nesil reklam mecraları olarak kullanılmaktadır.
Günümüz koşullarında ise dijital reklamcılık, reklam sektörünün kendine özgü yapısı gereği, rekabeti bölgesel ve aynı zamanda küresel koşullar altında sergilemektedir. Markalar internet teknolojilerinin sağlamış olduğu alt yapıları kullanarak az bir zaman denilebilecek dönemde etkili tanıtım stratejileriyle küresel pazarlara ulaşabilme olanağına sahip olmuşlardır. Bu dönemden sonrası markalar için, zaman, maliyet ve interaktiflik yönünden dijital reklam mecraları avantajlı bir seçenek olarak değerlendirilmektedir.
Dijital reklamlar, geleneksel mecralarda yayınlanan reklamlara kıyaslandığında daha hızlı ve daha az maliyetleriyle değerlendirilebilir, tüketicilerden gelecek istekler, talepler, beklenti ve şikâyetler sonucunda ise hızlı ve etkili bir şekilde revizyona kolaylıkla gidilebilmektedir.
Anahtar Kelimeler: *dijital reklamcılık, Metaverse, online medya, Google ve reklam.*

EXTENDED ABSTRACT

Background:
In this context, Google in general search services and Meta in social media services have expanded their operations into adjacent markets by leveraging their network power, while gaining a competitive advantage in these markets, they had the opportunity to increase their market power by integrating different products and services. In this framework, an overview of the products and services provided by Google and Meta will be presented first, followed by an analysis of Google's position in general search services and Meta's position in social media services.

Research Purpose:
Technology, which is changing and transforming every day, shows its presence in the field of digital advertising in parallel with the speed of taking place in the lives of individuals. Life practices transformed with digitalization have revealed the necessity of brands and advertisers to apply new ways, methods and techniques within the scope of promotional activities (Kelly-Holmes, 2015: 131).
Developed on the basis of simulating real life on a digital system, metaverse emerges as an important communication channel for brands as well. In this framework, technological convergence has emerged as a result of the integration of social media, which entered our lives with Web 2.0 technologies, with virtual reality and augmented reality technologies over time and the rapid development of internet and communication technologies (Hackley & Rungpaka Hackley, 2018: 2).
Conidering that the metaverse ecosystem will replace the internet and social media today, it can be said that the metaverse field will have a significant role in the understanding of data-centered digital advertising (Smart et al., 2007). It can also be foreseen that the metaverse field, which is predicted to be a reflection of the social and professional lives of individuals in parallel with daily life (Schlosser, 2020; De Vito et al., 2017: 740), will play a central role in the transformation of the advertising industry, which is reshaped with the digital footprints of individuals and is an important part of the progress of today's production and consumption dynamics (Du et al., 2021).

Methodology:
The objective of this research is to explore how the dynamics of the Metaverse are expected to transform the future of social media and digital advertising. Specifically, the research aims to assess the current developments within the Metaverse field, project how Metaverse technologies and related innovations will influence practices and activities in social media and digital advertising, and discuss the potential impacts of the Metaverse ecosystem on these fields based on expert opinions.

Findings:
The limited qualitative research available on the implications of the metaverse, which is anticipated to become an integral part of our lives, and its associated technologies on social media and digital advertising (Puch, 2014: 131), highlights the significance of the findings from this study. In this sense, the research on metaverse dynamics is expected to provide valuable insights into the opinions and predictions of industry professionals regarding the future of social media and digital advertising.

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The sample of the research, the functioning of the services of Google and Meta, the two big companies that make up the digital advertising ecosystem and have established the basic infrastructure platforms and service providers of this ecosystem, and their importance in the digital advertising ecosystem and their possible effects for the future have been tried to be evaluated. In this research carried out, the dynamics of the Google and Metaverse ecosystem, which continues to develop and is planned to be opened to more users in the near future, it is tried to be determined with the opinions of industry professionals regarding the changes and transformations that it will bring with it in the domain of digital advertising and social media.
On this basis, the beginning questions of the research were determined as follows:
What is the concept of ecosystem structure in digital advertising and how is it shaped?
What are the basic platforms and systems that make up the ecosystem structure in digital advertising?
What is the function of Google and digital advertising platforms in the development of digital advertising?
What are the uses and effects of social media in digital advertising?
How can the current state of the metaverse be assessed?
How will developments in the metaverse influence social media activities?
How will advancements in the metaverse impact digital advertising strategies?
In what ways will the future of social media and digital advertising be shaped by the metaverse?

Conclusion:
In the consumer society, which surrounds the consumer with advertising messages every day and every moment, the need for brands to apply to digital advertising practices developed in the light of digital technologies has arisen in order to be successful under intense competition conditions (Tosun, 2017: 647). In this context, the process that started with banner ads as the first examples of digital advertising (Ducoffe, 1996: 23) continues to transform through virtual reality and augmented reality applications as well as new tools and environments developed with artificial intelligence algorithms (Karnouskos, 2020: 140).
Today, the individual, who has the motivation to produce rather than just being a consumer, has an active role on social media platforms. According to Fuchs (201: 88), this situation, which is expressed as producer-consumer, has enabled the user to be positioned at a central point in the context of marketing communication and digital advertising (Kalan, 2016: 73-74). New communication technologies and the internet have provided users with the power to access information in the field of advertising, as in many areas, and in this direction, they allow users to interact, produce content for brands, and become conscious or unconscious brand representatives (Hamilton, 2017).
In other words, the power of ordinary users to reach large masses at the same time and in a short time has led to a significant transformation in advertising practices. In this context, the consumer's contribution to the content, reaching large audiences, having the power to influence other users by conveying their experiences, feelings and thoughts with the insight of an ordinary user, and playing an important role in the dissemination of content have led to the reshaping of digital advertising (Backaler, 2018: 188-189; Liu et al., 2020).
Within the scope of emerging developments in digital advertising, there are three important trends: search engine applications, social media platforms and mobile applications (Tham et al., 2017: 61-74). While the advertisement studies carried out in the light of these technologies are updated with the constantly changing and transforming technologies, the application areas of digital advertising are also developing in parallel (Harrison & Andrusiewicz, 2003).
In the literature, types of digital advertisements are examined under different headings such as banner ads, rich media ads, e-mail ads, social media ads, sponsored ads, mobile ads, game ads (advergaming), search engine ads, programmatic ads, pop-up ads, hyperlink ads, full screen (intersitial) ads and personalized ads (Köse & Yeygel, 2019).

1.INTRODUCTION
Depending on the fact that internet technologies have become more accessible over the years, advertising activities, which have continued their existence with traditional methods in written, visual and auditory for years, have started to show their presence in a new medium, especially since the early 2000s. As access to the Internet expanded in terms of both costs and accessibility, advertising activities found themselves in an unknown and new medium. Although this new medium, whose

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infrastructure is dependent on internet technologies, initially only covered advertisements on web pages, today it continues to develop in a wide range, including advertisements made in mobile environments in accordance with the dizzying speed of technology (Bulunmaz, 2013, p.6).

While addressing digitalization, many areas such as mobile internet connections and digitalized out-of-home channels should be taken into consideration, rather than the change of advertisements in the internet environment that can be accessed only through desktop computers or tablets. Digitization also means an integration of all communication tools. In this sense, the most prominent factor affecting online advertising practices is the structure and content of the area where the advertisement is placed (Önay Doğan, 2015, p.14).

When the digital age we live in is evaluated from the perspective of advertising, it can be summarized as a period in which the consumer is centered – he is a part of the ad rather than just watching it – the importance given to interactivity is increasing day by day, and multi-media combinations are accepted (Yılmaz & Erdem, 2016, p.151).

Digital media provides more concrete data by following the footprints left by the consumer on the internet, and can make more accurate predictions than traditional media at the point of making plans and strategies for the future. Thanks to technological developments, as a result of the development of systems such as data mining, an advertising understanding has emerged in which brands can get to know the consumer more closely (Özmen, 2003, p.13).

Although the main purposes of advertising are to inform, persuade, remind and reinforce, in our age, advertising studies have turned into a much more comprehensive and complex communication process. Advertising, which reflects and affects social, cultural and economic structures, has become an ecosystem today (Elden and Bakır, 2010, p.18).

“Advertising is an important economic and social phenomenon that has made tangible contributions to economic growth and value creation for over a century. It is also one of the important supporters of the modern consumer society centered on brand symbolism (Dyck, 2017, p.13).

In the period when the internet was just beginning to develop, while digital advertising was an area that was not preferred and suspected, the interest in digital advertising increased in parallel with the development of internet technologies. Digital advertising seems to be successful in eliminating doubts with the effectiveness and efficiency it provides. Today, being involved in digital channels has become compulsory rather than a necessity for businesses. This opinion is supported by the ever-increasing number of digital advertising agencies and the ever-increasing digital advertising expenditures in total advertising expenditures (Yılmaz and Erdem, 2016, p.163).

2.STRUCTURE AND OPERATION OF THE DIGITAL ADVERTISING ECOSYSTEM

Multi-actor ecosystems: In its broadest definition, an ecosystem is a community of independent parties. In economic terms, the ecosystem concept is closely tied to the notion of "joint value creation." and means that enterprises create value together that they cannot create alone.

Multi-product ecosystems: In digital markets, the term "ecosystem" refers to a unified economic system that provides various products and/or services through different divisions or business lines. Typically, there are economic connections between these products and services. On the demand side, these products or services may be substitutes (CMA (2020), p. 18.). Digital platforms that unite various actors and generate value through the platform are almost always multi-actor ecosystems. This dimension of the ecosystem concept is closely linked to the multi-market nature of platforms. Additionally, large-scale digital platforms often function as multi-product ecosystems. For instance, the Google ecosystem encompasses products such as Android, Google Search, Chrome, Google Docs, Google Play, Google Drive, Google Translate, Gmail, Google Maps, Google Shopping, and YouTube.

Certain unique features of digital platforms enable them to operate across multiple product or service categories in fact encourages the transformation of these platforms into multi-product

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ecosystems (Capobıanco, A. (2022). By monitoring the online behavior of digital consumers over a period of time, behavioral advertising, which is the presentation of personalized advertising according to these behaviors, is done with profiles created with deep packet analysis (deep pocket inspection [DPI]) by examining the traces of the user while surfing online, knowingly or unknowingly, or the data flow in internet service provider (ISP) services (McStay, 2011, 2). However, the data flow inspection method was generally found to be illegal because it was unauthorized, and Phorm, one of the largest companies involved in this process, was shut down. When Phorm signed with Türk Telekom (TTNET) in Turkey before it was shut down, it caused great controversy and reactions (twitter.com).

Platforms with significant market power functioning as an ecosystem have the ability to gather two crucial inputs for the online advertising market: (i) consumer attention and (ii) consumer data. In this way, platforms which generate higher advertising income can invest at a higher rate than their competitors, and this contributes to the power of the market of certain platforms. In addition, that platforms are typically ecosystems of products and services which complement each other allows them to use the user data they obtain within the scope of one activity while performing other activities. On one hand, this situation is viewed as advantageous because it allows users to receive more personalized services. On the other hand, it poses the risk of the market evolving in a way that makes users increasingly dependent on the platform. (CMA (2020), p. 56.).

3.ECOSYSTEMS OF GOOGLE AND METAVERSE PLATFORMS

Platforms have created comprehensive ecosystems of interdependent and complementary products and services, involving core platform services. Operating as an ecosystem allows these platforms to integrate various products and services and to facilitate data sharing between them. (CMA (2020b),Access Date: 07.03.2023.).

Firstly, platforms with market power have the ability to extend their influence to downstream, upstream, or adjacent markets. This possibility, known as the leverage effect, can cause established platforms to consolidate their different activities under one roof and gain an advantage over potential competitors. (Leverage happens when a company utilizes its monopoly power in one market to expand into an adjacent market, subsequently exercising its market power by increasing prices and/or limiting output or quality. (Todd, P. F. (2019).

Platforms that generate income through online advertising serve a wide range of user groups. Meta, which generates over half of the total revenue of the enterprises from which data is obtained within the scope of the sector analysis, even without breaking down in Google and display advertising services, which is the sole entity with dominant power in search-based advertising in Turkey, provides various products and services that users need or may need and expanded the size of their ecosystems. However, it can be stated that both entities bolster their market power in online advertising services through their robust standing in essential platform services. (CMA (2020), p. 18.).

3.1.Google Ecosystem

Google offers a variety of interconnected and complementary products and services to its advertising and non-advertising business customers as well as consumers. From Figure 1 below, which exemplifies the ecosystem of Google's consumer products and its operations within the internet and search engine value chain; Google appears to operate in a wide variety of consumer markets, including apps, operating systems, and devices:

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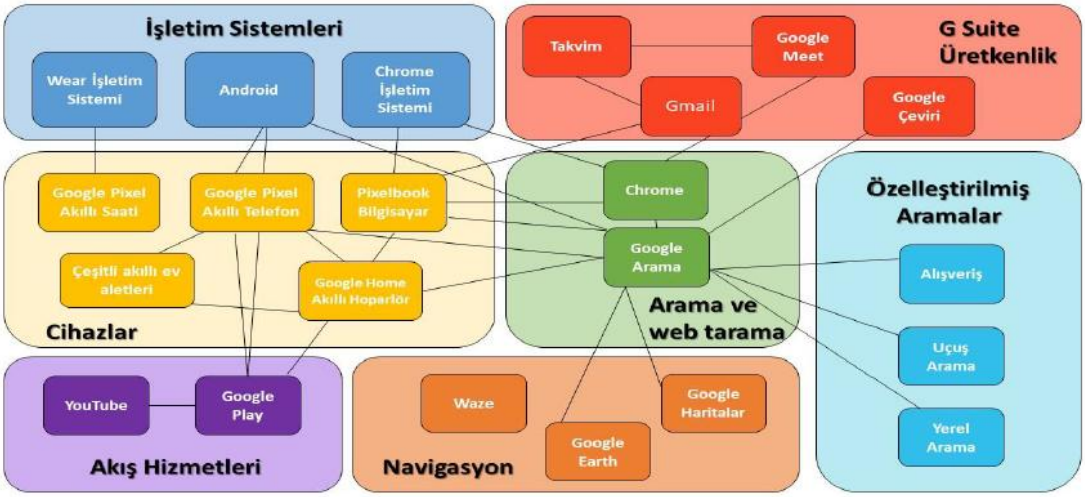

Figure 1: Google's Consumer Online Ecosystem

Source: CMA (2020b).

The product and service groups offered by Google to consumers are listed as follows:
-Pixel mobile phones, tablets, and Pixelbook laptops, which run on the Android operating system and often come with pre-installed applications like Chrome,
-Chromecast devices that enable computers and smartphones to connect and stream content to televisions, with Connected Home Nest, which provides an access point to the Google Assistant product and includes a range of smart home products
-Chrome operating system running on laptops and tablets in order to ensure that internet browsers are compatible with the necessary software and work effectively,
-The Android mobile operating system used on smartphones and the Wear operating system offered as a version of Android for smart watches and wearable devices,
-Chrome Wen Store, which provides a digital distribution service for add-ons that can be installed to increase the functionality of Chromium and Chrome browsers, an open source browser engine that serves as the primary access point for internet browsers and search engines, and is currently utilized by many other browsers, involving Chrome, Microsoft Edge, Opera, and Vivaldi.
-Customized vertical search services like Google Flights, Google Hotel Search, Google Shopping, Google News and Google Scholar that can be accessed through this portal with the internet search engine Google Search,
-As complementary products, the Messages application, which is supported by Google Assistant and enables users to send messages via smartphones and computers,
-In the entertainment category, YouTube, a video-sharing platform where users can watch, upload, share, comment, and subscribe, as well as YouTube Music, which offers online music streaming services through mobile applications
-Google Pay, which provides digital wallet platform and online payment system services
-Google Play Store, an application store that offers distribution services for Android devices, including e-books, games, on-demand online video (VoD), and mobile music applications
-Google Maps for desktop and mobile devices, Google Earth, Google Street View (Street View), navigation application Waze for in-vehicle navigation and Android Auto, which is designed for in-car infotainment systems and integrates with applications on Android devices,

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-Google Assistant, an AI-powered virtual assistant available on mobile devices and smart home devices,
-The free internet-based email service Gmail,
-Google Fit, a health monitoring platform designed to be compatible with Android, Wear, and iOS operating systems,
-Hangouts, a communication platform offering messaging, video chat, and voice over internet protocol (VoIP) features,
-The free translation app Google Translate (2020, p. 73.).

Despite its extensive range of products and services, Google has been able to penetrate various markets due to the market power it established through its primary platform service, which was its first core platform service. As previously mentioned under the title above, Google has a 76.24% market share in general search services in Turkey in terms of 2022. Google's dominant position in general search services is underpinned by several entry barriers and development. It has also been stated by the CMA that economies of scale in web indexing, access to click and search data, and Google's default features enable it to sustain its dominant position in the general search services market (2020, p. 73).

Based on Google's dominant position in general search services, having a wide ecosystem with various services in many vertical or conglomerate relationships enables it to gain significant competitive advantages or to have the ability to control access to the markets in which it operates. Given that Google offers many of its products and services free of charge to consumers, and that it has made certain programs such as Android and Chromium available on an open-source basis, many of these products and services would not yield significant profit to Google without Google's revenue from advertising services and sometimes it is stated that Google is making a loss from these products and services. Despite this, it is possible to mention that Google, which earns most of its income through search advertising, can utilize many of these products and services to draw more users to its search services. To put it differently, certain free products and services within the Google ecosystem support and bolster Google's dominant position in general search services. (CMA (2020b), p.6.).

Products and services offered by Google to businesses/business users include:

In terms of advertising services;

-In terms of advertising services;
-AdMob, an advertising network and platform for mobile application publishers
-AdSense, which provides publishers with text-based search ads related to user queries, as well as text, display, and video ads relevant to website content
-Analytics 360, which offers measurement data and web analytics on user interactions with content and ads
-Analytics and Analytics Standard for Firebase
-Campaign Manager, which includes features for display ad serving, reporting, media planning, frequency management, and time targeting for advertisers
-DV360, which offers display campaign management and performance services on advertising exchanges, allowing DSP buyers to purchase inventory and bid on third-party exchanges
-Ad Manager (formerly DoubleClick), used by publishers to forecast ad inventory availability, allocate it to buyers, and sell it via ad networks or exchanges
-Google Ads, an online advertising platform for advertisers
-Google Marketing Platform, a marketing platform offering free services for small businesses and more comprehensive paid advertising and analytics services for large enterprises
-Google Tag Manager 360 and Standard, a tag management system for managing tags and codes
-Local inventory ads, which help businesses display product and store information to nearby userssearching on Google

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-SA360, the ad management platform for advertisers, and Hotel Ads, which allows advertisers to create dynamic ads on Google's Hotel Search service (CMA (2020b), p. 6.).

Another area of activity in which Google expands the scope of its services by making use of the opportunity to access its data is Android, the most widely used mobile operating system, and a wide portfolio of software applications developed in line with Android. In addition, Google can provide a broad distribution network for its comprehensive and compatible product portfolio through agreements with hardware manufacturers and mobile network providers about the pre-installation and default configurations of Google services. While this is especially true for Google Search, Google Maps, Play Store app store, YouTube video platform and Gmail email service, Chrome browser is also particularly important in this regard. Namely, Google can preset its own search service access point in third-party operating systems rather than Android through this browser, which has a wide reach (Bundeskartellamt's decision B7-61/21, p. 20.).

According to a study (Kısa, Ugur , 2024, pp. 24–25) the issue was also covered in the Board's decision regarding Google Android, in agreements signed with device manufacturers of Google, which is dominant in the licensable operating system, it has been evaluated that the provisions regarding the assignment of Google Search by default at the designated points, its placement on the home screen and ensuring that it is the only app installed on devices meet the conditions of the binding application.

Google also provides a wide range of services for advertisers and publishers, operating across all levels of the ad technology industry supply chain. Thus, Google has services that combine supply and demand in both search-based and non-search-based advertising. In this regard, Google benefits from having a broad portfolio on both the advertiser and publisher sides (Board's decision dated 19.09.2018 and numbered 18-33/555-273, p. 82-83.).

Moreover, Google, which offers online advertising services—particularly search-based ads—and holds a dominant position in other products and services such as Android, Chrome, and YouTube, benefits from its leverage and strong network effects. Unlike Google, other platforms do not provide ad space across all sectors and lack an ad space equivalent to Google's search results page, making them viable alternatives for advertisers only in specific segments (Bundeskartellamt's decision B7-61/21, p. 22.) .

The fact that Google functions as an ecosystem can also raise concerns related to data. For example, in the decision by the Bundeskartellamt that Google was declared an undertaking of paramount importance in inter-market competition; It has been stated that another benefit of Google functioning as an ecosystem emerges when it comes to data consolidation, At this point, Google can utilize identifiers generated for the combination of data including advertising ID on mobile devices for personalized advertising efforts, or it could also link data in a more aggregated way, for instance, to identify groups of users who share similar preferences; Simultaneously, with Google's broad access to the data it collects from the utilization of its services, it can use this data for targeted advertising services while gaining the potential to gain insight into users' personal preferences and needs, It can also obtain data on user behavior from third-party services or websites via the advertising services it provides (Bundeskartellamt's decision B7-61/21, p. 77.).

It has also been stated by the CMA that the integrated structure of the Google ecosystem allows it to collect, process and share data via consumer-oriented products and services, this data includes utilizer information that users voluntarily provide when they create a Google account, as well as information about applications, browsers, and devices accessed by Google services used by consumers, and other information about users' activities on Google services, including location data (CMA (2020b), p. 6.).

In addition, Google can also manage the flow of user data between applications and systems within its ecosystem, depending on the operation of its operating systems. On top of

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that, Google can leverage the extensive datasets it collects on the use of its services to tailor its services for end users on a per-user basis, thereby increasing their attractiveness. This data volume provides Google with a significant competitive advantage, as Google has access to a vast number of utilizers and, as a result, user data on a large scale due to its extensive ecosystem (CMA, (2020b), p. 5).

It is noted that robust economies of scope are the reason a few large digital platforms build ecosystems that encompass many adjacent markets. Regarding economies of scope, it is emphasized that Google has the ability to provide, improve and develop a wide range of services, and cross-promote these services within the ecosystem, redirect users of one service to other services, or enter new markets by offering its services across different markets with various extensions and additions. (Unlocking Digital Competition (2019).

However, at different points within its digital ecosystem, Google wields significant influence on the reach of third parties to users. At the same time, it is possible to talk about the infrastructure character of Google's services, as it mediates the activities of third parties due to its strong market position across all levels of the supply chain and its wide-ranging different services. (Bundeskartellamt's decision B7-61/21, p. 161).

Additionally, as the rule maker setting the fundamental conditions for markets or processes within its ecosystem, Google can also influence these conditions as the ecosystem's operator. This dual role often makes it easier for Google to enter and expand into new markets compared to potential competitors. Consequently, Google's extensive user base, the diversity and range of its interconnected services, its influential market position in rule-setting across various platforms, and its broad access to data and other resources collectively grant Google a substantial competitive advantage.

3.2.Metaverse Ecosystem

Meta also provides advertisers and developers a wide range of products and services, many of which are interdependent and complementary. The services offered by Meta are depicted as follows:

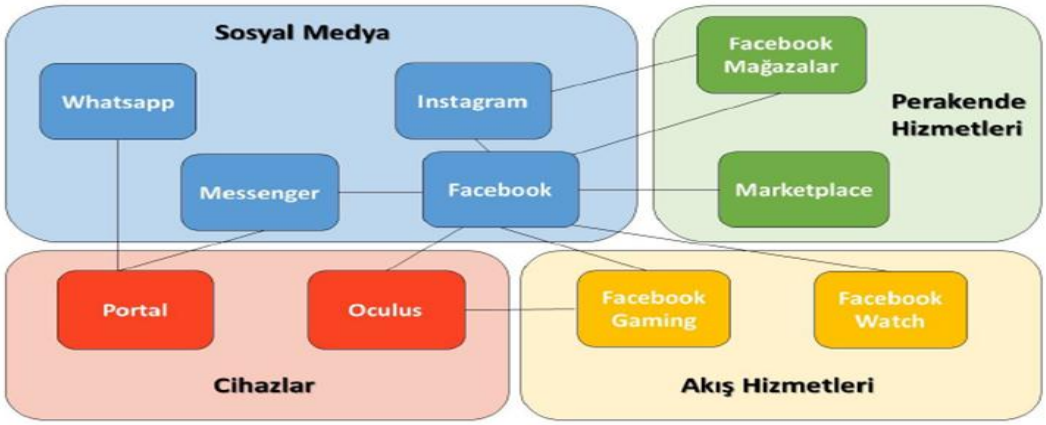

Figure 2: Meta's Consumer Online Ecosystem

Source: CMA (2020b).

It is seen that Meta holds a dominant position in the markets for personal social networking services, consumer communication services, and online display advertising services markets, where it is active and as well as social media platforms Facebook and Instagram, Various complementary services along with messaging services via Facebook Messenger, Instagram Direct Messenger and WhatsApp and in addition, it has recently begun to offer consumers devices called Portal and Oculus Virtual Reality (VR) devices. (Decision of the Board dated 20.10.2022 and numbered 22-48/706-299, p. 213.).

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As can be seen from Figure 2, Meta has ventured into other markets by taking advantage of its strong foothold in the social media market, as well as providing opportunities for developers to develop applications and services that enhance and complement its products within the ecosystem.

In this context, Meta's products and services within its ecosystem are categorized into two main groups: basic platform services and devices. The primary basic platform service is Facebook, a social networking platform accessible via web and mobile apps. It also includes additional services such as:

Purchase and Sale Groups: Facilitates trading between users.

Device Requests: Allows users to view and approve sign-in requests from various apps on different devices.

Events: Helps users discover events based on their interests and page likes.

Facebook Login: Enables users to quickly register or log in to other online services using basic information from their Facebook profile, and is also available to developers.

User Profile: Displays personal information and all content published by the user.

Friends and Friend Lists: Allows users to send and view friend requests and get recommendations for people to add.

Groups: Provides spaces for users to share interests and opinions.

Job Opportunities: Lets users find and apply for job postings directly on Facebook.

Live Videos: Enables users and businesses to interact through live streaming.

Messenger: Facilitates messaging and media sharing among users like pictures, videos, audio

News Feed: Displays organized content based on user interests and page visits.

Stories: Allows users and pages to share visual updates as photos or videos. (Kelly, S. M. (2021, October 29).

In addition, the services primarily provided to businesses encompass several features. These include Pages, which offer free and public visibility to consumers, Marketplace, where users can post and view advertisements specific to their local area, and Shops applications that enable businesses to showcase and sell products directly on the Facebook platform. Businesses can also engage with users through messaging applications and, in some regions, facilitate purchases either through online payment systems or by directing customers to their own websites. (Kuş, O. (2021) .245-266).

Another fundamental service offered by Meta is the Instagram application, which includes several key features. Direct Messaging allows users to send messages to each other, Feed provides content tailored to users' interests, Stories enable users to share visual updates, and Shopping services permit businesses to tag products so users can purchase directly from organic Instagram posts. In contrast, the WhatsApp service is a mobile messaging application that also supports VoIP (Voice over Internet Protocol), and at present, the application does not display any advertisements. (Heller, B., & Bar-Zeev, A. (2021).

Meta's ecosystem is built primarily on the basis of a high and large user base Fueled by a substantial economy of scope that has A significant lock-in effect on both private and commercial utilizers. In other words, Meta manages an extensive ecosystem, which is a combination of a system of products around platforms with a robust market presence, and a packaged offering of a wide range of products to individual utilizers. In this sense, economies of scope also make it possible to deter rivals in innovation and guarantee a continuous and targeted expansion of the portfolio of products and services on the platforms (Bundeskartellamt's decision B6-27/21, p. 25.).

Conversely, Meta has limited integration among some of its products and services, like WhatsApp, which currently does not connect with other social media platforms. However, Meta has recently announced intentions to integrate WhatsApp with its other messaging services, including Facebook Messenger and Instagram Direct Messages, and to unify data across these platforms. In fact, in 2021, Meta informed users in Turkey through a notification about its terms of use and privacy policy, indicating that utilisers must agree to share their personal WhatsApp data with Meta

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companies to continue using the service; otherwise, they would be unable to access WhatsApp. (CMA). (2020b), p. 8.).

Given that Meta's ecosystem largely relies on a data-driven business model, it is significantly shaped and enhanced by its access to substantial competitive data. Meta leverages the extensive data collected through its primary consumer services, such as Facebook, Instagram, and WhatsApp. This data is comprehensive, encompassing information provided directly by utilisers, device data gathered from utiliser interactions with these platforms, and data acquired from third parties. Consequently, Meta has access to a vast and growing dataset of high quality derived from diverse sources. Additionally, Meta's practices related to data collection and usage across its various services have been investigated by various regulatory bodies overseeing competition (Hackley, C., & Rungpaka Hackley, A). (2018).

As a major provider of social communication infrastructure on the Internet, Meta's services also have a significant impact on commercial communication opportunities and therefore product providers, advertisers' and content creators' access to supply and sales markets. Controlling access to a large user base and having a huge amount of detailed user and transaction data gives Meta an opportunity to exert a powerful influence on advertisers and publishers as well as other news content suppliers. This is attributable to the growing significance of social media advertising, Meta's dominant role in this sector, its intermediary influence within the ecosystem, and its authority in establishing rules, which can be defined as determining the framework and conditions for the utilization of different services like important sales and supply markets and advertising and communication channels created by the platforms within the ecosystem (Narin, G. (2021).

In addition, The vertically integrated structure of advertising services provided by Meta on its social media platforms also contributes to its competitive advantages. This is because Meta manages all essential functions within its ecosystem through its advertising technology tools, benefiting from economies of scope that enhance its position. This situation, which is called the "walled garden" within the advertising industry, indicates that advertisers are required to utilize the advertising technology tools provided by Meta to a large extent in order to use the advertising spaces offered in the ecosystem of Meta, particularly given the size Meta and its dominant role in social media advertising. (Capobıanco, A. (2022).

While other competitors that offer ad-funded social media services are trying to build such a walled garden through their own comprehensive advertising services, they are failing to achieve similar economies of scope given the number of users and the much smaller scale of services offered. In addition, other competitors in the social media industry are not earning an equal and stable income from advertising services, as advertisers are dependent on using Meta services, which creates a walled garden By employing social media advertising and allocating the majority of their ad budget to Meta. Additionally, the large user base, the high frequency of Meta service usage, and the extensive granular data within the ecosystem have further contributed to this phenomenon, this contributes to excluding competitors from the system created by Meta and hindering competition (An API for Ad Conversions, (2023.).

Therefore, it is observed that Meta uses its market power due to its leading position Its dominant position in the social media services market, combined with its large user base and access to extensive data, allows it to expand into other markets and expand its activities in these markets through various products and services offered to users. In this direction, it is possible to state that Meta has broadened its range of activities through economies of scope and established a significant lock-in effect on users within its ecosystem. Additionally, the vertically integrated nature of the ecosystem may cause advertisers to rely heavily on various advertising services, potentially leading to the exclusion of other competitors offering similar services from the market, resulting in a deterioration or restriction of competition (Hamilton, J. (2017).

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In conclusion, considering the complementary and interdependent relationships among the growing number of products and services within the ecosystems that Google and Meta have built around core platform services, fully integrated ecosystems developed by platforms with substantial resources and expertise can offer considerable benefits to consumers, such as increased efficiency and an enhanced user experience. On the other hand, such ecosystems;

Leveraging market power from core platform services to enter other markets may raise competitive concerns related to the processing or aggregation of the data taken and collected

-While serving to keep the primary services provided by the platforms, including those that provide the majority of their revenue, protected from competition in the market or any possible competitive forces from potential competitors' entry into the market ultimately leading to consumers being deprived regarding future innovative products and service;

-Leveraging market power from core platform services in other markets may raise competitive concerns related to the processing or aggregation of collected data.

After discussing the power and potential advantages of ecosystems, as well as the associated competition concerns, the next section will focus on data—another crucial element in online advertising. This section will first cover the types of data collected and processed in online advertising, including data gathered by Google and Meta within their respective ecosystems. It will then compare the advantages these companies gain from their data with those of other firms. Following this, online user tracking tools will be examined to understand the methods of data collection. Finally, it will be explained how user data is utilized in advertising, including the benefits of targeted advertising and the concerns arising from targeted advertising will be revealed (Çelikkol, Ş. (2022), 64-75.).

3.3.Transformation of Digital Advertising with Metaverse Ecosystem

In the process following the introduction of the Internet into our lives, technological developments have been the determinant of the characteristics of the social environments we use. After the first internet sites that came into our lives with the World Wide Web, the emergence of social media with the development of Web 2.0 technologies and popular mobile communication technologies enabled the formation of a smart, mobile and social communication environment. Recently, it can be said that with the development of virtual, augmented, mixed and augmented reality technologies, we are faced with a period that is interpreted as the convergence of these technological developments. Metaverse, which has become increasingly popular in this framework, can be defined as a term that includes various concepts and platforms (Kim, 2021).

Although the investments of technology companies in the three-dimensional virtual world, which is defined as Metaverse, have started in the previous processes, the current statements of the Facebook company, which is called Meta, have made the concept of Metaverse sit on the agenda of larger masses. In this context, it is observed that investments related to Metaverse, which is predicted to play a significant role in the future of social and professional relations, are getting more intense. While the Metaverse ecosystem, still in its early stages, continues to develop, it is observed that companies recognizing its significant potential for the industry are ramping up their investments. However, it can be noted that research on this topic remains limited. (Duan et al., 2021).

Developed new technologies bring along new areas of experience. In this framework, it is predicted that many sectors in the field of communication will undergo a change with Metaverse, which we can define as an emerging area of experience. In this context, the aim of this research is to reveal the role of the Metaverse ecosystem in the future of social media and digital marketing. In this context, as a new field of experience in the research, Metaverse was carried out as a study carried out within the ecosystem structure located on the axis of digitalization and the development of social media, the development of digital advertising and Metaverse - social media - digital advertising in the literature.

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The concept of the Metaverse, initially introduced in Neal Stephenson's 1992 novel Snow Crash, now refers to a three-dimensional virtual world where real people interact through their avatars. Google trends show that the word metaverse is becoming more and more popular, especially in 2021. In this popularization process, it can be said that after Roblox went public on March 10th, 2021, in April, Nvidia CEO Jensen Huang announced that the company's next step was to create a Metaverse, and on October 28, 2021, Facebook CEO Mark Zuckerberg rebranded the company with the name Meta, and events such as the institution's introduction of its advancements regarding the Metaverse came to the fore. (Shapiro, 2021; Kelly, 2021; Kim, 2021).

Metaverse, which can be defined as a virtual reality environment, can also be expressed as a virtual world that enables utilisers to interact with other users and a computer-generated environment (Shen et al., 2021).

On this basis, the virtual world is a a term that denotes computer-generated simulations of three-dimensional objects or environments, offering realistic and interactive user experiences (Dionisio & Gilbert, 2013). In the virtual world called Metaverse, users can socialize, engage in professional activities, play games or shop with a virtual version called avatar. Therefore, there may be a virtual life in which individuals defined as avatars can exist with their three-dimensional productions (Schlemmer et al., 2009).

Since each new technology, tool and digital environment transforms user behaviors and habits, the dynamics of the current sectors are changing accordingly. In this context, it seems meaningful to examine the domains of social media and digital advertising in the context of Metaverse developments.

Social media, which develops on the concepts of participation, mutual communication, community, openness and being connected (Güçdemir, 2010: 12) within the framework of new communication technologies, allows users to communicate and share with other users at the same time, eliminating geographical, physical and time limits. From another perspective, social media can be defined as a formal and technical infrastructure that allows users to access unlimited information (Safko & Brake, 2009: 3-4).

3.4.The Development of Social Media and Digital Advertising on the Axis of Metaverse

While the number of digital advertising works carried out with developing technologies is increasing, the processes of users' existence and contribution in the production process of the said advertisement contents are also changing (Koslow et al., 2003: 96). In today's world, where there is an interactive message flow with the user due to the nature of the internet technology in which digital advertising takes place, and the user has the right to have a say in the creation of the content beyond commenting on the content, new advertising applications developed in the light of artificial intelligence technologies cause the competition and technological cooperation between brands to strengthen (Li, 2019).

One of the most important common features of the new types of advertising emerging with digital technologies today is that the success of the advertisement is associated with the creative idea, as well as the technology used. Creative idea emerges as an element associated with the success of the advertisement as well as the technology used, the suitability of the technology to the user and the user insight. In this direction, the creative idea associated with the success of the advertisement has an important role in the fact that the advertisement can be spoken, shared, bonded with the user, and remembered (Landa, 2021: 4). In today's world dominated by technology, digital advertisements are at a central point in terms of recall and awareness formation in order to ensure successful brand awareness within the framework of both the technology used and the creative content (Nelson & Deborah, 2017: 16-17).

The spread of new communication technologies with digitalization has affected many aspects of life and has been reflected in many areas from individuals' consumption habits to their daily lives,

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from social relations to business processes. With this change, the necessity of cooperating with new communication technologies has emerged in applications for advertising and brand communication under the umbrella of marketing communication (Erdem, 2017).

The fact that Facebook, which entered our lives as one of the most widely used examples of social media platforms, changed its name to Meta in the last period of 2021, brought the physical world and virtual and augmented reality technologies together more (Çevik Aka, 2022). Within the scope of the investments of social media platforms under the new name Meta company regarding the Metaverse ecosystem, avatar plugins have begun to be developed, where individuals can reflect themselves in this new digital universe.

Avatars, which we can call the first steps in the adaptation of social media related to the metaverse field, can be created via the Instagram account. Avatars with limited visual elements remain hidden on the platform after they are created. In addition to the currently unavailable avatar applications, technological structures and investments that are expected to change both visual and aesthetic elements and habits regarding the Metaverse ecosystem continue to be developed (Haney, 2013: 40).

Manovich (2001: 36-37) expresses the digitalization process as the ability to store and use the moving and static audio, text and image contents, which emerge in media technologies, on different media tools with different extensions. In this context, the digitalization process is defined as the transfer to digital technologies by coding with the numbers one and zero sound, image, text, etc. produced through traditional media elements on the network-based system,with the development of modern computer technologies (Tocci et al., 2007: 13-14).

Social media platforms have started to gain popularity with the transition to Web 2.0 from the Web 1.0 era, where the user assumes a passive role and there is a one-sided communication. Social media, which emerged with the Web 2.0 era, is expressed as a communication tool that allows users to communicate with other users through an internet-based system, to convey their experiences to them, to produce their own content in the light of their feelings and thoughts, to comment on existing content and to express their opinions (Boyd & Ellison, 2008: 202-203; Fuchs, 2014: 54).

According to Kaplan and Andreas (2010:60), social media, where users can share their content with other users, refers to a structure in which the concept of user generated content comes to the fore.

Weinberg (2009: 1-2) also defines network-based social media platforms, which are important for the development of online communication and behavior, as an application area that enables the sharing of information, different thoughts and perspectives, and experiences via the web. It is predicted that the Metaverse world, like the social media platforms that we encounter in almost every part of life today, will routinely take place and be used in life practices (Altun, 2021).

Social media, which is handled in line with the content produced by users, has a user-centered structure. Today, it can be said that the user-centered structure plays an significant role in the fact that social media becomes widespread in a short time, takes place in social life, is adopted by users and creates new business areas (Aydoğan & Kırık, 2012: 29).

In order for the phenomenon of user-derived content to be in question, each user must be able to access these contents, the content in question must be prepared by non-professional users and natural, solution-oriented sincere messages based on consumer insight (Kaplan, 2010: 61).

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4. CONCLUSION

In the consumer society, which surrounds the consumer with advertising messages every day and every moment, the need for brands to apply to digital advertising practices developed in the light of digital technologies has arisen in order to be successful under intense competition conditions (Tosun, 2017: 647). In this context, the process that started with banner ads as the first examples of digital advertising (Ducoffe, 1996: 23) continues to transform through virtual reality and augmented reality applications as well as new tools and environments developed with artificial intelligence algorithms (Karnouskos, 2020: 140).

Today, the individual, who has the motivation to produce rather than just being a consumer, has an active role on social media platforms. According to Fuchs (201: 88), this situation, which is expressed as producer-consumer, has enabled the user to be positioned at a central point in the context of marketing communication and digital advertising (Kalan, 2016: 73-74). New communication technologies and the internet have provided users with the power to access information in the field of advertising, as in many areas, and in this direction, they allow users to interact, produce content for brands, and become conscious or unconscious brand representatives (Hamilton, 2017).

In other words, the power of ordinary users to reach large masses at the same time and in a short time has led to a significant transformation in advertising practices. In this context, the consumer's contribution to the content, reaching large audiences, having the power to influence other users by conveying their experiences, feelings and thoughts with the insight of an ordinary user, and playing an important role in the dissemination of content have led to the reshaping of digital advertising (Backaler, 2018: 188-189; Liu et al., 2020).

Within the scope of emerging developments in digital advertising, there are three important trends: search engine applications, social media platforms and mobile applications (Tham et al., 2017: 61-74). While the advertisement studies carried out in the light of these technologies are updated with the constantly changing and transforming technologies, the application areas of digital advertising are also developing in parallel (Harrison & Andrusiewicz, 2003).

In the literature, types of digital advertisements are examined under different headings such as banner ads, rich media ads, e-mail ads, social media ads, sponsored ads, mobile ads, game ads (advergaming), search engine ads, programmatic ads, pop-up ads, hyperlink ads, full screen (intersitial) ads and personalized ads (Köse & Yeygel, 2019).

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