

Literature Review: The Future of Social Media and Augmented Reality

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The social media industry is advancing at a rapid pace due to programming, user demand, and research investment. Because of this progression, its newest incarnations includes synergy with technological advancements such as Augmented Reality, or AR, as part of its future growth. This literature review will examine the available literature to analyze the crossroads between social media and AR, a technology that had originally developed independently and previously before the advent of platforms such as Facebook and developers such as Google. AR offers the opportunity for businesses to further their marketing goals through social media spaces and “out of the box” interactive solutions, which is why AR has merged with social media platforms as advertising tools to raise brand awareness and increase online conversions (Future, 2019).

What is AR?

Augmented reality, or AR, is a graphical overlay—mixing computer-generated graphics such as maps, icons, filters, or fantastical images on top the Real World—viewable by smartphones and other screen-based devices to enhance the user experience (Bullock, 2018). AR has a number of uses at this point, such as road navigation systems, the use of the first-down line during football games, the use by IKEA for shoppers to see how furniture will look in their abode, and fighter pilot heads-up displays, or HUDs (“What is” 2018). According to Roitman et al. (2018), the recent Pokemon Go game, which became an international craze in 2017, is one of the best examples of a recent popular AR app and demonstrated how the technology is available now.

AR and Social Media

The lack of peer-reviewed papers on AR and social media demonstrates how, at least in the academic world, this topic is still being explored, partially since the AR-social media (AR-SM)

merger is a relatively new phenomenon. In the commercial world, though, a number of authors have covered AR-SM and its effect on marketing and commercial efforts.

Jorner (2017) discussed how AR dissolves the lines between reality and a digitally augmented world, which has caught the interest of 25% of surveyed marketers. The incorporation of AR into Apple's iOS 11 shows how major brands are taking the lead, with its app store offering a number of AR applications and a developmental framework called ARKit (Chambers, 2017). Bullock (2018) discusses how AR is becoming intertwined with social media platforms, such as Facebook, Instagram, and Snapchat. Tillman (2018) said that innovation is needed if brands are expected to stay ahead of the pack, which is why platforms such as Snapchat have added AR features with geo-location filters and tags. Snapchat has also developed an AR platform called Lens Studio that allows users to develop AR face overlays, which has led to its use in classroom environments since 75% of teens use Snapchat, demonstrating how the platform can be used for a creative teaching tool (Blog, 2018). According to Constine (2018), Facebook has added AR games to its Messenger video chat that allows up to six players to play with games such as "Don't Smile," "Asteroids Attack," and "Beach Bump" being among the titles that the platform is offering. A Facebook Messenger bot called "Lipartist" is another app that shows the marketing potential of AR-SM, allowing users to try lipstick before making an online purchase (Jorner, 2017). Bonsor and Chandler (2019) describes Google's foray into AR with apps such as Google SkyMap, which provides information about constellations and planets by aiming a smart device toward the sky. Ahaskar (2019) describes how YouTube recently added selfie filters to "YouTube stories," which are collections of mobile short stories meant to extend the platforms reach.

Why is AR an effective tool? Due to its immersive nature according to Jin and Yazdanifard (2015), making it effective in customer engagement. Additionally, AR changes how people interact compared to the real world, as demonstrated by Miller et al. (2019), who studied user behavior with avatars, meaning that AR enhances sociability on social media platforms, extending their purposes as digital tools. As Reynolds (2019) discussed, AR-SM invites users to interact and move with each other, particularly because of mobile platforms where the technology is environmentally based and interactive, encouraging multi-user experiences among shared common spaces.

What is the future of AR and Social Media?

According to Mastorakis (2017), AR is the future of social media advertising due to a shift from 2D to 3D technologies as platforms such as Facebook partner with seven hundred companies to attain their AR-SM objectives. Part of the reason for this shift, Mastorakis said, is due to the decline of TV-style ads on social media's audience, requiring an innovative approach to marketing such as "VR-adverts." Since more users are spending time on social media, this offers an opportunity for a new visual paradigm to harness this image and video-based advertising environment via immersive experiences, whether it is someone watching a World Cup game or playing a game, allowing advertisers to target this audience for future conversions (Mastorakis, 2017). According to Bullock (2018), the largest companies in the world, from Apple to Facebook, are working on making AR a part of everyday online experiences to offer new ways for users to interact with brands in ways that were not previously possible, such as (1) AR-SM virtual stores, where products can be tried and purchases, (2) AR live events, from PGA tour events to games, (3) AR videos, offering more interaction than 2D videos, all of which offer

word-of-mouth advertising possibilities due to the possibility of AR-SM user generated content (UGC).

One of the principal factors affecting AR's future is linked to the development packages that will help further the technology's integration with social media. Commercially available programs such as Sparks, using a downloadable development program and tutorials, demonstrate how AR can be easily created and added into social media platforms (Spark AR, n.d.). Unity is another popular, low-cost program used to develop AR graphical overlays, with a host of YouTube videos providing tutorials for developmental purposes (Technologies, n.d.). Snapchat's Lens Studio is another free software that allows developers and users to create AR-SM experiences at a low cost (Lens Studio, n.d.). Two of the largest technology companies have their own SDKs (software development kits) with Apple's ARkit for iOS and Google's ARCore, which is compatible with Android and iOS OSs and Unity and Unreal engines (Jain, 2018).

The Web 3.0 represents the next developmental phase of the Internet, with AR adding a third dimension of usability to users, allowing them to become immersed in digitally enhanced environments, leading to new standards for the Internet (Web 3.0, 2018). But money tends to drive market shares, and AR represents billion-dollar industries. As forecasted by Jain (2018), by 2025, we will see investments into gaming (\$11.6 billion), health care (\$5.1 billion), engineering (\$4.7 billion), live events (\$4.1 billion), video entertainment (\$3.2 billion), real estate \$2.6 billion, retail (\$1.6 billion), military (\$1.4 billion), and education (\$7 million) that will drive AR-SM advancements as platforms continually add new AR features for marketing and for entertaining users.

Conclusion

By 2022, forecasters estimate that AR-SM advertisements will produce \$13 billion in revenue, with 12% of it coming from mobile ads from the estimated 2.5 billion AR users by 2023. The possibilities for large market and profits are driving social media platforms to get ahead of the curve to capture a segment of this AR-SM audience (Muhammad, 2019). As said by Facebook CEO Mark Zuckerberg, “We are going to make the camera the first augmented reality platform” as “phase one” of a development strategy that sees its two billion userbase as potential beta testers, showing the importance that social media platforms have placed on AR-SM, especially for mobile devices (Roettgers, 2017). As social platforms, businesses, and users adopt AR technology, it will continue to evolve in ways as more advertisers and developers invest into the technologies. With the high amount of marketing investment into AR-SM, with its wide adoption by most social media platforms including Facebook, Instagram, and YouTube via the various SDKs released from Unity to ARCore, the “future looks bright” for AR-SM as an emerging technology. And with the existence of AR-SM ready devices on the consumer market, the technology has a faster potential for adoption without the need for creating and purchasing new hardware (Is Augmented, 2017).

Technology is quickly developing as AR developers devise novel approaches to the way that we interface with social media. In fact, AR-SM may be the most exciting development in mobile technology since the development of smart devices, expanding both the device’s operating systems and social media platforms beyond conventional 2D limitations, meaning that the sky is not the limit at this point in our timeline. Only the human imagination is.

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