SNAPCHAT, AUGMENTED REALITY, AND TRANSACTIONAL AFFORDANCES

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Political Economy Section (POE)

ExOrdo submission ID #1189

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Introduction

Over the past few years, brand development and social media influencers (SMIs) have emerged as interconnected phenomena, reflecting the impact of digital media platforms on brand management and the role of (often performative or constructed) authenticity in that development (see, for example, Hearn & Schoenhoff, 2016; Marwick, 2013). This convergence offers a window into how mobile social media can act as an interface between culture and commerce. In contrast, the mobile social app Snapchat has combined 'Lenses', an in-app augmented reality (AR) feature which layers graphics and designs over real-world objects when viewed through a smartphone's camera with in-app consumption opportunities. While Lenses are often associated with features that augment users' faces in their photos by overlaying graphics through facial tracking, other AR features on Snapchat can identify and interact with object and environments. These Lenses power a feature called "Snapchat Scan" which, as we detail, makes it easier to incorporate 'transactional affordances', a term we develop to describe new tech-enhanced capabilities that facilitate the exchange of money, typically through the purchase of a good or service.

Incorporating Bratton's (2014) conceptualisation of the "app as interface" as a framework, and referencing industry data and corporate communications, we argue that Snapchat Lenses ultimately make it possible to turn any environment or, crucially, any social interaction into an advertising or sales opportunity in a way that relies less on the "performative authenticity" of social media influencers (SMIs) and more on the "native" authenticity of the user's environmental and interpersonal interactions, merging culture and commerce in new ways. We are broadly interested in how this phenomena intersects with the

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[1] Our journal article that expands on this topic, "Friction-free authenticity: mobile social networks and transactional affordances", has recently been published online by *Media, Culture & Society*. It is available at https://doi.org/10.1177/0163443721999953.

rise of transactional affordances on mobile apps Snapchat. Psychologist James Gibson (1979) originally developed the concept of affordances to understand how animals (and humans) view objects in the world. More recently, Ian Hutchby (2001a, p. 30) has outlined how "communicative affordances" are "possibilities for action that emerge from the affordances of given technological forms." The actions are not only informed by the construction or design of technologies but are also contextual (user-dependent) and learned (social). As such, the concept of affordances avoids the limits of strict technological deterministic and fully social constructivist understandings of technologies (Hutchby, 2001b, p. 448). This concept also stacks nicely with Bratton's (2014, p. 3) "app as interface" framework, where apps connect "the single remote device to an ocean of data and brings that data to bear on the user's immediate interests".

Augmented Reality and Snapchat Scan

Hawker and Carah (2021, p. 12) note that one of Snapchat's primary challenges was to determine "how to monetize the participatory culture they have engineered." While apps such as Instagram are dedicated to enhancing the window shopping-like dynamic of the platform and enabling businesses to reduce friction from transactions, Snapchat is leveraging its mobile experience and extensive Augmented Reality (AR) features to turn every space and social interaction into a potential storefront. In AR, "artificial textual annotation of the world is fused with direct perception" (Bratton, 2014, p. 3). Since 2014, Snap Inc. (Snap), the parent company of Snapchat, has invested heavily in intellectual property (IP) related to AR and has "quietly been building an ecosystem of AR experiences within its messaging app" (Sumra, 2018). The discussion of these "AR experiences" in this section demonstrates the commercialisation of AR and, more specifically, how Snap is leveraging AR to integrate transactional affordances on its mobile social media.

Snapchat Lenses, an in-app feature which layers graphics and designs over real-world objects when viewed through a smartphone's camera, are the most popular and visible of these AR experiences. Snap encourages users to create their own AR Lenses with a software package called Lens Studio, which Snap makes available for free via their website (Snap Inc., n.d.-a). As of May 2020, Snapchat users had created over 600,000 such AR Lenses (AR Insider, 2020). The company does not profit from the creation of use of these user-generated Lenses. However, Snap does benefit indirectly from the unpaid material labour these Lens creators provide, namely in the form of a more attractive user experience which helps grow Snapchat's user base, and increased user engagement which "attracts brand advertisers to Snapchat's AR revenue driver: sponsored lenses" (AR Insider, 2020). Snapchat earned an estimated US$1.114 billion from AR-based advertising in 2019, reinforcing the social media platform's belief that AR is "a core part of its business as a camera company" (AR Insider, 2020).

Many of these Lenses are designed to augment faces, similar to those featured in other apps such as Instagram. However, Lens Studio is becoming increasingly sophisticated; Lens Studio 3.0, released in 2019, incorporates "a host of new AR features, including hand, body and pet tracking" (Cohen, 2019), as well as the ability to recognise facial expressions and gestures (Snap Inc., 2020a). Other AR features on Snapchat, however, interact with environments, something that helps differentiate it from rivals such as Instagram. As TechCrunch Editor-At-Large Josh Constine notes, "Instagram Stories might have 500 million daily users, but they're mostly applying AR to their faces, not to interact with the world" (Constine, 2019). He elaborates using the example of Snapchat's Landmarkers feature, which layers animated AR transformations over famous places such as the Eiffel Tower or the Flatiron Building in New York City (Constine, 2019). Other lenses can interact with objects in a user's space: "If you view a $10 bill, Hamilton will come alive and sing a song from the

musical" (Constine, 2019). These Lenses that interact with the environment demonstrate how the Snapchat app is "also an interface between the user and his habitat" (Bratton, 2014, p. 3).

At the heart of this feature is "Snapchat Scan." This search capability, which Snap slowly rolled out to users in the United States starting in 2018, was originally called 'Visual Search' the Scan utility was acquired through the purchase of the tech startup company Scan.me and originally used to interact with Snap's 'QR Snapcodes' that helped people add new friends or unlock new Lenses (Constine, 2019). A new Scan button was included, along with Lenses, as a part of the app's 'AR Bar', which was added in 2019 to make it easier to access Snapchat's growing AR offerings (Palladino, 2020). Users can access the Scan function via this AR Bar or simply by pressing and holding on the app's camera button (Constine, 2016). Some of Scan's capabilities are more functional conveniences than creative or artistic expressions, such as the ability to identify dog breeds or plant species (Leskin, 2020). Many of Scan's features are possible thanks to partnerships with other apps and companies. For example, users can access Scan to identify a song and its artist through an agreement with the popular music app Shazam. A partnership with Photomath allows users to "point the camera at math equations and have them instantly solved" or, thanks to a partnership with the popular animated GIF provider Giphy, "point the camera at a wide variety of real-world scenes and objects and have gif suggestions pop up" using object recognition (Palladino, 2020).

Snapchat's environmental AR Lenses that incorporate object recognition features also make it easier to integrate e-commerce opportunities and transactional affordances. One of these opportunities is again the result of a corporate partnership, this time between Snap and online retail giant Amazon initiated in 2018 (Team Snap, 2018). Users simply open the Snapchat app, point the camera at an object or barcode, then activate Scan. Using a combination of "computer vision and AI" (AR Insider, 2020), the Snapchat app accesses

Amazon's 'machine vision tech', which "recognizes logos, artwork, package covers or other unique identifying marks to find the product" (Constine, 2018). Once identified, a pop-up window displays current product information and pricing on Amazon. If the user selects one of the displayed options, they are then taken to the product page in the Amazon mobile app or, if that app is not installed, the same page in the phone's mobile Web browser. In short, with the Scan AR feature, product information is layered on top of "real world" images, giving users the opportunity to complete a purchase from Amazon from within the Snapchat app.

Bratton (2014, p. 3) argues that an AR app "renders the environment for the user, and the user for the environment, according to the logics and limits of that programmability." Hawker and Carah (2021, p. 13) argue that, Snapchat Lenses enable "a mode of advertising where the consumer shifts from consuming pre-produced images to creating images by using filters that augment their faces and environment." In other words, in the case of Snapchat Scan, the app, coupled with its mobile character, makes it possible to convert any physical location into a virtual shopping centre. The Amazon-powered object recognition functionality similarly offers the user a transactional affordance, namely one that frames any recognised object in a user's environment into a product for consumption. Other partnerships provide additional transactional affordances; in June, 2020, Snap announced a partnership with the development company Wannaby to develop a "a downloadable foot tracking template that allows you to create fun Lenses that interact with your feet", exemplified by the ability to create "realistic shoe try-on Lenses" (Snap Inc., 2020b). It is easy to imagine someone combining these features to provide users with a series of related transactional affordances: the ability to see and scan an object while out and about, virtually try it on via a downloadable Snapchat Lens, then purchase the product from Amazon, all without ever leaving the Snapchat app. If an app is "the aperture through which the cloud redraws the city"

as Bratton (2014, p. 8) argues, then Snapchat redraws the city—or any space into which one enters with their mobile device—into a site of endless and increasingly frictionless consumption opportunities.

Scan's transactional affordances also contribute to the development and naturalisation of a more entrenched transactional culture. Bratton's discussion of AR apps is illustrative in this regard. He argues that the app-as-interface not only "redraws" spaces, but also transforms a physical environment into a "designable instrumental frame by the use of various techniques" including "the overlaying of iconic GUI menus upon real-world systems" (Bratton, 2014, p. 11). A result of this framing is that the material world is "rendered as interactive narrative" (Bratton, 2014, p. 11). While the interactive elements give the user a sense of control over that narrative, Bratton (2014, p. 11) stipulates that "[t]he ultimate effect of that programming is to transform these semiotic technologies into a direct ideological, even theological, articulations of the inhabited landscape." Snapchat's AR Scan feature reflects Bratton's (2014, p. 12) assertion that "AR is where the microtargeting business models of cognitive capitalism melt into the choreography of the mobile user-subject." With Scan, Snap is leveraging the transactional affordances of both AR and the authenticity enabled by platforms such as Instagram, but in a way that relies less on the "performative authenticity" of SMIs and more on the "native" authenticity of the user's environmental and interpersonal interactions.

Because Snapchat is primarily used for synchronous, real-time communication, it "needs to integrate advertiser-content into ephemeral peer-to-peer chat" (Hawker & Carah, 2021, p. 12). By capitalising on the authenticity of everyday interactions and naturalising transactional culture, Snapchat Scan also offers the platform, product makers, and Amazon transactional affordances as well, namely the opportunity to benefit from turning every user interaction into a potential advertising or sales opportunity. This potential highlights how

considerations of 'shopability' are driving these AR features which are key to the Snap-Amazon relationship. Although the specific financial details of the Snap-Amazon partnership are unknown (Constine, 2018; Sloane, 2018c), the partnership makes economic sense for both parties. Snap, for example, has experienced a number of financial difficulties since its inception. After an initial public offering (IPO) in March 2017 saw the company valued at US$31 billion, its net worth fluctuated between US$8 billion and US$15 billion , dipping to roughly US$13.5 billion in March 2020 before steading growing again during the second quarter to reach a high of US$33.2 billion at the end of June (CNBC, 2020). In addition to financial issues, Snapchat has had issues maintaining its user base (Ghosh & Morgan, 2019). The combination of these factors led New York University professor Scott Galloway (qtd. in Bloom, 2018) to claim that "Snap needs *something*" to avoid going out of business before the end of 2019 (emphasis in original). Obviously, that closing did not happen; Snap's leveraging of AR and Scan, and the transactional affordances these features provide has been one strategy the company has used to appease its investors.

The appeal of these transactional affordances to Amazon is not surprising considering Snap's user base, which, despite previous issues, numbered 218 million daily active users in 2019, an increase of 17% over the previous year (Snap Inc., 2020c). In addition, Snap's CEO Evan Spiegel announced in 2019 that the app was used by nearly 75% of 13-34 year olds in the United States, 90% of US-based 13-24 year olds, and "more 13 to 24-year-olds than Facebook or Instagram in the United States, the U.K., France, Canada and Australia" (Constine, 2019). This is a lucrative consumer base, as "studies show Snap users are 20 percent more likely to make mobile purchases and 60 percent more likely to make impulse purchases" (Newman, 2018).

The Snapchat app is now in large part defined by its incorporation of AR. Snap's Lenses and Scan functionality encourage users to view and augment social interactions and

everyday environments through AR, and Scan's transactional affordances ease the transition of Snapchat's users to consumers. There is evidence that Snap has been planning this kind of integration for some time; three of the executives listed in Snap's 2019 Annual Report were Amazon executives until 2018 when they joined Snapchat. Furthermore, Scan is merely one of a suite of features that offer transactional affordances. Before the addition of Scan, Snap launched a purchasing-based initiative called the "Shoppable Snap Ad" which "shows multiple products in a carousel of images" through which users can browse and make purchases (Sloane, 2018a), and AR ads that "blend selfies with commerce" by including "a button that leads to a shopping page, an app-install page, a video or a website without leaving Snapchat" (Sloane, 2018b), indicating an emphasis on removing friction from purchase opportunities. Snap specifically frames Scan and Lenses as advertising tools that can "close the gap between you and your customers" (Snap Inc., n.d.-b), and companies from Budweiser to BMW have test-driven Snap's AR Lenses as an advertising tool (Chen, 2017).

Although these features are relatively new to Snapchat, it is worth noting that they essentially replicate features that have "been a staple in Chinese e-commerce apps Taobao and Tmall since 2014" and are "helpful especially when users are searching for an item where they have no knowledge of the name or brand" (Soo, 2018). Weiying Peng and Wilfred Yang Wang (2020, p. 2) relatedly discuss increasingly common 'microtransactions' on the popular social networking and messaging app Weixin or WeChat, which they define as transactions that "mainly occur between existing familiars (shu ren) in China (such as families, friends, and neighbors)". Just as Snapchat's features conflate social and transactional interactions, Peng and Wang (2020, p. 6) argue that microcommerce on Weixin/WeChat are "relies on the interpersonal relations and personal networks of the users (trader and sellers) to facilitate the financial transactions and the product/services provisions." The existence of these dynamics and features on Taobao, Tmall, and Weixin/WeChat

demonstrate that the development of transactional affordances on online platforms is a global phenomenon. Snap's partnership with Amazon, however, exemplifies the concrete but interconnected character of mobile media (Daubs & Manzerolle, 2015) and makes every person a possible influencer just by virtue of being on the platform.

Conclusion: Realizing Contextual Commerce

While our article captures technical and financial developments that may prove transitory, it provides a snapshot of the way that culture and commerce are articulated within mobile apps. Our goal is to draw out the specific set of conditions within which financial transactions are developed within mobile social media. Snapchat is primarily a mobile app platform; it is designed to be ubiquitous, making it both an ideal payment platform and easily integrated into the day-to-day activities of users. Snap, Inc., the publicly-traded corporation that governs thus platform has realized this and is attempting to leverage its user-base and the platform itself to make mobile, contextual shopping more fluid, overcoming barriers in user experience (UX) and payment that have previously restricted the use of mobile technologies as a shopping and purchasing platform in Western countries where mobile ecommerce has not fully matured.

To conclude, we want to discuss a recent mobile marketing concept that captures the logics of commercial exploitation we have already outlined, but also captures the wider marketing imaginary as it reckons with the transactional affordances emerging within social media. "Contextual commerce" refers to the "ability to discover a product or service and buy without redirection" (PYMNTS, 2018, p. 2). As an affordance necessary to facilitate contextual commerce, one industry analyst noted, "Putting a buy button at the moment of discovery is a game changer" (qtd. in Daly, 2019). Merging the moment of discovery and the purchasing opportunity and incorporating in-app payment opportunities create the potential for a truly "shoppable life" (Hund and McGuigan, 2019).

Contextual commerce realises the potential of social media to act as the newest tool in maintaining the hegemony of consumer capitalism, not only as a political economic reality, but as a set of affordances and behavioural or cognitive impulses. Media theorist Harold Innis (1991 [1951]) warned that our dominant media shape our habits of mind; media that, for example, facilitated the expansion of the price system and market relations intensify a "present mindedness" that would, if left unchecked, be increasingly difficult to reverse. An uncharacteristically critical comment from an industry report on contextual commerce, for example, notes that some consumers "fear that making the buying process too easy will encourage them to purchase products they didn't need" (PYMNTS & Braintree, 2018, p. 6).

While the benefits this impulsive behaviour offers to consumer capitalism may be obvious, we are only now beginning to see the wider political and cultural implications. An important element of contextual commerce is understanding "context" as a function of the spatio-temporal embeddedness of culture. By capitalising on interpersonal relationships and converting individual interests into consumable products, these apps demonstrate a prevalence of transactional affordances that merges frictionless consumption, the attention economy, and the circulation of culture, trends, and products via mobile-based social media applications, hence: a pervasive transactional culture.

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