

Algorithmic Digital Transformation in Name-Personalized Retargeting

Sajan Vaidhyanathan¹ and P.S. Rajeswari²

Faculty of Management, SRM Institute of Science and Technology

Kattankulathur, Tamilnadu, India – 603203

vs1046@srmist.edu.in¹, rajeswap1@srmist.edu.in²

Corresponding Author P.S.Rajeswari

rajeswap1@srmist.edu.in

ARTICLE INFO

Received: 18 Dec 2024

Revised: 10 Feb 2025

Accepted: 28 Feb 2025

ABSTRACT

Digital marketing is rapidly evolving and given the recent emergence of algorithmic personalization, especially in retargeted advertising, it is timely to study and understand its use. In this research, we introduce name-personalized retargeting which is a type of algorithmic-driven digital transformation that seeks to embed and personalize, in real time, the name of the user in the ads to enhance the level of engagement and customer conversions. Ads can be personalized through, for example, machine learning, data analytics, and real-time bidding, which optimizes consumer experience in real time, ultimately, improving customer retention. However, there are significant ethical and privacy concerns about algorithmic personalization in advertising as consumers struggle to understand how their personal data is collected and used in marketing. Although personalization has been shown that ad personalization can enhance efficiency and effectiveness through algorithms, the personalization-privacy paradox suggests that more targeting could create consumer push-back and regulatory issues. This study considers the practices, effectiveness, and ethical considerations for name-personalized retargeting practices with the goal to better understand how personalization can be achieved without sacrificing consumer trust. Taken together, the article presents empirical reviews to make recommendations to marketers, draw conclusions, and frame discussions in a larger context on the future of advertising as driven by new AI technologies. In sum, this research adds to the discussion of ethics in digital marketing and the implications we can expect from AI approaches in advertising.

Keywords: Algorithmic personalization, Digital transformation, Name-personalized retargeting, Machine learning in advertising, Behavioral targeting

1. INTRODUCTION

1.1 Evolution of Online Marketing

Digital marketing has changed tremendously from the early days of the internet. In the mid-1990s, the web created new opportunities for advertisers, such as basic banners and simple email marketing (Goldfarb and Tucker, 2011). An early and often-cited example was AT&T's banner ad on the website HotWired.com in 1994, which had a reported click-through rate of about 44%, due to the novelty of seeing relevant ads on the web (Bleier and Eisenbeiss, 2015). This early success foretold the enormous potential for advertising in the future. As the web grew in the late 1990s, advertisers started placing ads on search engines and content websites, marking the first move toward data-informed strategies (Kannan and Li, 2017). The introduction of the pay-per-click model with Google AdWords around 2000 made it possible to better measure performance of campaigns and optimize the campaigns from there (Dwivedi et al., 2020).

As display ads became the norm (primarily as banners) across portals and news websites, and through early social media pages, more internet users were beginning to log on to consumer websites on a regular basis. There was a steep learning curve, complemented by increased adoption of the internet, often described as entering the Web 2.0 era by

the end of the 2000s. In this era, interactivity and user-generated content proliferated on social media (e.g., Facebook, YouTube), extending the online advertising reach (Leeflang et al., 2014). The launch of marketing automation and the ability to segment audiences and trigger messaging also contributed to the momentum of online advertising. By the end of the 2000s and early 2010s, online ad practices became increasingly sophisticated. Programmatic advertising entered the market, which allowed marketers to automatically and in real-time bid on ad space to present customized ads to specific segments and at scale (Alawadhi, 2021).

Programmatic advertising was so effective and profitable that it began to dominate display ad spending for the primary display ad-focused markets, surpassing traditional media buying practices (Dwivedi et al., 2020). In parallel, improvements in data compared to browsing history, demographics and behavioral design allowed marketers to present "smart" ads (Choi & Kim, 2022). Eventually, displacement advertising became increasingly data and systems driven and only moved toward automated and algorithmic learning-based ad purchasing (Leeflang et al., 2014). In this early evolution of digital marketing practices, marketers soon realized that they could also personalize messages directly at the audience level to slice through the clutter happening in digital ads. Personalization could be as easy as providing a customized message with a user-specific product selection or even simply addressing potential customers by name in their email (Ansari and Mela, 2003).

The rise of retargeting was another early noteworthy example of how customers were bombarded on their same digital device with repetitive ads for the same (generic) product, but still were perceived as relevant third-party ads based on their browsing history with those items (Lambrecht and Tucker, 2013). In the 2010s, retargeting became a critical part of the digital strategy for many brands, eCommerce products, and service brands because these ads were relevant reminders to past customers who had already exhibited intent (Goldfarb and Tucker, 2013).

1.2 Algorithmic Transformation and Personalized Retargeting

A defining feature of contemporary online marketing is algorithmic digital transformation, in which elements of data science, automation, and machine learning are embedded in the marketing activities in question (Dwivedi et al., 2020). In the past, media-buying decisions and campaign optimization were made manually; marketers relied heavily on historical experience and aggregated demographic information. In the present, however, artificial intelligence models are able to monitor and quantify users' behaviors in real time, applying immediate changes to bids, targeting specifications, and creative elements (Tucker, 2014). One of the most noticeable forms of this evolution is name-personalized retargeting, in which a user's name (or other identifying information) is dynamically embedded into the ad copy. Even if the more conventional form of personalization in retargeted ads is product based ("You left Product X in your cart!"), name-personalized retargeting still uses the same principle: grab the user's attention with content that is very relevant to that individual's unique interest (Dwivedi et al., 2020).

Retargeting itself is an algorithmically driven tactic, and the underlying technologies include features such as cookies, pixels, and device IDs as tracking features. When a user visits a site and later leaves, the tracking mechanism flags the user to serve an ad based on user's behavior (adding a product to a shopping cart, viewing some particular product category or spending time on a page) (Boerman et al., 2017). After the mechanism has captured a user's presence, a series of machine learning models interpret which of the user's product or 'message' is the most likely to cause a conversion. Specifically, if the viewer is deep in the funnel towards making a purchase (i.e., they have been comparing prices or reading multiple reviews), the ad is likely displaying that product along with some time-limited deal. If they have shown interest but at an initial level, the app puts out a more high-level brand message as an ad (Lambrecht and Tucker, 2013). This ability to 'read' user intent is one of the main reasons retargeting has performed better than standard digital display ads, reflected by the rates of click-throughs compared to other ad methods (Bleier and Eisenbeiss, 2015).

Advertising platforms like Google Ads or Facebook Custom Audiences are also a driver here; in this case, the platform algorithms retrieve 'user data' from the advertiser's website and are matched to user profiles existing elsewhere via social media or just the rest of the internet to receive retargeted content in milliseconds (Sahni et al., 2019). So prevalent has retargeting become that some advertisers spend half or more of their online advertising budget on some aspect of retargeting strategies (Lin and Kim, 2019). Naturally, as the practice continues to develop, name personalization will likely move to a more prominent role, especially on direct lines like emails or app notifications.

In these areas, inserting someone's name can increase the likelihood of opening an email and conversions (Ansari and Mela, 2003). While this creates a new form of opportunity, there will be challenges associated with user privacy and user data use.

Numerous studies indicate the effectiveness of retargeted advertisements, regardless of industry. Take, for instance, the case of e-commerce in which a common scenario is a consumer browsing through an online store, scrutinizing a product option, but deciding to leave the website without purchasing the item. After some time, if the consumer sees a retargeted advertisement bringing their attention back to the benchmark product, the likelihood the consumer will return to the store to purchase the item will be substantially higher than those who do not experience the retargeted advertisement (Bleier and Eisenbeiss, 2015). It has been shown that consumers can be upwards of 70% more successful in consummating purchases if they engage in retarget advertisements compared to those who do not experience a retarget (Boerman et al., 2017). Retargeted advertisements can also receive click-through rates, in display ads as an example, tend to be, on average, closer to 0.7% compared to the average non-retargeted click-through rate of 0.07% (Sahni et al., 2019). This is often the rationale behind many companies firmly embedding retargeting into their marketing plans.

One study featuring retargeted advertisements was conducted in an online retail environment measuring the effect of retargeting to an audience of over 200,000 users (Sahni et al., 2019). The researchers studied the effects of retargeting previous users with display advertisements, showing that retargeting ads led to a lift, or an increase of 14.6% in the probability that users who previously visited may convert in a three or four-week period. About one-third of the lift in the advertising campaign was shown to occur in the first exposure of the user, suggesting that soon after, reminders rather than delayed reminders may be a more effective tactic for engaging the previous user back to the action, in this case to the store to convert. The researchers in their study, also identified that frequency capping improved experience or and maybe even I think better than engaging frequency of ads shown to the user, so that the user could avoid what they call "ad fatigue" (Lin and Kim, 2019).

Social media has also proven to be a haven for retargeting. Facebook, for example, has allowed retargeting in some form since it introduced FBX. Facebook also developed a retargeting technology through Custom Audiences, allowing retailers to retarget people specific in social media feeds (Dwivedi et al., 2020). Surveys consequently show that retargeting through those social media companies continue to proliferate: a majority or the significant (remaining percentage) of advertisers quickly began using retargeting on Facebook's retargeting tool was available for advertisers. Annan and Brown discuss the potential for retargeted ads to receive two to three times the average rate of normal click-through (Bleier and Eisenbeiss, 2015). Case studies from the real environment signal a case for the power of retargeting: for example, an apparel retailer whose campaign featured product bundles based on site browsing by consumers saw conversion lifts as high of 30%, showing just how relevant directly the advertising can be to feed engagement into more action (Choi and Kim, 2022).

In the travel industry, a user browsing for a flight or hotel with Qantas or Booking.com but ultimately decides against booking may subsequently be retargeted with an advertisement promoting a relatively modest discount, for the same trip they had previously searched for, (Harrigan et al., 2017). This strategy has performed extraordinarily well to re-engage potential travelers who browsed for flights or hotels, for hotels, airlines or online travel agencies all have successfully leveraged retargeting methodologies to entice users to re-engage. In the business-to-business (B2B) sector, retargeting will also serve to trigger corporate buyers who had previously visited a website for a software solution (or even a pricing page). Ads may appear on LinkedIn or on professional blogs that invite an invitation to download a white paper, or sign up for a webinar (Alawadhi et al., 2021). In either case, research findings show that, when compared to more generic advertisements, retargeting consistently performs better across all key metrics, such as: engagement, click-through, and conversion (Wang et al., 2021). For marketers, retargeting ads serve to attract an audience with a previously expressed interest, allowing for ad spend to be allocated to the most likely to engage or convert, maximizing potential ROI.

1.3 Ethical Considerations and Consumer Perceptions

The rise of algorithmic personalization has raised concerns around consumer privacy and potential overreach (Tucker, 2014). While some consumers enjoy retargeted ads, which prominently feature relevant products, others

may feel uneasy if it appears that targeted advertisements are "following" them on the web based on limited browsing behavior (Aguirre et al., 2015). This challenge has been framed by researchers around the personalization-privacy paradox, indicating that consumers enjoy advertising relevance, but remain concerned with the process of data collection and exploitation by advertisers (Bleier and Eisenbeiss, 2015). Additionally, overly personalized or excessively repetitive advertisements can backfire, provoking psychological reactance or distancing consumers from the brand (Aguirre et al., 2015).

Evidence suggests that perceived intrusion by more precisely owned advertisements may decrease purchase intent by 4.5% to the extent that consumers believe advertisers tracked too much of their individual identity (Aguirre et al., 2015). Trust is the most important variable: consumers trust the brand or publisher are more likely to trust a data strategy becoming more personalized, while consumers who are skeptical or feel deceived will reject the data-driven personalization messages (Japutra et al., 2020). Bleier and Eisenbeiss (2015) indicated that strong relationship can ameliorate some privacy considerations and could utilize more elaborate personalization without inciting negative response; however, advertisers are continue to walk a fine line between high engagement, and user discomfort or privacy violations (Boerman et al., 2017).

Regulatory frameworks have begun to formalize and codify these considerations, as for example, the European Union's General Data Protection Regulation (GDPR) treats data collection, user consent, and processing of personal data as stringent consumers' marketing privacy laws (Boerman et al., 2017). Post-GDPR, there are some studies demonstrating that online ad effectiveness has decreased in European Union areas in part due to a decrease in fine-tuned data targeting based on privacy considerations (Choi and Kim, 2022). Other common air-mass legislation and privacy products have prompted them for advertisers to investigate new avenues for advertising, with less individualistic tracking or aggregated instead of individual data - creating new algorithmic marketing technology (Tucker 2014) to improve all constituent interests regarding the degree of fine-tuned advertising to target. Finally, as the browser developers have begun to dispose of third-party cookies, a common retargeting pathway, the degree of certainty that advertisers depend upon has been exacerbated, thus leading to a heightened need for first-party data, contextual advertising, and new privacy-enabled machine learning models (DWIEDI et al., 2020).

It is important to understand that, if approached in a transparent and ethical manner, personalization in retargeting campaigns can yield consumer and marketer value alike (Aguirre et al., 2015). Many users prefer the convenience of relevant ads, especially when they reflect a discount on a product that they already want (Wang et al., 2021). Research has shown that a significant number of people are willing to share their information during the purchase process, with more than 60% of internet users in one study reportedly willing to share some level of data for a clearly communicated value (i.e., better offers or more curated product recommendations) (Japutra et al., 2020). Marketers are motivated to explore how algorithmic tools can be effectively leveraged while implementing privacy-by-design principles and a clear consent template to build trust for ongoing data-driven personalization efforts (Boerman et al., 2017).

Retargeting is an example of how marketing has made progress in delivering relevant and timely messages to users who have expressed interest in a brand or product, with research consistently demonstrating better click-through and conversion rate outcomes (Sahni et al., 2019; Bleier and Eisenbeiss, 2015). The boundaries of targeted marketing are further expanded through more advanced forms of personalization, like name-personalized retargeting, highlighting that ad delivery is only going to become increasingly sophisticated and complex (Ansari and Mela, 2003). From an ethical perspective, privacy is an important concern that raises ethical questions for all parties involved, as the increasing public awareness of personal privacy rights requires companies, platforms, and regulators to reflect and reconsider written policies and marketing data usage (Tucker, 2014). At the same time, as long as they are used responsibly, the algorithmic digital transformation used in name-personalized retargeting can enhance more engaging online experiences that are still timely and relevant, which can be a substantial business value, and ultimately define the next era of modern marketing.

2. REVIEW OF LITERATURE:

Retargeted advertising, which is also referred to as remarketing, has emerged as a key facet of the strategy utilized by marketers in domestic digital marketing. Retargeted advertising aims to re-engage prospective customers by serving

ads that are personalized to users based on their prior online behavior honing in on customers that have already shown interest in a product but have not yet completed a purchase. The review cites retargeted advertising within the broader framework of online advertising and the market structure of advertising and marketing. To do this, the review first discusses the history of online advertising and market structure and then examines retargeted advertising and the mechanisms of influence it has on consumer behavior. The review discusses the effectiveness of retargeted advertising across various digital channels, and especially explores how retargeted advertising is used in the context of business-to-business SaaS organizations in the lead nurturing and customer retention process. The review uses recent research predominantly from the last five years, and a history in advertising and a marketing journal to understand retargeted advertising as a key component of a digital marketing strategy.

2.1 Online Advertising History and Market Structure

i. The Transformation of Digital Advertising: Since the advent of the first clickable web banner advertisement in 1994, click-based online advertising has dramatically evolved and transformed the landscape of the advertising industry, giving way to interactive ad formats and data-driven advertisements (Liu-Thompkins, 2019). Early internet ads consisted of a single banner ad format on websites, but within two decades, ad formats rapidly built upon themselves to include ads on search engine results pages, video ads, rich media ads, and mobile ad ads (Kim & McMillan, 2008; Liu-Thompkins, 2019). By the late 2000s, online advertising has led from a niche market to a major ad channel, accounting for growing shares of ad spend in the overall ad budget. In 2017, it was estimated that global online ad spend reached \$209 billion (approximately 41% of total ad spend) (Kafka & Molla, 2017) and has since become the largest medium for ad spend in many markets, overtaking TV. This growth has been fueled by widespread consumer adoption of the internet & mobile devices, continuing improvements in ad formats and targeting strategy (Leefflang et al., 2014).

ii. Key Players, Models, Ecosystem; As a result of market structure, digital advertising has been concentrated on a few technology companies and their associated intermediaries. Search and social media platforms became central players in the online advertising ecosystem and were often referred to as a digital duopoly. For example, Google and Facebook combined hold a significant majority of online advertising revenue (Lilien, 2016). Google's and Facebook's platforms aggregate a large consumer database to then distribute ads in a targeted manner and achieve scale. Specialized ad networks and exchanges emerged to enable the dissemination and purchase of ad space on millions of websites and mobile applications (Ha, 2008). In the 2010s, programmatic advertising, in which ad impressions were purchased by using real-time bidding practices, became the dominant method in digital advertising and became the basis for much of the online advertising market (Leefflang, et al, 2014). Programmatic advertising allowed advertisers to take advantage of targeted advertising in a granular way (including re-targeting for conversions) alongside ad purchasing in real time, optimizing their costs. In addition to the traditional pricing model of cost-per-mille along with the newer performance models of ad-value-based pricing, such as cost-per-click (CPC), and cost-per-action (CPA), made it attractive for advertisers to make the shift to take their advertising dollars and budgets online (Evans, 2009). Targeting ad measurement systems align the measurement of specific ad interactions for specific audiences and reduce advertisers' risk of paying for a new form of advertising and paying for the ad in exchange for some sort of outcome.

iii. Advertising formats and revenue models: As online advertising evolved, it moved beyond static banner advertisements and expanded to search advertising (text-based ads triggered by user search queries), display advertising (graphic ads displayed on web pages), video advertising (e.g., on YouTube), sponsored posts on social media sites, native ads (ads that blend with content), and the like (Liu-Thompkins, 2019). Each of these formats created new sources of revenue and new business models. Search advertising Began with Overture and evolved with Google AdWords in the early 2000s. Search advertising auctions off keywords, and advertisers pay based on the number of user clicks. Display advertising was traditionally sold based on impressions, but now auctions off individual impressions for viewing an advertisement through a programmatic exchange (Goldfarb & Tucker, 2011a). Social media methods leveraged the equity for their platforms by introducing feed-based ads they targeted based on the voluminous last-data their platforms

obtained, and these are more often sold on a CPC or CPM basis. Together, these many different models contributed to a more robust source of revenue generated from advertising "free" content and services (Evans, 2009). The major ad-supported platforms, with the use of data obtained from users, and more sophisticated algorithms, have achieved a level of targeting precision never seen before, leading to concerns about data privacy issues and market concentration. New regulations, such as GDPR, or new policies by browsers that don't permit tracking via cookies of users, are services that are new, seeking to rebalance the market structure of advertising and media models consisting of rampant data collection. While significant, these regulations are several to consider when developing new retargeting or advertising practices (Goldfarb & Tucker, 2011b; Boerman, et al., 2017).

2.2 Retargeting in Online Advertising

An overview of retargeting. Retargeting (or remarketing) is a type of online advertising that serves advertisements to consumers based on the consumer's previous online behavior; a typical example is a visitor to a retailer's website who ultimately does not purchase. Subsequently, the visitor is shown advertisements from the same retailer and/or similar products while browsing other websites. "Technologically, retargeting is accomplished through the appending of tracking identifiers (think cookies or mobile device IDs) to the historical record of visits to websites or engagements with their content" (Lambrecht & Tucker, 2013). The tracking identifier will be recognized when that individual visits a different website that sources advertising from the same ad exchange/network, and the ad exchange/network will dynamically conduct an auction for a retargeted advertisement. Put another way, a consumer's browsing history is used as means of delivering retargeted advertisements on subsequent web properties (Lambrecht & Tucker, 2013; Bleier & Eisenbeiss, 2015).

As such, most retargeting is done through programmatic display advertising, where companies code a retargeted pixel (which is a small snippet of code) on their webpages in order to tag their visitors. These visitors then comprise what is known as a "retargeted audience" (or "retargeting list"). Advertisers can then (in real time) bid to show ads to this audience of individuals. The advertisement experience can be anything from basic "brand advertisement messaging" to fully dynamic "creatives" that showcase the exact product the user viewed (Lambrecht & Tucker, 2013). For instance, if a user viewed a particular pair of shoes on a retail site, then a dynamic retargeted ad may showcase the same pair of shoes with a "Still interested?" or "Enjoying a 20% off discount" (not to be confused with a generic advertisement). Retargeting is not limited to only web display advertisements; retargeting is dynamic and spans through multiple channels. For example, search retargeting allows advertisers to increase (or decrease for that matter) their bids or show specific ads on the search engines based on consumers who have previously visited their web-site. This is commonly referred to as RLSA or remarketing lists for search ads. Moreover, social media retargeting is popular on Facebook, Instagram, LinkedIn, and other platforms. Typically, advertisers upload audiences (e.g., email lists and website visitor lists) and then target and serve to help targeted users brand related sponsored posts. Email retargeting is yet another variant of retargeting where automated emails are sent to users for actions they took (e.g., for users who abandoned the shopping cart). Regardless of the format (e.g., display, search, social media, or email), the basic idea of retargeting is the same (i.e., attempt to encourage conversion by reaching and delivering post-action messaging to a user who was close to converting): the objective is to identify and deliver messages to a user that occurred directly followed by an action (Ansari & Mela, 2003; Boerman et al., 2017).

Role in Contemporary Marketing: Retargeting has rapidly emerged to become a common practice in the digital marketer's toolkit. Surveys have reported that most marketers utilize retargeting as a component of their online marketing efforts, and it is offered as a highly effective targeting practice (AdRoll, 2015). For example, in one industry survey, more than 70% of marketing organizations reported that they spend 10-50% of their online advertising budget on retargeting; 90% of participants indicated retargeted ads were as effective or more effective than other channels utilized in their campaigns, such as search or email (AdRoll, 2015). There are several factors that contribute to this high level of adoption, but the primary reason is the highly compelling value proposition for retargeting: it invests advertising expenditures on people that have already expressed interest, which quite frequently generates higher conversion rates than untargeted display advertising. Most commonly, retargeting runs ads that provide reminders or customized offers to people that were already warm prospects, in an attempt to "close the loop" on some previous marketing action that generated interest (Lambrecht & Tucker, 2013). In the e-commerce or travel industries, for

example, retargeting is heavily used to advertise to cart abandoners, along with website visitors through advertising creative serves with product-related ads, and has been credited with substantial increases in sales and return visits (Sahni et al., 2019).

Retargeting can also serve a defensive purpose through maintaining brand awareness to prospects, thereby delaying competitive advertising from influencing the customer through their advertisements during the consideration phase (Sahni et al., 2019). What enables these aspects of retargeting is sophisticated advertising technology along with data. The rapid proliferation of third-party cookies and tracking pixels in the 2000's greatly facilitated the technical feasibility of tracking users across a large portion of the web, which made retargeting easier because it demonstrated the ability to reach users anytime, anywhere (Goldfarb & Tucker, 2011a). Third-party data also enabled demand-side platforms (DSPs) or advertising technology that allows advertisers to manage retargeting campaigns in bulk, while frequency-capping how often a user sees the same ad. This also led to innovating creative personalization, since dynamic creative optimization now allows user-level products, pricing, or specific content insertion into ads (Bleier & Eisenbeiss, 2015). Companies such as Criteo or Google have undertaken innovative approaches to retargeting by applying predictive algorithms, which informs them of which specific product or ad to show to any user based on their browsing history.

However, there has also been considerable backlash regarding user tracking that has made retargeting a central topic in respect to privacy. Consumers have raised concerns or possible dissatisfaction with the practice of "ads following you around," along with some attention from regulatory bodies (Boerman et al., 2017). Companies have addressed this by exploring alternatives to retargeting like contextual retargeting (targeting users based off of the context of content as opposed to based on personal user profiles), as well as, first party data (data obtained via logging into a site, or matching email accounts) to ensure that retargeting has sufficient privacy compliance. Ultimately, despite the challenges regarding retargeting it is still a critical practice in advertising from the perspective of showing the right ad to the right person and the right time. The following sections discuss some academic research on how effective retargeting is, and how consumers respond to these very targeted ad messages.

2.3 Retargeting as a Tool to Influence Buying Behaviors

Retargeting is grounded in the idea that a consumer, who has previously shown some interest, will be more likely to convert upon reminder or persuasion. There is a growing body of research that examines the psychological processes and consumer reactions to retargeted ads. There are several interrelated factors that contribute to retargeting's effectiveness as a behavior change strategy: relevance/personalization, timing/frequency, and consumer perceptions (including privacy-related concerns and reactance).

- i. **Increasing Relevance and Recall:** A primary benefit of retargeted ads is their relevance to the individual. When ads are retargeted, they typically incorporate data about a consumer's demonstrated interests (e.g., a product they considered viewing), which can return content that is closely aligned with a consumer's preferences, or needs. The literature suggests that when ad relevance is perceived as being higher, so too is attention, and the amount of favorable response to the ad (Kim & Huh, 2017; Maslowska et al., 2016). Contrary to conventional advertising, retargeting is more aligned with the principles and practices of selective attention - consumers observe, pay attention to, and engage with ads which reflect their current interests (or goals). Instead of cluttered ads that may otherwise compete for attention, studies show that personalized ads are indeed more effective in advertising, primarily due to an increase in perceived relevance and the reduced effect of "ad clutter" noise (Baek & Morimoto, 2012; Maslowska et al., 2016). For instance, consideration of ad relevance comes into play when the retargeted ad reminds a consumer about an item they left in a shopping cart to surf the Web. In this case, the retargeted ad serves as a direct reminder but could also elicit recollection about the product or the need that likely sparked a desire to leave the items in a shopping cart altogether. Consequently, the more popular theory suggests that the "mere-exposure" effect, in conjunction with the retargeted ad relevance, would increase brand recall and keep the product in their minds during the purchase decision. Sahni et al. (2019) found in a field experiment that their retargeted ads for banners caused a 14.6% return-to-site rate, and subsequently confirmed retargeting causes consumers to return to their website, as the ads are reminders for interested consumers (Sahni et al., 2019). The authors also point out an extremely important factor to account for, timing. Sahni et al. (2019) found that one-third of the total returns through retargeted ads occurred within the first day of seeing the retargeted ad,

suggesting re-engagement was greatest when the consumer just showed interest. The primacy of consumer interest is extremely valuable in marketing, demonstrating that timely follow-up when the consumer's interest is fresh can achieve progressively better purchases.

ii. Recency, Timing, and Intentional Wearout: It is useful to remind people once they indicate an interest in a product, but there is a sweet spot for ad recency, and ad timing can be the difference between awareness and annoyance. When the consumer is shown too many retargeting ads, or too long after the initial visit to their product or website, it may lessen the impact or possibly make it worse. Research has shown the impact of retargeting diminishes over time. The sooner the retargeted ad shows up after the event (e.g. site visit), the more powerful it is; after longer lengths of time, the retargeted ad loses its efficacy (Sahni et al., 2019). That said, if a retargeted ad is shown too quickly, or too frequently, it can begin to annoy the user. Li et al. (2021) recently studied the timing of e-commerce retargeting on online purchases, and unexpectedly found that early retargeting (i.e. 30-60 minutes after cart abandonment) actually decreased the likelihood of purchase. It is likely that consumers felt overwhelmed or "stalked" by the immediate chase after they had showed interest. Late retargeting (from 1-3 days after visit), however, increased the chances of purchase, likely allowing users some space to breathe before re-engaging (Li et al., 2021). Together, these findings suggest there is a need for a temporal gap for consumers to not only feel comfortable, but to allow them to process the decision made after the initial event, and then potentially being reminded beyond that 24-48 hour window in order to activate a potential purchase. Ad exposure frequency also seems to matter; retargeting a single user more than a few times confuses recall, but too much frequency can lead to ad fatigue or irritation. For this reason, many advertisers implement frequency caps (e.g. 3 impressions per user per day) to extend the media's usage until 'wearout'. Indeed, diminished returns have begun to set in as repeated retargeted ads take over 'wearout' and negatively impact engagement and or brand sentiment. It was mentioned in one study, retargeted ads in the second week during advertising peaked with a comparative lower incremental effect (1st vs 2nd week) with some ad fatigue. However, Sahni et al (2019) found consumers who were engaged through retargeted ads in the first week were more responsive to ads in the second week. This seemed to indicate initial exposures may prime their openness to subsequent messages despite length in time (but not too far long). Marketers need to think carefully about retargeting schedules: an up in activity immediately after the original event, followed by declines, may be the balance from a reminder and to allow some breathing space.

iii. Personalization: Dynamic versus Generic Messaging: One of the most weighed questions relates to the level of personalization in retargeted advertisements affecting consumer behavior. One might assume "the more personalized, the better," but research demonstrates mixed findings. Lambrecht and Tucker (2013) conducted a landmark field experiment on a travel site that presented dynamic retargeted ads (same hotel product viewed by the site visitor) with generic recollection ads (general branding ad for the travel site). The results suggested that on average the dynamic product ads had less customer conversion than the generic ads for the brand. The authors present a decision process framework as a way to interpret their observations. For users who initiate browsing with high interest (ex: user viewed very specific products), the generic branding ad to drive their recollection of the brand or category drove them back more effectively than showing the same item again, possibly because they either had the think item fully on their minds, or the ad was too narrowly targeted. However, for those who were still forming their preferences (i.e. had viewed broad categories or comparative site), the dynamic product listings no longer underperformed; in this case showing specific recommendations can help form their preferences (Lambrecht & Tucker, 2013). A different contextual factor leading to a better understanding of this personalization approach was discussed by Bleier and Eisenbeiss (2015). Their findings also suggest that personalized advertising will differ contextually too. In looking at their research in an early customer decision journey the outcomes were that deeply personalized content drove click-through and engagement, but the benefits of deep personalization decreased with proximity to the purchase decision (Bleier & Eisenbeiss, 2015). Later in their journey, customers may already have a clear idea of what they want or deep personalization may not be viewed as beneficial, and may instead elicit customer reaction of redundancy or invasiveness. The aforementioned research has led to the idea of a "personalization paradox" (Aguirre et al., 2015) in retargeting category: personalization increases relevancy and may increase responses to a point, but once the ad is too personal, or too overtly targeting, the consumer may react negatively - potentially risking conversion.

- iv. **Consumer Responses:** Persuasion versus Privacy: Retargeting-also named behavioral targeting-can affect consumer behavior with its mindless relevance and overexposure of advertisements, but it can also trigger skepticism on consumers' parts and privacy concerns. Many internet users realize that a retargeted advertisement is simply an advertisement that is "following" them because of tracking cookies, and, thus, consumer awareness can enact what Friestad & Wright (1994) call coping tactics-meaning, essentially, that consumers recognize that the advertisement is persuasive and therefore tend to feel either resistant or reactant. Indeed, some consumers reflect on retargeted (behavioral targeted) advertisements as being "creepy" and invasive, feeling as if they are being watched (Boerman et al., 2017). That is, the feeling of being under surveillance can develop into negative emotions such as anxiety or annoyance, which detracts from the advertisement's efficacy (Aguirre et al., 2015; Van Doorn & Hoekstra, 2013). Van Doorn & Hoekstra (2013) found that consumers not only experienced higher irritability when online advertisements were personalized to a greater extent, but the positive impact of relevance diminished when the advertising was obtrusive. Along the same lines, Goldfarb & Tucker (2011a) indicated that in the more intrusive and obtrusive format that targeted advertisements take, there was no difference in consumer response than a nontargeted advertisement-meaning, the benefit of targeting did not pay off due to the intrusive or obtrusive aspect. Between appreciating relevance and protecting their privacy, consumers are generally right in the middle (Aguirre et al., 2015; Goldfarb & Tucker, 2011a; Van Doorn & Hoekstra, 2013). Aguirre et al. (2015) found that consumers responded positively to personalized advertisements when it appeared to them that their data was ongoing (transparent) and based on consent, but, alternatively, if the data was captured in a covert manner (without the user realizing fully) tracking ads created feelings of vulnerability and negatively impacted the ad effectiveness. In this and as suggested by Aguirre et al. (2015), if the consumer trusts the reasoning behind the why and what they are seeing of targeted advertisement offers, there is a higher likelihood for positive consumer responses to the ad.
- v. Privacy concerns are a primary moderator of retargeting results. In their study, Baek and Morimoto (2012) found that users with high levels of privacy concern typically reported negative responses to behavioral targeting, reflected in lower acceptance of the advertisements and higher avoidance behavior. Supporting this, a recent survey by Cooper et al. (2023, as cited in Alghanayem et al., 2023) found that only a handful of consumers expressed any sort of embrace of behavioral relevant or personalized advertising with acceptance of tracking, approximately one-quarter of U.S. internet users liked relevant ads and accepted tracking behavior, while the rest were in a neutral but cautious position, or outright opposed. Consumers have also reported reactions when they feel the advertising was too targeted based on a sensational amount of personal information, or if they felt an ad caught them and their perception of self in a perceived too intimate ad presentation context. In these situations, reactance to the advertisement can result, which refers to a motivation to regain control that was "threatened" by the advertisement (Bleier & Eisenbeiss, 2015; White et al., 2008). In a series of experiments Summers et al. (2016) showed that behaviorally targeted advertising can sometimes produce "implied social labels." And in situations when the inference about a consumer aligns with the consumer's perception of self, they may internalize the inference and become extremely more likely to enact the labeling of an interested person into their behavior (e.g. buying a product opportunity in relation to their interest) which can be a positive outcome for the advertiser. However, if the implication of the targeted advertising is inaccurate, or a consumer feels resentful about being labeled by an advertisement, the consumer is likely to engage in behaviors that create distance against behavior recommendation in a way to regain autonomy. Of note, Summers et al. (2016) found that targeted advertising led consumers to change their self-perceptions toward an implied label, using the attracted inference to influence behavior- highlighting the ways in which retargeting can sometimes not just reinforce reminders of a click, but tell consumers tacitly, that "this is who you are" (e.g. "right down to how you are someone interested in luxury hotels"). However, identity labeling can sometimes be a double-edged sword. Identity labeling can appeal to the consumer to motivate further engagement from the consumer if they are labeled with something desirable (e.g., someone who is concerned with ecological and social outcomes), or on the contrary, it might spur avoidance if the consumer feels their behavior is manipulated or mis-categorized by the label.
- vi. In the end, retargeting can lead to purchase behavior by keeping a product/brand at the consumer decisions, and enacting the powerful priming and timely reminder effects and relevant persuasive messaging. Retargeting has benefits in leveraging the psychological drivers of familiarity and personal relevance towards increasing the

likelihood of making a purchase (Sahni et al., 2019; Maslowska et al., 2016). However, the very same benefits can become weaknesses if overdone; all of which could feel like too personalized, mistimed, or excessive, and the "uncanny" feeling of tracking can initiate a consumer avoidance behavior (Aguirre et al., 2015; Boerman et al., 2017). Some retargeting campaigns, therefore, can sometimes achieve retargeting has been successful in a purposed and thoughtful context within their subjection- and values- on the side of advertising and appropriately limits through communication and consumer informed sentiment. Johnson et al. (2017) summarized the impacts well, saying if retargeted advertising generates consumer reactance; they undermine their own effectiveness. The best results likely come when retargeting is relatively responsible- providing value through relevant reminders or offers, while not overtly manipulating the consumers decision-making process- will be much better than only provided tracking is used.

2.4 Retargeting Effectiveness across Digital Channels

Retargeting occurs across various digital channels - primarily display advertising on websites is the primary focus on the paper.

- i. **Display Ads:** The most traditional style of retargeting took place via responsive display ads on websites and apps. That is, banner ads, sidebar ads, and other visual placements showed up as people browsed the web.
- ii. **Effectiveness:** Display retargeting has been shown to raise revisit and conversion rates in comparison to non-targeted display ads (Lambrecht & Tucker, 2013; Dinner et al., 2014). As the strengths of display advertising, which are broad reach and visual impressions are universal and therefore any site in an ad network can deliver the message in support of the brand/product imagery in an efficient reminder format. While click-through rates for display ads labeled as retargeting can be very low in absolute numbers (perhaps .1 -.5%), they remain higher than generic display ads because of some measure of audience pre-qualification happens in the retargeting process (Bleier & Eisenbeiss, 2015). Furthermore, and perhaps even more importantly, recall does not require that improvements result specifically from "clicks"; an ad's repeated exposure may have a branding effect or may be enough to prompt the user to return through another format (view-through conversions). Dinner et al. (2014) stated that online display (which likely included retargeted views) ads had benefits for the online sales process in particular, while achieving a small positive spillover effect related to offline sales by keeping the brand in the mind of the user/consumer.
- iii. **Channel Context:** The effectiveness of a display retargeting ad can depend, at least in part, on the nature in which the ad is seen, in the associated context/space. Previous research supports that retargeting ads show better efficacy when shown in a related or contextually relevant site. For example, a retail outdoor gear net targeting ad shown on a travel blog may engage the audience of the blog better than it appearing on a site that was unrelated (Goldfarb & Tucker, 2011a). Indeed, there are pros and cons for display ads on a site/news aggregator type of site that are known for attracting broad audiences; while the volume of users can be advantageous and scale can help the volume convert over time, the ads may come off as lost or incongruous due to lack of contextual fit (Van Doorn & Hoekstra, 2013). Relatedly, a recent study by Semerádová and Weinlich (2023), allowed hens to identify differences between standard "retargeting" (A person viewed or engaged a generic or static type of content) and dynamic retargeting (real-time permutations of the same "seen" content) as a result of differing asserts of an ad platform. They in fact found that standard retargeting leads to very sticky moments in buying while the dynamic experience was good for retargeted ads on social media which highlighted the nuance that as a function of the environment, contextual use of retargeting can dictate potential outcomes (Semerádová & Weinlich, 2023). Essentially, display ads are probably best as reminders via retargeting of specific items/point of interest that can be dynamically hung ads, that primarily have display ads for the purpose of rounding out/improving visibility. And while there are many factors that contribute to the additional efficacy, not using frequency as a consideration chain as well as other consequences and delay shows viewer fatigue as ads can lose effectiveness over a period of time and must show creativity in order to either coax more interest, or set up for less fatigue.
- iv. **Summary:** It is clear that retargeting can work well across the digital landscape; especially considering that each medium has its own dynamics and drivers of success. Display ads have relevance to reach and visual reminders of previous activity and search retargeting leads to active intent and usually close with a quick communication to

visitors focused on selling, with their engagement creating more story opportunities or relative recency quotas without engagement. In retrospect to retargeting, products, or content, specific email retargeting length to communicate relative and actionable along the steps of content could appeal to improved warm leads. Companies or brands that use integrated/reminders/multi-layered retargeting tactics, usually realize greater success across multiple sites/case conversion cycle after the later point, while companies that only rely on a single medium may only realize incremental success. Moreover, as technology improves for companies, the visible and separate lines of the type of ad across mediums are probably more fuzzed (Google/Facebook has retargeting aligned across their search, display or video properties) across multi-medium because it streamlines reflections of managing medium and environments without losing effective multi-track retargeting.

V.3. LIMITATIONS OF ELM IN DIGITAL ADVERTISING:

The Elaboration Likelihood Model (ELM) is a prominent theory developed by Petty and Cacioppo (1986) that assists researchers and practitioners in understanding persuasion through two routes of persuasion: the central route, which elaborates on the message, and the peripheral route, which is based on heuristics (e.g., source credibility, repetition, and emotive content). ELM has been a valuable model of advertising and persuasion, but most importantly, it has significant limitations and challenges that arise in the digital space and the dynamic world of advertising and personalization.

A primary limitation of ELM is its rigid categorization of information processing into two routes of persuasion, and its binary approach to consumer response. In specific digital and contextual settings, especially in retargeted advertising, persuasion is often not a binary process, but takes place on a continuum of varied degrees of processing influenced by factors such as the timing and frequency of the ad, and what the user had done previously, if anything. Kitchen et al. (2014) assert that the assumptions made in ELM eliminates the responses that modern consumers exhibit towards digital advertisements. In fact, at a time of personalization and changes to ads, ELM's binary categories based on cognitive and emotional processing may not apply at all (Bleier & Eisenbeiss, 2015). Indeed, some have proposed that rather than static routes of processing, digital advertising produces brand-specific advertising responses that rapidly evolve, where consumers are cognitively and emotionally generating responses simultaneously to the various advertising strategies (e.g., motivational incentives) (Bleier & Eisenbeiss, 2015).

Another major limitation of ELM involves its inability to contextualize advertising personalization. Personalized retargeting ads use a consumer's browsing history, preferences, and behavioral data to create contextual and relevant messages and impressions in an individualized setting. Unlike traditional advertising thinking before, which depends on a single impression, retargeted advertising takes advantage of multiple impressions for various touchpoints that will add up or gradually reinforce persuasion. Research has determined that personalized retargeting results in better recognition and recall, increasing engagement rates driving more conversions than non-personalized ads (Lambrecht and Tucker, 2013). In personalized ads adaptations, the consumer behavior continues to dictate dynamic and personalized variation into the messages experiencing (Bleier & Eisenbeiss, 2015).

4. IMPLEMENTATION OF PERSONALIZED RETARGETED ADVERTISING

In order to apply personalized retargeted advertising, organizations must establish a systematic process that connects their marketing strategies to consumer behaviors. Organizations can create demand and entice customers to purchase through enhanced customer interaction and increased conversion rates based on data-driven insights. Personalized retargeting consists of several elements that will ultimately lead to growing sales success. Below are important considerations to achieve personalized retargeting success.

4.1. Data Collection & Audience Segmentation

The initiation of effective retargeting commences with tracking user behaviors within websites, applications and digital services. Behavioral data is gathered relating to page visits, interactions with features, completed demo requests and activity with free trials. Grouping users based on engagement levels provides businesses with the ability to serve ads tailored to a specific customer need (Arora et al., 2008).

4.2. Dynamic Content Optimization (DCO)

Personalized retargeting has the greatest effect when the content of the ad is adjusted dynamically based on user behavior. Dynamic Content Optimization (DCO) allows for different elements of an ad to be adjusted as they are served to users in real time such as varying recommendations of products, varying price incentives, and varying information on previously reviewed testimonials. An ad may highlight a limited-time discount for a user that visited a pricing page and did not proceed to subscription, while a free trial user may be receiving ads that emphasize additional feature benefits as well as testimonials from satisfied customers (Bleier & Eisenbeiss, 2015).

4.3. Multi-Channel Retargeting Strategy

Personalized retargeting must function across digital channels; it should not be confined to online display advertising. Firms should implement retargeting ads in a variety of digital approaches such as:

- i. Social/B2B Media (LinkedIn, Facebook, Instagram) - to connect with decision-making audiences and to build familiarity with the brand.
- ii. Email remarketing - where they also send them a personalized follow-up message with relevant offers and content.
- iii. Search Retargeting (Google Ads, Bing Ads) - to place their ads in front of past visitors to the brand's website who did not convert into business.
- iv. A multi-channel approach delivers a continuous presence of brand advertising to potential site users and increases engagement (Järvinen & Taiminen, 2016).

4.4. Frequency and Timing Optimization

To reduce ad fatigue and Banner Blindness, businesses can monitor ad frequency and timing very carefully. Studies of ad frequency reveal that exposure to an advertisement of 3-5 times per week provides enough sighting for both visibility and the user's experience which leads to more engagement and less annoyance (Lambrecht & Tucker, 2013). Timing is also vital to retargeting, as ads are generally more effective immediately after a user navigates away from the site, as opposed to weeks later (Sahni et al., 2019).

4.5. Privacy Compliance and Transparency

In the current environment of evolving privacy rules in the digital environment such as GDPR and CCPA, businesses must act ethically when collecting data and sharing with users. Providing consumers a simple choice to opt out of retargeting ads and sharing their privacy disclosures will help users build trust and lessen the negative aspect of personalized retargeting ads. Showing transparency around data usage helps build the brand overall credibility which helps to build customer loyalty (Aguirre et al., 2015).

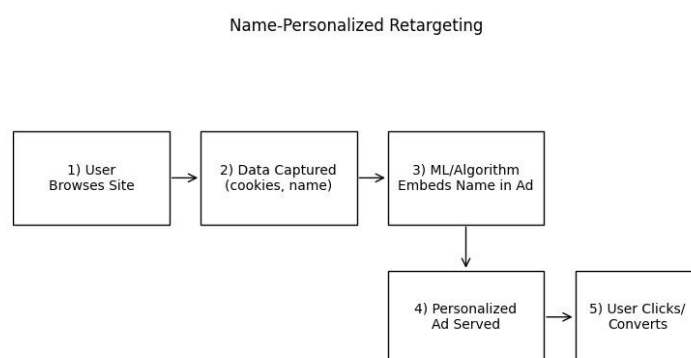


Figure.1 Schematic flow of data and algorithmic decision-making in name-personalized retargeting

Figure 1 outlines a process for personalized advertising using data captured from user interactions on a website. Here's a step-by-step explanation:

i. User Browses Site:

A user visits a website and interacts with its content (e.g., views products, reads articles).

ii. Data Captured (cookies, name):

The website collects data about the user, such as cookies (tracking identifiers) and their name (if provided, e.g., via login or form submission). This data helps identify the user and their preferences.

iii. ML/Algorithm Embeds Name in Ad:

A machine learning (ML) algorithm or advertising system uses the captured data to personalize an ad. For example, it might insert the user's name into the ad copy (e.g., "Hi, [Name]! Check out these deals!").

iv. Personalized Ad Served:

The tailored ad is displayed to the user, either on the same website, a different platform, or through an ad network. Personalization aims to increase relevance and engagement.

v. User Clicks/Converts:

The user interacts with the ad by clicking on it or completing a desired action (e.g., making a purchase). This step measures the ad's effectiveness.

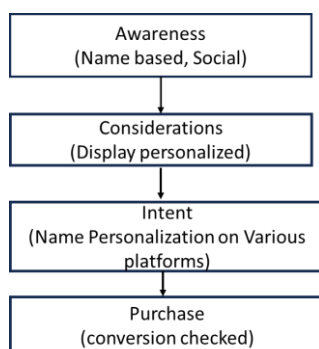


Figure. 2 Name-Personalized Retargeting Framework

Figure 2 represents Name-personalized retargeting strategically integrates with the consumer journey by aligning marketing efforts to the stages of Awareness, Consideration, Intent, and Purchase. This approach involves using a consumer's name in retargeting messages to create a personalized connection, enhancing engagement and fostering trust. By addressing consumers individually, it amplifies awareness, encourages deeper consideration of a product or service, and influences intent to purchase. At the final stage, this personalization can lead to higher conversion rates, as the tailored experience resonates more effectively with potential buyers. This technique exemplifies how personalization can significantly impact consumer behavior and decision-making.

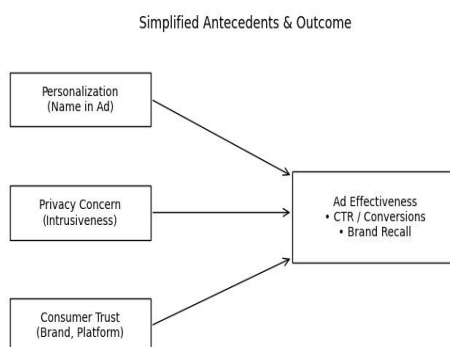


Figure. 3 Antecedents and outcome of Consumer Engagement Optimization Framework

Purchase

Figure 3 illustrates the relationships between personalization in ads, privacy concerns, ad effectiveness, and consumer trust. Here's a breakdown of each component and how they interact:

i. Personalization (Name in Ad)

What it is: Tailoring ads using user-specific data (e.g., inserting the user's name).

Goal: Increase relevance and engagement (e.g., "Hi, [Name], check this out!").

How it works: Uses data like cookies, login info, or social media activity.

ii. Privacy Concern (Intrusiveness)

What it is: User discomfort or distrust when ads feel overly personalized or invasive.

Why it matters: Excessive data use (e.g., names, browsing history) can trigger privacy fears.

iii. Ad Effectiveness

a. Metrics:

CTR/Conversions: Click-through rates and purchases may rise due to relevance.

b. **Brand Recall:** Personalized ads can make brands more memorable.

Trade-off: Effectiveness may drop if privacy concerns overshadow benefits.

Consumer Trust (Brand, Platform)

c. Dual Impact:

Positive: Transparent personalization (e.g., opt-in) builds trust.

Negative: Sneaky data use erodes trust in the brand and the platform (e.g., social media site).

5. IMPLICATIONS:

5.1 Enhanced Marketing Effectiveness through Personalization

Evidence demonstrates that personalized advertising is more likely to stimulate engagement, and, subsequently, conversions, since advertising content can be customized according to the individual interests of the targeting audience. Although there are many studies reporting that retargeted advertising – defined as reminding consumers of the products they previously viewed – are more effective than advertising that is not retargeted (Sengupta & Goodhardt, 2015). In fact, retargeted visitors were reportedly approximately 70% more likely to convert vs. non-retargeted users (Sengupta & Goodhardt, 2015).

An example of studies into retargeted advertising is Lambrecht and Tucker (2013), where they conducted a field experiment and established that dynamic personalized retargeting increases the relevance of advertising for consumers. However, the effectiveness of retargeted advertising depends on context, as on average they were no more effective than generic advertising of the same brand, unless personalization corresponded with the consumer's decision phase (Lambrecht & Tucker, 2013). Bleier and Eisenbeiss (2015) also assert that personalization improves banner advertising significantly, especially for boosting click through rates for brand advertising in the early stage of the decision process, but only if the advertisements are presented at the right time and placed properly (Bleier & Eisenbeiss, 2015). In summary, personalization has the potential to improve the overall impact of advertising as the content can be made more relevant to consumers' needs, which in turns leads to better engagement and chances of purchase, granted that the content is correctly timed and suited to the user at the correct moment (Lambrecht & Tucker, 2013; Bleier & Eisenbeiss, 2015).

Recent advancements in artificial intelligence (AI) and machine learning are the most important developments in improving the opportunity for personalized ads, ultimately leading to greater marketing efficiency. Once machine learning algorithms process so much user data, they inform the ad delivery process and which content to display, to

whom and when, in a manner that real-time targeting decisions become possible and abundant, and far beyond fixed and manual rules (Rohleder, 2024). Modern retargeting platforms use predictive analytics and adapt in real-time, for example, to tell when a user is most likely to be responsive, allowing dynamic content delivery that synthesizes user modelling with optimally adapted content delivery (Rohleder, 2024). Machine learning also automates A/B testing and budget allocation, with the intent of maximizing conversion, by either monitoring or 'learning' which personalization methods produce the best conversion for the appropriate customer segmentation (Rohleder, 2024).

The outcome is the development of dynamic creative optimization, ads that autonomously modify images or products shown to each viewer based on their browsing history and preferences (Bleier & Eisenbeiss, 2015). The effect is that ads are more relevant and timely – for example, elements of an e-commerce retargeting campaign would create an ad featuring the item a user previously left in their cart, or switch to a broader category ad if excessive time has passed since their last engagement (to mitigate the avoid declination of the rewards of advertising as a result of over-personalization) (Bleier & Eisenbeiss, 2015). Evidence supports these ad personalization algorithms improve engagement with the user while providing an action plan for avoiding stale and overly repetitive ads (Bleier & Eisenbeiss, 2015). Overall evidence suggests AI can facilitate continuously refined personalization tactics, ultimately producing greater advertising effectiveness and conversion rates through data-informed learning and adapting.

5.2 Ethical and Privacy Considerations in Digital Advertising

Simultaneously, personalized retargeting has started to come under increasing privacy legislation, regarding protection of user data, which has meaningfully changed the landscape of digital advertising. Examples of laws like the European GDPR or California's CCPA place more strict requirements of explicit consent by the user, providing rights over the personal use of personal data, thus curtailing the extensive misuse of tracking data in the earliest moments of retargeting (Wang, Jiang & Yang, 2024). Overall research suggests that privacy laws may, indeed, cause something of a decline of effectiveness from personalized retargeting.

For example, Wang et al. (2024) aggregated impressions from billions of ads, seeing an impact on ad performance; specifically, after when complying with the GDPR, the performance metrics garnered lower levels of meaning - there were ~2% differences in click-through rates, with ~5% differences in conversions, and an overall downward trend in bid price by advertisers (Wang, Jiang & Yang, 2024). These results imply that because personal browsing data has limited access, advertisements become slightly less targeted, leading to lower intent to engage (Wang, Jiang & Yang, 2024). This pushback has caused marketers to explore more privacy-safe targeting methods. Contextual advertising - displaying ads based on webpage content (rather than personal profiles) - is seeing renewal. Research has shown that contextually aligned ads may recoup a significant amount of lost performance; in Wang et al.'s, when examining billions of impressions, contextually aligned ads recouped ~40% of conversions lost from decreases of targeted ads following the GDPR (Wang, Jiang & Yang, 2024). In addition, first-party data (e.g. a brand's own customer information) and aggregated targeting methods are being used by firms to remain within regulations like the GDPR, while still allowing brands to make individualistic user engagements (Wang, Jiang & Yang, 2024). Overall, the data privacy laws have created challenges for advertisers to find some bench of targeting with compliance and the strict limitations of the privacy consent (Goldfarb & Tucker, 2011; Wang, Jiang & Yang, 2024).

Someone may indicate they do not feel positively about personalized retargeting as a result of their feelings related to surveillance and consent. Many people do not dispute that personalized targeting logic can be beneficial, yet, they desire general ethical considerations relative to them (Boerman, Kruikemeier & Bol, 2021). Personalization has the ability to improve the ad experience for users by sharing information that pertains to their interests regularly: neighbors or followers of the user consume the product and have relevant offers (Boerman, Kruikemeier & Bol, 2021). Alternatively, ads that are retargeted may also lean the user to a feeling of being "watched," or "tracked" when they do not want to be (Boerman, Kruikemeier & Bol, 2021).

Research has found that ads that make use of sensitive information or personal information (like an individual's name used in an ad), or use data exchanged without consent or users knowledge, produce adverse consumer perception affects (i.e. lower ad credibility and increased avoidance) (Boerman, Kruikemeier & Bol, 2021). Individuals usually attempt to draw the line around a feeling when the ad is a function of an invasion of privacy; in other words, if someone were to suspect their browsing experience and conversations were being mined without

consent, it typically is viewed as creepy from the user or consumer viewpoint in terms of the level of trust of the advertisers as they perceived (Bleier, Goldfarb & Tucker, 2020). These examples provide us with important considerations for ethical treatment, that have been discussed relative to creativity in digital marketing, ethical frameworks, highlight transparency, choice, and content relevance to their interests (Bleier, Goldfarb & Tucker, 2020).

5.3 Strategic Application of Retargeting in SaaS and B2B Marketing

Retargeting is a highly valuable aspect of the marketing functions of B2B and SaaS, as these processes often include long sales cycles and lead nurturing activities (Sengupta & Goodhardt, 2015). Unlike B2C transactional media messages, which are often associated with impulse purchases, B2B purchases are often made of several weeks to months of consideration, information gathering, and negotiation processes that might involve multiple stakeholders and touchpoints (Sengupta & Goodhardt, 2015). Retargeted content allows advertisers to continue to educate a potential client on the brand services through the use of continuously visible advertising impressions (Sengupta & Goodhardt, 2015). Studies indicate that retargeting is particularly effective for B2B lead conversion because it taps into a warm audience (Sengupta & Goodhardt, 2015). B2B retargeting gains access to a warm audience that has already expressed some interest, as it retargets users who have already visited a site or engaged with a content (Sengupta & Goodhardt, 2015).

6. DISCUSSION:

6.1 Derived Knowledge During the Research Process

Recent studies of users' perceptions of retargeted advertisements in digital environments have enhanced understanding of how effective it is, where it is effective, and its many considerations. The overall emerging consensus is that personalized retargeted advertising can effectively re-engage and improve conversion statistics. However, the impact of retargeted advertising is highly contextual, depending on when and how the advertisement is retargeted to individuals. Field experiments have reported that exposing individuals to retargeted advertisements causes significant increases in return visit rates to websites – the most prevalent example being approximately a 14.6% increase in returning visitors over the span of four weeks following retargeted advertisement exposure.

At the same time, timing of exposure is also important: retargeted advertisement effects begin to diminish over time approximately of the total first week effect occurs from the first exposure experience. These results would imply that certain elements of immediacy matter – i.e. who re-using retargeted marketing to recapture user attention may be better received if its use is prompt (as previously mentioned) following the initial contact of interest instead of delayed. Additionally, retaining the sequential nature of advertising then becomes relevant as well, meaning retaining an ad to recapture is instead warrants value-added advertising exposure effects as consumers see retargeted advertisement efforts stronger in a second week of advertising, if they were retargeted in the first week as well.

This conveys compounded benefits of retargeted advertisement effects when retargeted advertising is thoughtfully extended rather than only along the decision journey. In addition, across studies, it was found that retargeting will not work with indiscriminately retargeting advertising. Lambrecht and Tucker (2013) reported that highly personalized (dynamic) retargeted advertisements on average were not more effective than generic advertisements where the consumer has not already exhibited overt intent for even that specific purchase. These paradoxical findings suggest that a potential consumer in Stage One of the Strategy could respond more positively to broad, imaginative generic advertisement messaging not as specifically targeted at that prospective user. Yet, the findings also suggest that their intended or disclosing product preference had a saying far deeper into the consumer consideration stage (the time or cognitive limit user returns over time to finally persuade them is less useful to them). In addition from their study, each study suggests the proximity of advertising content matched to the intentional cognitive stage of the consumer non-linear journey is more reasonable, a consideration. Plus, many recent studies have emphasized boundaries of retargeted advertisement happenings for instance, a field experiment of retargeting an ad where it seemed to be asked to retarget where they have initiated the ad first, was without significant immediate incremental determining of improved actions they were asked to take.

This finding, would imply if retargeting could be ignored and not discriminate or target a user retargeted ads in bad and not strong consideration users repeatably would become flat, impeding if at all larger lifts in engagement. Thus, with that measure if an advertisement would find better findings of larger lifts on engagement tactics or behavior engagement – is when the added retargeted advertisement was combined with additional offers or added relevant features not to the retargeting experience instead leaving it behind but enhanced. Similar recent studies have similarly shown how this showed better leveraged more existing advertising retargeted comments of tilt rather than just ads – for instance, high-interest or intentional visitor online steers towards selling exist best through retargeted advertisement shares than someone who has just visited a few infinite pages and randomly scrolled. Thus, these findings are slowly becoming affected to distinct and valued signaled research beyond breaking reading engagement just retargeted ads work beyond – previous before this literature awareness but confirmed era beyond the marketing business transitioned on why better – now more field-tested about it working itself with conversion and product interest.

Ultimately, a new awareness from recent research is the distinction between the outcomes of retargeting prior to purchase and retargeting post-purchase. The previous body of retargeting literature focused on turning prospects, while new contributions focus on how retargeting ads influence a customer after they have made a purchase (e.g. advertising options for upgrades or related services to a client with a SaaS subscription). Alghanayem et al. (2023) provide a cautionary post-purchase story, where studying the e-tourism sector suggests a possible downside: Exploring the views of posted-purchase customers revealed notification ads for competing alternatives resulted in diminished customer satisfaction and repurchase intentions.¹ Customers who saw repeated notifications for similar products reported uncertainty regarding the appropriateness of their choice and formed lower confirmations of expectations and product satisfaction. In short, retargeting ads that were positioned to upsell or cross-sell inadvertently created regret and doubt. These findings have especially pertinent ramifications for SaaS service providers where consumer retention is critical, as poorly timed or ad marketing to current customers could potentially damage their established loyalty (feeding discontent if the promotion was not offered to existing subscribers, for example). It thus provides insight that the impact of retargeting is felt across the entire customer lifecycle, and as such could possibly differ based on whether that retargeting behavior is intended to acquire new customers or retain existing customers. Overall, the knowledge generated from recent work provides a more insightful view of retargeting: retargeting can be an impactful method for personalized outreach in the context of B2B SaaS; however, it merits the need for a scientific approach. Timing (e.g. not too soon after interaction), frequency, relevancy, and consideration for user privacy all determine whether retargeting turns from generic ad blasts into enhanced experiences that add value. When these factors align, retargeting can dramatically shorten the B2B buyer's journey by keeping their SaaS solution on the "top of mind." When they do not align, the ad practice turns misaligned with the potential to annoy or, worriedly, alienate potential and existing customers reinforcing the predisposition against purchasing or renewing subscriptions.

6.2 Theoretical Contributions

The recent literature examining personalized retargeting has propelled advertising theory forward on several dimensions. First, this body of work has complicated classical advertising and consumer behavior theories by introducing retargeting into the modern digitally-mediated funnel of purchase. The traditional models, such as AIDA and hierarchy-of-effects, convey the assumption that advertising primarily serves the purpose of creating awareness and interest which, in turn, can lead to action. However, the consumer behavior literature on retargeting posits that the influence on consumer decision processes has more complexity and is iterative (Sahni et al., 2019).

The findings from Sahni et al. (2019) provided some evidence against tractable "ads-as-reminders": decay was rapid, and there were complementary weekly advertisement effects, which led the researchers to conclude that the majority of retargeted ads are functioning to compete against the brand's competitors and to keep the brand psychologically salient in consumer consideration rather than to simply provide information to the customer. Herein is a shift in thinking theoretically advertising, in the retargeting context, is a vehicle for holding the customer's attention and preventing deflection, which is consistent with the theory of competitive interference. This refines the understanding of the influence of advertising timing on consumer memory and the inertia in decision processes. The insight that advertising can serve as blocking competitive options functions at the theoretical level adds another layer to the

theories of marketing communications, in that the value of an advertisement impression is influenced not only by what is provided to the consumer, but in what is potentially prevented - such as forgetting about the brand or considering alternative options. This is an important theoretical advancement that broadens the notion of advertising effects beyond the immediate persuasion paradigm.

Moreover, the research on retargeting has advanced personalization theory, by providing empirical evidence of the personalization-personal relevance paradox in advertising, in this case digital advertising. Recent conceptual work has theorized that tailoring marketing delivery of messages supports higher relevance, however raises consumer concerns regarding privacy and ultimately creating reactance (e.g. Bleier & Eisenbeiss, 2015). More recent empirical work provides empirical evidence supporting this paradox--the higher the level of personalization in a message results in greater click through and engagement, however after a certain level, the consumer will feel uncomfortably stalked. The moderation of who is delivering the personalized advertisement (value brand or unknown ad source) into the personalization theory also builds trust into the personalization framework. This ad option builds theory that suggests functionality is not universal; it is contingent on consumer-brand relationship and consumer data transparency. The heightened negative consumer arrival that may occur based on covert user behavior that misconstrues personalization to improve the consumer experience and trust. These contributions are important developments of the personalization of advertising, particularly in root extensions of consumer persuasion knowledge and psychology Aguirre et al. (2015).

A further theoretical development emerges from research that examines mobile retargeting in relation to two consumer journey and decision-making stage theories. This research has taken a more nuanced perspective to the purchase funnel, recognizing distinction between early stage prospects and later stage intended buyers. This in turn has theoretical implications for modeling consumer heterogeneity in responsiveness. For instance, the finding that dynamic ads are less effective than generic ads for consumers that are in an earlier stage of the decision-making funnel (Lambrecht & Tucker, 2013) may influence responsiveness in purchases later on, which indicates an interaction between ad content specificity and consumer's stage of decision-making journey.

This finding has theoretical value in that it makes a contribution to advertising theory with the insight that message specificity activates a U-shaped relationship with purchase readiness, which was not a consideration of advertising advice theory. Similarly, Li et al. (2021) advances understanding of optimal timing in retargeting. Their large scale study found that waiting a day to retarget someone engaged in cart abandonment was more effective than an immediate retarget (within an hour). This empirical study supports the notion that there is an initial reactance or need for autonomy moment to consider after leaving a social touchpoint; and that for all consumers but particularly someone experiencing reactance, waiting disturbs the immediacy of their reactance and allows retargeting to be better received which essentially speaks to psychological reactance theory. Furthermore, these timing effects added rigor to our temporal dynamics of consumer behavior models and suggests refinements to existing ad response lag theories by adding a very short (within a day) dimension of a digital touchpoint. In the case of B2B SaaS, while direct academic research is still limited, it is possible to extend theoretical implications to organizational buying behavior theory. Traditional B2B decision-making processes assume deep rational evaluations, several stakeholders, and longer decision cycles. Theoretical implication of B2C personalization and retargeting research can inform B2B. Theoretically, it is reasonable to assume that retargeting will reduce friction in B2B decision-making, an assumption that is quite natural in its own sense if the retargeting ad is aligned with the attention of the buying center - which makes it an ongoing stimulus decision effect throughout the decision making process. The body of research concerning frequency and sustained effects may provide a theoretical lens for B2B: repeated exposures may build consensus for a buying group or keep the product benefit present while in a long consideration space. A recent body of analytical modeling (e.g. Jiang & Turut 2024) dealing with game theory to derive optimal retargeting further extends a normative theoretical contribution to marketing and management academics.

They present retargeting within the strategic segmentation and pricing responses within the overall context of a market. Their contributions not only extend the previously discussed economic theories of advertising into a personalized advertising context, they consider how firms choose between a segment versus a uniform retargeting scheme within competition to include retargeting into an established theory of formal marketing strategy. While

extending firm decision-making within the context of a use case adds to theorizing decisions made in the market that will complicate adopting advertising theorizing in consideration of fathers like the retargeting market.

6.3 Managerial Implications

The developing theoretical perspectives on retargeted advertising present powerful implications for practitioners involved in B2B SaaS marketing. From a design standpoint, retargeting is not simply a blanket ad but should be a campaign that aligns with the prospect's stage in the customer journey and their mindset. Instead of a one size fits all (remaining) retargeting ad, the research suggests we use a more dynamic ad that offers different ad content depending on the prospect's engagement with the product offer. While soft personalization content may yield greater performance for a prospect who is just learning about the category (e.g. clicks on retargeted educational content), firmer personalization can be applied to those who are specific in their engagement with the organization (e.g. recurring visits to the website) or intention (e.g. signed up for a free trial) and have visited the specific product ad content on the organization's website.

To illustrate this, a marketer might retarget a first-time website visitor with an ad leveraging soft personalization, lightly mentioning the trial they signed up for, instead of directly delivering the exact product demo the visitor clicked on. Then once the visitor has shown consistency or intent to the organization (e.g. steps 1-2), retargeted ad content that is highly relevant and specific can be provided. This method of methodological dependence would be in line with the sentiment of matching ad content (relevant degree to your funnel stage) to the user's mindset for achieving maximum performance and keeping disruptions at a minimum. When looking at ad retargeting, time and frequency control would be another powerful leverage point – as it relates to B2B organizations. Research shows that too soon after initiating a retargeting ad, can hamper overall success. Franchisees cannot just throw retargeting up after a few minutes, that same evidence suggests some time delay. A practical implication of this is admins configuring their retargeting ad management platforms to have time; e.g. retarget cart abandoners after 24 hours not 2 minutes once they left the site.

This slight timing difference shows respect to the user, avoiding an immediate chase of the user in a negative light. Additionally, frequency capping can assist in preventing exposure to the ad or message in the first place. Excessive frequency can annoy and irritate the viewer's for their perception of being intrusive on the prospect. B2B organizations with a retargeting model would want to set boundaries for impressions for the ad ad: follow-up a suitable number of impressions or commitment to monitor and capture engagement. The goal should remain cognizant of the prospect without incurring offensive perceptions based on impressions, as the literature showed, are detrimental to brand perceptions. Then, balance time and a reasonable ad frequency to consider the wrath of the research findings authoring higher is better.

Another take-away is the necessity of layering value-added elements and incentives into the retargeting process. One study found that running retargeting ads alone had little effect, so marketers should try it with meaningful and valuable offers or content linked to the ads. For instance, a retargeting ad could be to offer a personalized demo, a limited-time upgrade discount, or case study relevant to the prospect's context. These types of value-added combinations build on the synergy found by Gopalakrishnan and Park (2021) in which retargeting ads with promotional incentives resulted in significant increases in engagement and eventual conversion vs. retargeting ads alone. In a B2B SaaS context, this could mean retargeting a visitor that had 'abandoned' the previous website visit with an ad that reminds them of the product, but also suggests an actionable "Schedule a 15-minute custom demo this week" or "Download a tailored ROI report" style of call-to-action, creating a more rich retargeting touchpoint. This all reinforces the broader finding that consumers are more receptive when the ad is relevant to their needs and conveys clear benefit or utility.

Similarly, personalization should be applied with judiciously, respecting privacy and trust. The manager should remind themselves that just because data allows targeting at a fine level does not mean it should be overtly targeted at every opportunity. For example, a SaaS company may have a lot of intel on a potential customer (from behavior bundled within website or third-party firmographic data), and choose to retarget the user, but the advertisement may not need to highlight that targeting by stating "We noticed you checked out feature X of software, here's exactly feature X again." Rather, the ads may take the more trust preserving approach of saying "Here's how our software

solves [the general problem] you're researching again," making the ad relevant but not survey-scary prescriptive. This is supported by research that finding that of high depth personalization can trigger negative privacy reactions unless consumers have primary trust in the brand. Thus, even companies, potentially and especially without a track record, especially newer SaaS companies, should error on the side of moderate personalization.

Likewise, transparently stating the use of the data can also be helpful, which can simply stating a statement like "Why am I seeing this ad?" which explains the retargeting ad in a reader friendly way, and providing easy opt-outs, which may mitigate potentially negative user reception. In sum, online text support states that trust will be sustained in the long run, positively effecting the ad conversion as well; one study notes that consumers that have a better understanding of retargeting as a calibrated targeting approach, are more receptive toward the retargeting advertisements.

The research supported also emphasizes the need for valid and reliable measurement and ongoing retargeting campaign optimization. This involves utilizing hold-out groups (a random subset of potential targets that are not served retargeting ads), which for marketers to cleanly measure and report the overall effect of the retargeting ads on the target population return visits or conversion rate. A hold-out group helps correct the overall effect of retargeting ads in a sharing economy associated with the true effect of retargeting. This helps construct a more useful ROI, which is vital in B2B SaaS markets where each lead or conversion is often high value, note the sales cycle is long and attribution isn't confirmed.

6.4 Limitations and Future Research

While recently published research on retargeting has made great strides in the current understanding, significant limitations exist that pave the way for future theoretical exploration. One significant limitation is the context of nearly all the literature examined virtually all empirical data becomes available from B2C consumer contexts (i.e., e-commerce retail, the travel industry, etc.), most of which is aimed at the individual consumer making a moderate-to-low involvement purchase decision. Business-to-Business (B2B) Software as Service (SaaS) contexts manifestly differ and have an arguably compelling rationale purchase, for one, would be viewed as high involvement; second, these decisions are made by a group of decision-makers rather than an individual, and with the decision being higher involvement, this implies that the evaluation period would be extended.

Thus, a clear pathway for future research is to operationalize retargeting in a specifically B2B context. Relatively little is known about how, for example, retargeting impacts a group of decision-makers in a group purchasing decision or in a longer consideration cycle. Future research could examine, for instance, whether retargeting a member of a buying committee would have spillover effects on the group decision—that is, does the member that is shown the advertisement act as a surrogate internal salesperson stakeholder, or do you need to retarget multiple members of the committee? Organizational buying behavior theories could be used, as an example, to also be used in research related to retargeting, including intra-firm sharing ("Did you see that advertisement?" So and so might see the ad too, did they see it?"), or when retargeted ads appear at the same time as salespeople are actively trying to sell something over the SaaS sales cycle would retarget advertisements impact sale outcomes? Case studies or observational studies in a B2B SaaS domain would be valuable in testing whether the principles underlying campaigns derived from B2C, and shown to be effective, hold as true when the "individual" buying the product is an organization. This line of inquiry would significantly contribute and enhance the theoretical generalizability of retargeting research by extending or mapping the current consumer context to B2B marketing theory.

In the methodological consideration, many studies conducted in this domain draw on either field studies, or analytical modeling that can only, by necessity, oversimplify the environment in which the findings were observed. Field based studies are high in internal validity, however, if a promotional campaign is based on one firms retargeting actions, the studies can only study the effect of retargeting in regard to this firms retargeting ideation knowing that the real market scenario will never isolate one firms retargeted advertisement; furthermore, real-world buyers are subjected to multiple retargeting advertisements from multiple firms (which could potentially include competitor firm retargeting) of the same product, company, or category minimalist focus. This competitive contextual dynamic in retargeting in B2B or any space is not captured in most previous studies, and points to significant methodological limitations.

Future research could extend the B2C studies in this notion and consider studying retargeting (in general) in a multi-firm ecosystem hypothetically, if an individual buyer served on two or more different buying committees in B2B, how would the concurrent existence of retargeted ads from those committees influence other value-based commercials? Particularly the studies can investigate whether the presence of competitor retargeting-modulate or diminish retargeting effectiveness of a firm's own advertising? Several studies, such as Jiang & Turut (2024), have begun to theorize competition and retail based retargeting in formal decision frameworks, however empirical validation of individual retargeting propositions is still limited—the firm, as the theoretical lens, further explains.

Another limitation is that most retargeting experiments have measured very short term outcomes, whether that be click throughs reset on retargeted advertising, immediate revisit, and/or conversions typically weeks from the moment a decision to act on the conversion was made. Spanning the meaning of the decision to convert into short and long term outcomes has proved to be a clear gap in existing literature. Is retargeting facilitating long-term brand building or brand value, customer lifetime value or brand equity? Does retargeting as a campaign produce a long-standing memory trace of non-accruing value of the branded company, product, or service months later, is there measurable dividends arrived long after a campaign has ended? Longitudinal studies tracking subscriber-buyers over a longer horizon, or itemizing retargeted exposure to downstream metrics like renewal rates or customer equity would serve to tap this gap, or at least provide a preview of how the advertising might have transitioned value additions and caught followers. This focus of inquiry represents a clear theoretical advancement of contribution to retargeting advertising, by understanding relationships and combinatory effect to long-term value type models and metric itemizations.

The intersection of privacy, personalization, and regulation is another productive area for future research. As privacy regulations and technology persistently change (GDPR, CCPA, the phasing out of the third-party cookie, etc.) it is possible that the retargeting of today will look dramatically different tomorrow. The study on Privacy Sandbox conducted in 2024 provides the first look into potential iterations of retargeting, but more needs to be developed to support theory that allows marketers to leverage personalized retargeting in a post-cookie world. Future studies could examine consumer's reactions towards new "cohort based" or on-device retargeting - do these privacy-preserving modalities reduce consumer's concerns, ultimately modifying whether they accept personalization? Or, do they not react differently and don't note a difference in targeting?

There is also space to ask consequentially about the ethical implications of ongoing retargeting transparency and consumer psychology. Whereas some research has indicated that transparency does mitigate reactance, there is a balance - there may be too much transparency that draws attention to a practice that would otherwise go unnoticed. Experimentation could manipulate the transparency of the disclosure for retargeting and the effect on consumer trust or effectiveness, adding to the public policy discourse on best practices for digital advertising disclosure.

Theoretically, incorporating advancements in technology such as artificial intelligence provides an additional frontier for research. AI-powered personalization algorithms could make retargeting extremely effective (by employing algorithms that deduce the best ad to serve at the exact right time for every individual). Preliminary work on AI in marketing suggests targeting is effective, but theoretical exploration about how consumer autonomy and decision making is understood in AI. Does retargeting, which is hyper-targeted (via user-specific preferences), improve outcomes, or is this a further manifestation of intrusion? There is a danger that hyper-targeting makes targeting less perceived (a point for future consideration when investigating the principles of persuasion, possibly bringing "algorithmic targeting" into current understandings). Conversely, AI could effectively mitigate frequency and relevance, which at least moderates benign annoyance (for example, predict when a user is likely to convert and stop serving an ad after they have converted). Testing such scenarios would meaningfully contribute to the conversations at the intersection of both marketing science and information systems (and inform technical developments of algorithmic decision-making paired with consumer behavior).

In summary, the body of recent work has certainly established clarity about what retargeted advertising is, how it works, and how it can be optimized. However, there are some gaps in theory that would be relevant especially to business-to-business (B2B) SaaS contexts, multi-stakeholder impacts, and rapidly changing privacy concerns. Future theoretical work should certainly strive towards developing a more ecologically valid assessment of what retargeting

does and how it is embedded, especially assessing the multivariate scopes of competing messages, timeframes, and organizational focuses.

Interdisciplinary work, tying marketing to psychology, economics, data science and beyond, using a variety of techniques will likely move knowledge forward and substantively expand the literature in the retargeting space. By specifying and addressing the gaps that exist, researchers can present a contemporary and richer theoretical foundation to further guide marketers who are at the forefront of the privacy crisis, normatively trying to assess retargeting practices in a digital age. Ultimately, continuous testing, developing, and establishing concepts via the principles of personalized retargeting, from initial assessments about personalizing ubiquitous prompting, is a mechanism to help ensure alignment of theory drives practice in a rapidly evolving marketing context.

7. CONCLUSION:

Through the literature, we can see that personalized retargeting is a powerful marketing technique that can greatly positively affect the effectiveness of advertising, provided that it is used appropriately. Personalizing the individual drives the user to higher engagement metrics because the ad is aligned with their specific interests, leading to stronger brand recall and dramatically higher conversion rates than a single ad that is meant for everyone. Yet, as with previous literature, there are also nuances here as well, as personalization as an advertising technique will backfire if the ad is both overly personalized and not appropriate at that moment. Effectively using retargeting requires a continual balancing act between relevance and timing if the ad shows up when the user interest is high or if the user preferences have changed. AI-targeting techniques have become essential to managing these types of factors by refining how the ad changes with the customer journey. At the same time, ethics and consumer trust have proven to be fundamental. Personalization without transparency will fail. When personalization is overbearing, the intrusive nature of retargeted advertising fosters distrust into the advertising process, reducing the effectiveness of the ad. The most productive forms of retargeting are ones that append value, in terms of a reminder or recommendation, while at the same time also being respectful of the boundaries of the user. In marketing, that means to focus on personalized advertising that enriches the user experience and potentially leads up to the completion of purchases or sale of services and products while also taking into account the “creepiness” factor of why and how the company uses data. The literature has confirmed that personalized retargeting is a successful form of value exchange where trust is an essential consideration. If a user believes they are in control of the situation and they see the applicability of the offering, they will be more likely to positively engage with the advert.

REFERENCES

- [1] Aguirre, E., Mahr, D., Grewal, D., de Ruyter, K. and Wetzels, M. (2015). Unraveling the personalization paradox: The effect of information collection and trust-building strategies on online advertisement effectiveness. *Journal of Retailing*, 91(1), pp.34-49.
- [2] Alawadhi, R.S., Al-Hashel, B. and Rahman, M.S. (2021) ‘Effectiveness of Personalized Online Advertising: An Empirical Study of the Middle East’, *Journal of Interactive Marketing*, 56, pp. 31–52.
- [3] Alghanayem, M., Sharma, P. and Srivastava, A. (2023). Retargeting after the purchase: The impact of post-purchase advertising on consumer satisfaction. *Journal of Consumer Behavior*, 22(4), pp.511-530.
- [4] Ansari, A., & Mela, C. F. (2003). E-Customization: The value of parametric content customization in online advertising. *Journal of Marketing Research*, 40(2), 131–145.
- [5] Arora, N., Dreze, X., Ghose, A., Hess, J., Iyengar, R., Jing, B. and Sajeesh, S. (2008). Putting one-to-one marketing to work: Personalization, customization, and choice. *Marketing Letters*, 19(3-4), pp.305-321.
- [6] Baek, T. H., & Morimoto, M. (2012). Stay away from me: Examining the role of consumer skepticism and privacy concerns in the context of personalized advertising. *Journal of Advertising*, 41(1), 59–76.
- [7] Bleier, A. & Eisenbeiss, M. (2015a). Personalized Online Advertising Effectiveness: The Interplay of What, When, and Where. *Marketing Science*, 34(5), 669–688.
- [8] Bleier, A. & Eisenbeiss, M. (2015b). The Importance of Trust for Personalized Online Advertising. *Journal of Retailing*, 91(3), 390–409.
- [9] Bleier, A., Goldfarb, A., & Tucker, C. (2020). Consumer Privacy and the Future of Data-Based Innovation and Marketing. *International Journal of Research in Marketing*, 37(3), 466–480.

- [10] Boerman, S. C., van Reijmersdal, E. A., & Neijens, P. C. (2017). Online behavioral advertising: A literature review and research agenda. *Journal of Advertising*, 46(3), 363–376.
- [11] Boerman, S.C., Kruikemeier, S. and Bol, N. (2021). When is personalized advertising crossing personal boundaries? How type of information, data sharing, and personalized pricing influence consumer perceptions of personalized advertising. *Computers in Human Behavior Reports*, 4, p.100144.
- [12] Chatterjee, P., Hoffman, D. L., & Novak, T. P. (2003). Modeling the clickstream: Implications for web advertising. *Marketing Science*, 22(4), 520–541.
- [13] Chief Marketer (2018). 2018 B2B Lead Gen Outlook. Chief Marketer Magazine.
- [14] Choi, D. and Kim, J. (2022) ‘Predictive Modeling for Retargeting Advertising in E-Commerce: A Machine Learning Approach’, *Electronic Commerce Research and Applications*, 49, p. 101081.
- [15] Dinner, I. M., Van Heerde, H. J., & Neslin, S. A. (2014). Driving online and offline sales: The cross-channel effects of traditional, online display, and paid search advertising. *Journal of Marketing Research*, 51(5), 527–545.
- [16] Dwivedi, Y.K., Rana, N.P., Slade, E.L. and Kewlani, D. (2020) ‘Could Personalization be the Missing Link in E-commerce Customer Retention? A Bibliometric Analysis’, *Electronic Markets*, 30, pp. 1–22.
- [17] Evans, D. S. (2009). The online advertising industry: Economics, evolution, and privacy. *Journal of Economic Perspectives*, 23(3), 37–60.
- [18] Goldfarb, A. and Tucker, C. (2011) ‘Online Display Advertising: Targeting and Obtrusiveness’, *Marketing Science*, 30(3), pp. 389–404.
- [19] Goldfarb, A., & Tucker, C. (2011b). Privacy regulation and online advertising. *Management Science*, 57(1), 57–71.
- [20] Gopalakrishnan, S. and Park, J. (2021). Combining incentives with retargeted advertising: Synergies in digital marketing strategies. *Marketing Science*, 40(6), pp.902–920.
- [21] Ha, L. (2008). Online advertising research in advertising journals: A review. *Journal of Current Issues & Research in Advertising*, 30(1), 31–48.
- [22] Harrigan, P., Evers, U., Miles, M. and Daly, T. (2017) ‘Customer Engagement with Tourism Social Media Brands’, *Tourism Management*, 59, pp. 597–609.
- [23] Japutra, A., Ekinci, Y. and Simkin, L. (2020) ‘Self-Congruence and Sponsorship: The Role of Attitudes Toward Social Media Pages’, *Journal of Business Research*, 121, pp. 552–559.
- [24] Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. *Industrial Marketing Management*, 54, 164–175.
- [25] Jiang, B. and Turut, Ö. (2024). Personalized retargeting in competitive advertising: An analytical approach. *Journal of Marketing Research*, 61(1), pp.33–49.
- [26] Kannan, P.K. and Li, H. (2017) ‘Digital Marketing: A Framework, Review and Research Agenda’, *International Journal of Research in Marketing*, 34(1), pp. 22–45.
- [27] Kim, H., & Huh, J. (2017). Perceived relevance and privacy concern regarding online behavioral advertising (OBA) and their role in ad avoidance. *Journal of Advertising*, 46(4), 414–432.
- [28] Kim, J., & McMillan, S. J. (2008). Evaluation of internet advertising research: A bibliometric analysis of citations from key sources. *Journal of Advertising*, 37(1), 99–112.
- [29] Lambrecht, A. and Tucker, C. (2013). When does retargeting work? Information specificity in online advertising. *Journal of Marketing Research*, 50(5), pp.561–576.
- [30] Leeﬂang, P. S., Verhoef, P. C., Dahlström, P., & Freundt, T. (2014). Challenges and solutions for marketing in a digital era. *European Management Journal*, 32(1), 1–12.
- [31] Li, F., Xie, K. and Song, J. (2021). The optimal timing of retargeted advertising: Insights from large-scale field experiments. *Journal of Business Research*, 134, pp.274–289.
- [32] Lilien, G. L. (2016). The B2B knowledge gap. *Journal of Marketing*, 80(5), 134–149.
- [33] Lin, C. and Kim, Y. (2019) ‘Predicting Purchase Intentions in Retargeting Contexts: The Effect of Collectivism Culture on Consumer Behavior’, *International Marketing Review*, 36(5), pp. 727–743.
- [34] Liu-Thompkins, Y. (2019). A decade of online advertising research: What we learned and what we need to know. *Journal of Advertising*, 48(1), 1–13.

- [35] Maslowska, E., Smit, E. G., & Van den Putte, B. (2016). It's all in the name: A study of consumers' responses to personalized communication. *Journal of Interactive Advertising*, 16(1), 74–85.
- [36] Sahni, N., Narayanan, S. and Kalyanam, K. (2019). An experimental investigation of the effects of retargeted advertising: The role of frequency and timing. *Journal of Marketing Research*, 56(3), pp.401-418.
- [37] Sengupta, A. & Goodhardt, G.J. (2015). Assessing the Incremental Value of Retargeting for Online Display Advertising. *Journal of Marketing Research*, 52(3), 378–396.
- [38] Snyder, J., & García-García, M. (2016). Advertising across platforms: Conditions for successful cross-platform campaigns. *Journal of Advertising Research*, 56(4), 352–367.
- [39] Song, M., & Mela, C. F. (2011). Targeting via segmentation and advertising response: A Marketing Science Institute Report. (Marketing Science Institute Working Paper, 11-100).
- [40] Summers, C. A., Smith, R. W., & Reczek, R. W. (2016). An audience of one: Behaviorally targeted ads as implied social labels. *Journal of Consumer Research*, 43(1), 156–178.
- [41] Tucker, C. (2014) 'Social Networks, Personalized Advertising, and Privacy Controls', *Journal of Marketing Research*, 51(5), pp. 546–562.
- [42] Van Doorn, J., & Hoekstra, J. C. (2013). Customization of online advertising: The role of intrusiveness. *Marketing Letters*, 24(4), 339–351.
- [43] Wang, P., Jiang, L. and Yang, J. (2024). The early impact of GDPR compliance on display advertising: The case of an ad publisher. *Journal of Marketing Research*, 61(1), pp.70-91.
- [44] Wang, Y. and Chang, C. (2013) 'Credibility and Trust of Information in Online Retargeted Advertisements', *Journal of Computer-Mediated Communication*, 18(3), pp. 16–27.
- [45] Wang, Y., Gupta, S. and Bhan, C. (2021) 'Exploring the Effectiveness of Machine Learning-Driven Retargeting: Evidence from a Real-World E-Commerce Experiment', *Journal of Retailing*, 97(4), pp. 535–548.
- [46] Zajonc, R.B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology Monographs*, 9(2), pp.1-27.
- [47] Zarouali, B., Ponnet, K., Walrave, M., & Poels, K. (2017). "Do you like cookies?" Adolescents' skeptical processing of retargeted Facebook ads and the moderating role of privacy concern. *Computers in Human Behavior*, 69, 157–165.