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The Emotional Afterlife of Advertising: Post-Exposure Mood, Brand Recall, Purchase Regret, and Repeat Consumption

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Abstract: Advertising effects may persist beyond exposure through changes in mood, brand memory, and subsequent consumer decisions. Ad-evoked feelings contribute to brand evaluations, while advertising exposure can also serve a mood-repair function. Emotional arousal and its fit with the advertisement shape memory, underscoring that recall is not a uniform indicator of advertising effectiveness. Integrating research on post-consumption emotion and purchase regret, this article frames the emotional afterlife of advertising as a temporal process linking post-exposure mood and brand recall with regret and repeat-consumption intentions. The framework highlights the need to distinguish immediate affective responses from delayed evaluations when assessing how advertising may relate to later consumer behavior.

Keywords: *Post-Exposure Mood; Advertising Affect; Brand Recall; Purchase Regret; Repeat Consumption; Consumer Memory.*

I. INTRODUCTION

Advertising research has often treated emotion as an immediate response that shapes advertisement attitude, brand evaluation, or purchase intention. A longer view asks what remains after exposure: whether affect persists into memory retrieval, changes the interpretation of a later purchase, and influences subsequent consumption. Large-scale evidence shows that ad-evoked feelings affect brand evaluations through both direct routes and changes in attitude toward the advertisement, with stronger effects for hedonic than utilitarian products. The emotional afterlife therefore connects three episodes: exposure, purchase and consumption.

Defining Post-Exposure Mood Across Advertising, Purchase, and Consumption Episodes

Post-exposure mood refers here to the affective state carried forward from an advertisement or its surrounding context into a later judgment or behavior. It differs from emotion depicted in an advertisement, because depicted emotion is a stimulus property whereas mood is the viewer's experienced state. This distinction matters because positive mood can induce imagery-based processing, while negative mood can increase attention to specific claims [2]. After purchase, mood is further reconstructed through consumption, payment, comparison with alternatives, and perceived confirmation of expectations. Delayed assessments can therefore diverge from immediate assessments: excitement for hedonic products may intensify, whereas confidence associated with utilitarian products may fade [1].

Research Questions Linking Mood Persistence to Recall, Regret, and Repetition

The literature supports three linked questions. First, when does affect improve brand accessibility, and when does emotional intensity distract from brand encoding? Second, can advertising-generated mood alter regret by changing how consumers compare the chosen product with foregone alternatives? Third, under what conditions does a positive or negative residue affect repeat consumption rather than merely an immediate intention?[2] These questions require temporal designs because immediate recall, delayed evaluation, post-consumption emotion, and later repurchase are distinct endpoints. They also require separating advertising exposure from actual brand experience, since experience, trust, attachment, and satisfaction can independently shape recall and loyalty [3], [4].

Emotional Advertising and the Formation of Brand Memory

Valence, Arousal, and Emotional Fit as Predictors of Advertisement Recall

Valence and **arousal** should be treated as separable dimensions of advertising affect. Positive feeling can improve advertisement and brand attitudes, but high arousal can consume attentional capacity and weaken immediate brand encoding. During emotionally intense sports programming, strong program reactions inhibited recall of advertisements and brands, a pattern consistent with intensity-based accounts of attention [5]![6] This does not establish that emotional advertising is generally poorly remembered. A review of recall evidence concludes that well-executed emotional commercials can perform well, particularly when retrieval cues match their experiential content [7].

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The timing of the memory test changes the observed effect. Across three experiments, arousal communicated in an advertisement inhibited immediate memory but enhanced delayed memory when the arousal fit the advertising claim; arousal that was incongruent with the claim did not produce this pattern [8]. Fit therefore supplies a boundary condition. A dramatic execution for a dramatic claim can organize encoding around the advertised meaning, whereas unrelated excitement may be remembered as entertainment without strengthening the brand trace. Emotional fit also concerns product meaning. Emotional appeals performed better for some product types than others, but the evidence did not show harmful effects for the tested categories when appeals were product-congruent [9].

The relationship between affect and attitude is similarly mediated by execution. For emotional formats, increasing positive feelings and reducing negative feelings improved perceived advertising credibility, which then affected advertisement and brand attitudes [10]. Emotional responses can therefore support memory indirectly by increasing engagement and favorable processing, but the evidence does not justify treating emotional intensity as a universal memory enhancer. A small free-recall study reported stronger recall for negative and high-intensity appeals [11], yet its student sample and limited design do not resolve the broader conflict between immediate distraction and delayed consolidation.[12]

Explicit, Implicit, and Low-Attention Memory Pathways

Explicit memory requires deliberate retrieval of a brand, claim, or advertisement. **Implicit memory** appears in facilitated responses or accessibility without a conscious report of remembering. Emotional advertising may leave a trace that is accessible but insufficiently diagnostic for explicit attribution. Experiments using an accessibility and diagnosticity framework found that emotional appeals exerted a larger effect on implicit than explicit memory, although intense emotion improved explicit performance when the emotional experience was diagnostic of the advertised product [13]. This distinction explains why emotional advertising may influence preference without producing confident unaided recall.

Low attention does not imply absent processing. Affective advertising can operate at relatively low attention and may be underestimated by claimed-awareness measures when effectiveness is inferred only from recall [14]. Divided attention and delay impair explicit retrieval, whereas implicit retrieval is more resistant to both conditions [15]. Recognition, response latency, choice, and brand preference can therefore reveal effects that free recall misses. The measurement consequence is substantive: an advertisement may establish a feeling or accessibility cue that later guides choice without being retrievable as a verbal episode. [16]

The retrieval task must also match the encoded representation. Emotional commercials often contain characters, settings, music, and narrative transitions rather than product facts. Free recall or executional cues can consequently recover more information than category-based questions, which may favor semantic rather than episodic retrieval [13]. Recall should therefore be interpreted alongside recognition and implicit measures rather than treated as a single sufficient index. The evidence supports a dual-pathway account in which conscious memory depends on accessibility and diagnosticity, while automatic influence depends more heavily on accessibility.

Attention Capture, Brand Familiarity, and Prior Usage as Memory Moderators

Attention is allocated unevenly across an advertisement. Eye-tracking analysis of 1,363 print advertisements tested with more than 3,600 consumers found that pictorial elements captured attention strongly, text attracted attention in proportion to surface area, and brand elements transferred attention toward other elements [17]. These findings imply that attention to an appealing image does not guarantee attention to the brand. Brand visibility must be integrated with the execution rather than appended after emotional engagement has occurred. [18]

Prior familiarity changes the value of repetition and attention. Two experiments using television and Internet advertising found that repeated exposure to an unfamiliar brand produced declining effectiveness, whereas familiarity postponed wearout; negative thoughts about tactic inappropriateness were especially associated with repetition for unfamiliar brands [19]. Prior use also changes the attention-recall relationship. Infrared eye-tracking across nearly 700 participants and 64 video executions showed similar levels of visual attention among users and non-users, but greater attention improved recall among light and non-users and not among heavier users [20]. Existing users may retrieve the brand from established knowledge, reducing the marginal memory benefit of additional visual attention. [21]

Brand awareness can also condition attitude change. In fashion sportswear advertising, emotional strategies produced greater attitude change than informational strategies, while the direction of change depended on brand awareness [22]. Survey evidence further indicates that exposure more strongly establishes recall for fast-moving consumer goods, whereas personal experience matters more for durable goods, with brand trust mediating both relationships [3]. Memory is thus jointly formed by executional affect, attention, familiarity, and accumulated usage. This provides the basis for examining how the same emotional trace can be reinterpreted after time has passed.

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Time, Mood Shifts, and the Delayed Reinterpretation of Advertising

Immediate Versus Delayed Effects of Mood on Brand and Extension Evaluations

Mood affects the style through which consumers elaborate advertising and brand information. Positive mood encourages relational processing, linking a product to a broader brand meaning, whereas negative mood encourages item-specific processing. Two experiments found that positive mood generated more favorable evaluations of brand extensions and extension fit immediately after exposure and after a one-week delay [23]. The persistence of the effect indicates that mood can influence the structure of encoded knowledge rather than merely biasing an immediate rating.

A similar temporal distinction appears in imagery advertising. Positive preexisting mood increased positive affect, encouraged mental imagery, and improved brand attitudes; negative mood reduced imagery but promoted more detail-oriented processing and more accurate memory for specific claims [2]. These outcomes are not equivalent. Positive mood may support broad brand evaluation while negative mood can preserve claim-level information. The effect of a mood state therefore depends on whether the endpoint is extension fit, attitude, claim memory, or later choice. [24]

The delay itself can change the emotional meaning of consumption. In experiments involving cellphone purchases and biscuit consumption, higher-hedonic products generated excitement and cheerfulness that intensified over time, while utilitarian products generated confidence and security that gradually weakened [1]. Delayed evaluation is therefore not a noisier version of immediate evaluation. It can reflect consolidation, reinterpretation, fading affect, and the accumulation of consumption evidence.

Emotional Transitions Within Advertisements and the Placement of Positive Affect

An advertisement's emotional trajectory can matter as much as its final valence. A negative-to-positive transition produced greater recall of both brand and advertised information than a neutral-to-positive transition or an advertisement without an emotional shift [25]. A second study reproduced the effect in a buyer-seller encounter, where the seller's facial expression changed from negative to positive. The transition may provide a distinctive episodic boundary and make the positive resolution more diagnostic than an uninterrupted positive presentation.

This finding qualifies simple advice to place positive affect at the beginning or throughout an execution. Positive resolution may be particularly memorable when it follows an identifiable negative state, but the mechanism remains tied to recall rather than demonstrated repurchase. Emotional transitions can also influence brand evaluation through transfer. In a factorial experiment involving valence, arousal, and brand attitude, an unfamiliar positive brand placed in a highly arousing positive scene produced the greatest purchase intentions, while valence affected brand attitude and purchase intention more generally [26]. The execution must therefore connect the emotional shift to the brand rather than leave the affect attached to the surrounding scene. [27]

Advertising Repetition, Wearout, and the Reversal of Annoyance Over Time

Repeated advertising demonstrates why immediate affect is an incomplete performance criterion. A field study found greater annoyance with a frequently advertised brand at the time of exposure but greater preference for that brand several weeks later. A longitudinal online experiment attributed the reversal to decay in annoyance while brand memory remained relatively stable; the reversal occurred when the product category became relevant at the later consideration point [28]. Repetition can therefore produce an adverse short-term mood residue and a favorable delayed accessibility effect.

Familiarity changes the timing of this process. For unfamiliar brands, repeated exposure can trigger thoughts that the tactic is inappropriate and reduce effectiveness, while familiar brands experience postponed wearout [19]. The two findings are compatible because annoyance, memory stability, familiarity, and category relevance need not change at the same rate. A brand may be disliked during an exposure burst yet remain cognitively available when a purchase occasion arises. Longitudinal measurement must consequently record both affect and memory at multiple intervals rather than infer delayed preference from immediate irritation. [29]

Post-Purchase Emotion: Regret, Mood Repair, and the Reconstruction of Consumption Experience

Purchase Regret, Foregone Alternatives, and Post-Consumption Emotional Change

Purchase regret arises when consumers compare the chosen option with a foregone alternative and judge the decision unfavorably. It is therefore distinct from dissatisfaction with product performance alone. In a study of online shoppers, satisfaction and regret predicted post-purchase behaviors differently: regretting consumers were less inclined to repurchase and more likely to switch, while online reviews were associated with satisfied rather than regretting shoppers [30]. A cross-sectional study of purchases made under a steadily increasing discount strategy similarly found that alternative attractiveness and price consciousness were associated with greater regret, and regret harmed repurchase intention [31].

Mood at the decision point can alter the comparison process. Experimental evidence indicates that negative mood increases variety seeking and regret; when consumers later find that a switched-to brand performs worse, loyalty to the original brand can increase [32]. This pattern suggests two temporal consequences. Regret can initially encourage switching or reduce repurchase,

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yet a disappointing alternative can generate comparative revaluation of the original brand. Loyalty is therefore not a direct opposite of regret; it can emerge after regret has supplied information about the quality of alternatives.[33]

Consumer-brand identification moderates this process. Scenario experiments involving participants' favorite brands found that identification attenuated regret's negative effects on satisfaction and behavioral intentions, reduced behavioral regret coping, and strengthened the association between satisfaction and repurchase or recommendation intent [34]. Identification appears to provide a favorable interpretive frame through which an unfavorable purchase outcome is regulated. It does not remove the comparison with the foregone brand, but it can reduce the likelihood that regret becomes switching.

Advertising can enter this reconstruction after consumption. Experiments on post-experience advertising found that false cues, when undetected, were processed similarly to truthful cues and could influence recollection of prior product experience [35]. The implication is not that advertising determines every memory of consumption. Rather, advertising may supply imagery or interpretive material that becomes incorporated into later recollection, especially when the original experience is ambiguous or retrieval is reconstructive. Evaluations of the product can thus reflect both what was consumed and how the experience was subsequently represented.

Mood Management Through Consumption and Advertising-Induced Mood Repair

Consumption may be selected as a strategy for managing an existing affective state. A model of advertising and consumer emotion management found that favorable responses to an advertisement for a hedonic product improved advertisement attitudes, encouraged hedonic rationalizations, and increased behavioral intentions; guilt associated with purchasing or consuming the product was also mitigated [36]. The advertisement therefore affects more than product appraisal. It can make an anticipated consumption episode seem emotionally appropriate and reduce an obstacle to action. [37]

Mood repair can occur through the media context as well as the advertisement. Research on exposure to advertising after negative news examines advertising as a possible means of repairing the affective consequences of the preceding content [38]. The broader implication is that incidental mood and ad-evoked feeling may combine. A positive execution may be evaluated differently after distressing content than after an already pleasant program, and the resulting response may reflect relief, repair, persuasion, or all three.

Preexisting mood also changes processing. In a study using induced positive and negative moods, positive mood produced more favorable attitudes toward advertised products and stronger intentions to try them [39]. Yet mood does not uniformly increase persuasion. Forewarning of persuasive intent produced negative attitudinal effects regardless of prior attitude or affect intensity, and participants with already negative brand attitudes were not influenced by ad-induced affect [40]. Mood repair is therefore conditional on perceived intent, prior evaluation, and the consumer's willingness to treat the advertisement as a source of emotional experience.

The discrete emotion matters as well. In environmental advertising, gain framing elicited hope and loss framing elicited guilt; both emotions improved attitudes toward the cause, but only hope improved attitudes toward the company [41]. This distinction cautions against treating all positive or negative affect as interchangeable. Hope may connect the consumer to an organization, whereas guilt may remain directed toward the social issue. Emotional residue can consequently travel to different objects depending on the appraisal embedded in the execution. [42]

Price Promotions, the Pain of Payment, and Delayed Consumption Experience

Price promotions alter the emotional meaning of consumption through two opposing mechanisms. A discount can improve mood and reduce the pain of payment, but it can also reduce attention during later consumption by weakening the perceived need to recover the expenditure. Four experiments involving real spending and consumption found that discounts increased enjoyment when consumption followed payment immediately, whereas the pattern reversed when consumption was delayed [43]. The result separates immediate payment affect from later experiential attention.

This temporal reversal has implications for advertising that frames a promotion as emotional relief. A positive advertisement may make the deal feel rewarding at purchase, yet the resulting consumption experience can be weaker if delay reduces engagement. Conversely, a full-price purchase may carry greater payment pain but also sustain attention to the product during later use. The relevant outcome is not simply perceived value at checkout; it is the sequence from payment, waiting, consumption, and retrospective evaluation.

The same logic applies to regret. If a delayed experience fails to justify the purchase, consumers may reinterpret the promotion as evidence of low value or a missed alternative. If consumption is enjoyable, the deal may become a positive autobiographical cue. Advertising and pricing therefore interact with temporal distance, and post-purchase research should measure emotion at payment and consumption rather than collapse them into one satisfaction score. These processes connect mood repair and regret to the repeated-use question, because the memory of enjoyment or disappointment becomes a basis for the next choice. [44]

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From Emotional Response to Repeat Consumption and Brand Loyalty

Brand Attachment, Trust, Affective Commitment, and Loyalty Formation

Brand loyalty includes repeated purchase and favorable attitudinal commitment, which are related but distinct outcomes. Aggregate evidence from 107 brands found that brand trust and brand affect jointly predicted purchase loyalty and attitudinal loyalty after product- and brand-level controls; purchase loyalty was associated with market share, while attitudinal loyalty was associated with relative price [45]. Advertising affect can therefore contribute to loyalty, but the route generally runs through trust, affect, satisfaction, and accumulated experience rather than through exposure alone.

Brand attachment gives emotional response a more durable relational form. Field research in wine tasting rooms found that store-evoked pleasure and arousal affected brand attachment through satisfaction, and attachment was associated with loyalty and willingness to pay a price premium [46]. A follow-up experiment in juice bars supported the interaction between affective environment, brand personality, and consumer personality. These results indicate that emotional response is more likely to persist when the consumption setting confirms the brand's personality and produces satisfaction.

Brand love, trust, and commitment provide related mechanisms. Among buyers of Toyota, Ford, and Renault, attachment was positively related to brand love, while brand love reinforced trust, interest in continuing the relationship, and faith in the brand's future [47]. Survey evidence across cars, laptops, and sneakers found that brand experience affected loyalty through affective commitment rather than through a direct experience-to-loyalty path [48]. Emotional advertising may initiate a relationship, but repeated use and credible performance determine whether the relationship becomes commitment. [49]

Regret, Variety Seeking, and Repurchase Intentions

Regret can interrupt loyalty by making an alternative salient. The immediate response may be switching, reduced repurchase intention, or reluctance to recommend, particularly when the alternative seems attractive [30], [31]. Negative mood can intensify this process by increasing variety seeking and post-choice regret [32]. Variety seeking should therefore be distinguished from simple disloyalty. A consumer may switch because of exploratory motivation, then return after the alternative performs poorly.

Identification protects against some consequences of regret, but it does not make performance irrelevant. Consumers who strongly identify with a brand can regulate regret more favorably, preserving satisfaction and repurchase intentions [34]. This protective effect suggests that loyalty includes an interpretive component: the same disappointing outcome can be explained as an isolated failure by one consumer and as evidence of a bad brand choice by another. Advertising can influence the available explanation by strengthening identity, trust, or expectations before use.

Expectation confirmation remains a central bridge. In online retail, price transparency, service quality, and firm sincerity were associated with satisfaction, whereas firm sincerity was the only characteristic associated with regret in the reported model [30]. In mobile advertising, involvement and interactivity contributed to perceived usefulness and satisfaction, which mediated product loyalty [50]. Emotional response may attract attention and create approach motivation, but repurchase depends on whether the subsequent interaction confirms what the advertising led consumers to expect.

Brand Experience as the Bridge Between Advertising Affect and Repeated Use

Brand experience encompasses sensory, affective, intellectual, and behavioral responses to brand-related stimuli, including communications, packaging, design, and environments [4]. This construct links advertising residue with actual use because it treats communication as one element in a wider stream of brand contact. Six studies established the measure as distinct from brand evaluation, involvement, attachment, delight, and personality, while also linking experience to satisfaction and loyalty [4]. Advertising affect is therefore best interpreted as an antecedent or component of experience, not as a substitute for it.

Smartphone evidence supports this mediated pathway. Among 278 users in Lebanon, experiential brands generated loyalty through passion, self-brand connection, and affection [51]. Social media evidence likewise found that marketing activities were associated with sensory, affective, behavioral, and intellectual experience, which in turn related to continued usage and brand loyalty among 309 respondents [52]. These survey designs establish patterned associations but cannot demonstrate that an advertising-induced mood caused later use.

The experience bridge also explains why an emotionally strong advertisement can fail. If the consumption episode contradicts the promised feeling, regret or distrust may replace attachment. If the episode confirms the emotional expectation, satisfaction can consolidate the brand memory and increase commitment. Advertising evaluation should therefore follow consumers beyond exposure, recording whether the expected affect appears during use, how it is remembered later, and whether the next purchase occurs. That sequence distinguishes emotional persuasion from emotional loyalty. [53]

Boundary Conditions in the Emotional Afterlife of Advertising

Product Category, Service Type, and Hedonic Versus Utilitarian Consumption

Product category changes both the strength and meaning of advertising affect. Analysis of 1,070 television commercials, 1,576 consumer responses, and more than 150 product categories found that ad-evoked feelings affected brand evaluations directly and

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through advertisement attitude, with stronger effects for hedonic products than utilitarian products [54]. The effects did not depend on involvement, durability, service status, or whether the product was a search or experience good. Category differences therefore concern affective diagnosticity rather than a simple emotional versus rational division.

Experiments on four product types found that emotional advertising was more effective for some categories, but did not produce negative effects when appeals were product-congruent [9]. Service research gives a sharper distinction: emotional appeals generated higher purchase intention for experience services such as restaurants, whereas rational appeals were more effective for credence services such as dentists, airlines, or hospitals [55]. High affect-intensity individuals responded more favorably to emotional appeals, strengthening the need for consumer-level matching.

Consumer Mood, Affect Intensity, Brand Identification, and Persuasion Knowledge

Preexisting mood changes the processing mode brought to the advertisement. Positive mood encourages imagery and broad evaluation, while negative mood encourages analytic attention to claims [2]. Affect intensity further moderates appeal fit: high-intensity consumers showed more favorable brand responses to emotional advertising, while rational appeals did not produce comparable differences [55]. The same execution can therefore generate different memory and attitude outcomes without any change in its content.

Brand identification can protect positive evaluations and reduce damage from negative advertising. Online experiments found that highly identified consumers evaluated positive advertising more favorably and were less harmed by negative advertising, whereas weakly identified consumers were more likely to share negative content [56]. Identification also attenuated the effects of purchase regret [34]. Prior relationship strength thus moderates both the encoding of advertising and the later interpretation of consumption. Persuasion knowledge introduces another boundary. In an advergame experiment with 127 participants, disclosure activated persuasion knowledge, increasing brand recall but producing more negative game and brand attitudes; the mediated effect appeared among participants in positive moods, whereas negative-mood participants were already processing critically [57]. Emotional positivity can therefore increase openness while also making a disclosure more consequential.

Executional Contexts: Television, Mobile, Social Media, Advergames, and Brand Placement

Media context determines attention, agency, and retrieval. Television studies show that emotional programming can compete with advertisements for attention [5], while eye-tracking work demonstrates that visual elements distribute attention unevenly [17]. Mobile advertising adds personalization, involvement, and interactivity, with perceived usefulness and satisfaction mediating product loyalty [50]. Social media adds sharing and community participation; emotional and rational brand experiences both predicted loyalty and awareness among luxury-fashion followers [58].

Advergames embed persuasion in play, making disclosure and mood especially relevant [57]. Brand placement embeds the product in an emotional scene, where arousal and valence can transfer from the surrounding narrative [26]. These formats differ in interruption, control, social visibility, and memory retrieval. A single estimate of “emotional advertising effectiveness” cannot represent these distinct exposure conditions, so temporal studies should identify the medium and the consumer’s activity during exposure. [59]

How the Evidence Has Been Generated: Experimental, Field, Survey, and Attention-Based Approaches

Controlled Experiments on Valence, Arousal, Timing, Regret, and Repurchase

Controlled experiments provide the clearest tests of emotional causation. Mood induction experiments manipulate positive versus negative states before exposure and measure attitudes, intentions, imagery, or claim memory [2], [39]. Advertising experiments independently vary valence, arousal, emotional fit, or emotional transition, allowing researchers to distinguish the effect of intensity from the effect of message meaning [8], [25]. Delay experiments then test whether immediate effects survive or reverse after hours, days, or a week [1], [23].

Experimental work also captures post-purchase mechanisms. Real spending and consumption experiments show that the effect of a discount reverses when consumption is delayed [43]. Scenario manipulations test whether brand identification changes responses to regret [34]. These designs support mechanism claims, but many use short exposures, hypothetical decisions, student samples, or brief follow-up periods. Their behavioral outcomes often remain intentions rather than observed repeat purchases.

Large-Sample Commercial, Field, and Administrative Evidence

Commercial and field evidence improves external validity. The television-commercial database spanning 1,070 executions and 1,576 consumers shows that ad-evoked feelings predict brand evaluation across many categories [54]. A field study of wine tasting rooms connects naturally occurring store affect with satisfaction, attachment, loyalty, and willingness to pay [46]. The repetition study combines a field design with longitudinal online experiments, showing that annoyance and preference follow different time courses [28].

Survey and administrative-style evidence extends the outcome range but is mainly associational. Models using 367 online shoppers, 278 smartphone users, 309 social-media respondents, and 107 brands connect satisfaction, experience, commitment,

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trust, or attachment with loyalty-related outcomes [30], [45], [51], [52]. These studies provide broad structural patterns, yet cross-sectional measurement cannot determine whether mood preceded loyalty, resulted from it, or was confounded by prior usage. The strongest evidence will combine commercial scale with temporal and behavioral measurement. [60]

Eye Tracking, Explicit Recall, Implicit Memory, and Self-Reported Emotion as Complementary Measures

The main methods capture different stages of the proposed process:

Method	Primary endpoint	Main contribution	Limitation
Eye tracking	Fixations and visual attention	Identifies attention allocation across brand, text, and pictorial elements [17]	Attention does not guarantee encoding
Explicit recall	Deliberate retrieval	Measures accessible and diagnostic brand or claim memory [7]	Sensitive to delay, divided attention, and retrieval cue
Implicit memory	Automatic accessibility	Detects effects that survive low attention or weak conscious recollection [15]	Does not identify conscious source memory
Self-report emotion	Experienced valence and arousal	Measures mood, feeling, guilt, hope, or satisfaction [41]	Vulnerable to demand and retrospective reporting
Behavioral purchase data	Choice, repurchase, or switching	Establishes practical consequences beyond intention [30]	Often lacks direct measurement of ad-evoked mood

Eye tracking, recall, implicit tests, self-report, and purchase records should therefore be treated as complementary rather than interchangeable. Eye-tracking research involving nearly 700 participants and 64 video executions shows why attention must be modeled as a moderator of recall rather than as recall itself [20]. A multimethod design can test whether mood changes attention, whether attention changes explicit and implicit memory, and whether either memory pathway predicts regret or repeated consumption. That sequence is necessary for evaluating advertising's emotional afterlife rather than its immediate persuasive response.

Synthesis: A Dynamic Pathway from Ad-Evoked Emotion to Recall, Regret, and Repeat Consumption
Integrating the Stimulus–Organism–Response, Affect Transfer, Regret, and Memory Perspectives
The evidence supports a **dynamic pathway** in which advertising stimuli alter affect, affect changes attention and memory accessibility, and these traces influence later evaluation after consumption. Within the **Stimulus–Organism–Response (S-O-R)** framework, executional features constitute stimuli, experienced emotion and processing constitute organismic states, and brand evaluation, purchase, regret, or repurchase constitute responses. Emotional responses can affect brand evaluation directly and indirectly through attitudes toward the advertisement, with stronger effects for hedonic than utilitarian products [54]. The pathway therefore extends beyond immediate persuasion: an advertisement may remain consequential when its explicit content is forgotten but its affective accessibility persists. [61]

Affect transfer explains why feelings generated by a program, scene, store, or advertisement can become associated with a brand. Yet transfer is conditional. Positive and negative advertising emotions influence attitudes through distinct cognitive routes, while emotional and informational executions depend on different credibility and feeling judgments [10]. Memory research adds a temporal distinction: arousal can inhibit immediate memory while enhancing delayed memory when it fits the claim [8]. Emotional appeals may also produce stronger implicit than explicit memory, particularly under delay or divided attention, because implicit accessibility survives conditions that impair deliberate retrieval [15].

The post-purchase stage introduces **regret theory** and reconstructive memory. Regret arises through comparison with foregone alternatives and can reduce satisfaction, switching, and repurchase intention [30], [31]. Consumer-brand identification attenuates these effects by regulating regret and reducing behavioral coping [34]. Advertising can also modify how prior consumption is remembered when later cues alter reconstructed experience [35]. Repeat consumption consequently depends on the interaction of remembered affect, actual product experience, alternative comparisons, and relationship strength rather than on exposure alone.

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Comparative Evidence Matrix of Emotional Inputs, Temporal Outcomes, and Moderators

The literature compares emotional inputs across distinct endpoints rather than measuring one unified afterlife. The matrix below makes those differences explicit.

Emotional input or condition	Immediate outcome	Delayed outcome	Moderator or boundary
Positive or negative ad feelings	More favorable brand evaluations through direct and ad-attitude pathways [54]	Not directly established	Hedonic products show stronger effects [54]
Arousing appeal	Weaker immediate memory	Stronger delayed memory when arousal fits the claim [8]	Claim-arousal fit
Negative-to-positive emotional shift	Greater brand and message recall	Persistence was tested through recall rather than repurchase [25]	Placement of positive affect
Repeated exposure	Greater annoyance during exposure [28]	Preference can rise after several weeks as annoyance decays and memory remains	Later category relevance
Purchase regret	Lower satisfaction and repurchase intention [30]	Switching becomes more likely	Brand identification [34]
Hedonic consumption affect	Excitement and cheerfulness	Intensifying positive emotion and loyalty	Product hedonicity and delay [1]
Discounted purchase	Greater enjoyment after immediate consumption	Lower enjoyment when consumption is delayed	Attention and payment-consumption interval [43]

These findings resist a single valence rule. Positive affect commonly improves evaluation, but negative or mixed emotion can increase diagnostic recall when it creates distinctive transitions or claim-relevant arousal [8], [25]. Repetition likewise has opposite effects across time: annoyance is contemporaneous, whereas preference may improve later if the category becomes relevant [28]. The evidence is therefore more consistent with time-dependent accessibility and evaluation than with a stable immediate-to-later effect.

Conceptual Pathway Diagram: Exposure, Mood Carryover, Memory Accessibility, Post-Purchase Evaluation, and Loyalty

The proposed pathway distinguishes felt mood from stored memory and from the later consumption experience. Prior usage, attention, product category, identification, and consumption delay can modify transitions between stages [9], [20], [34], [43].

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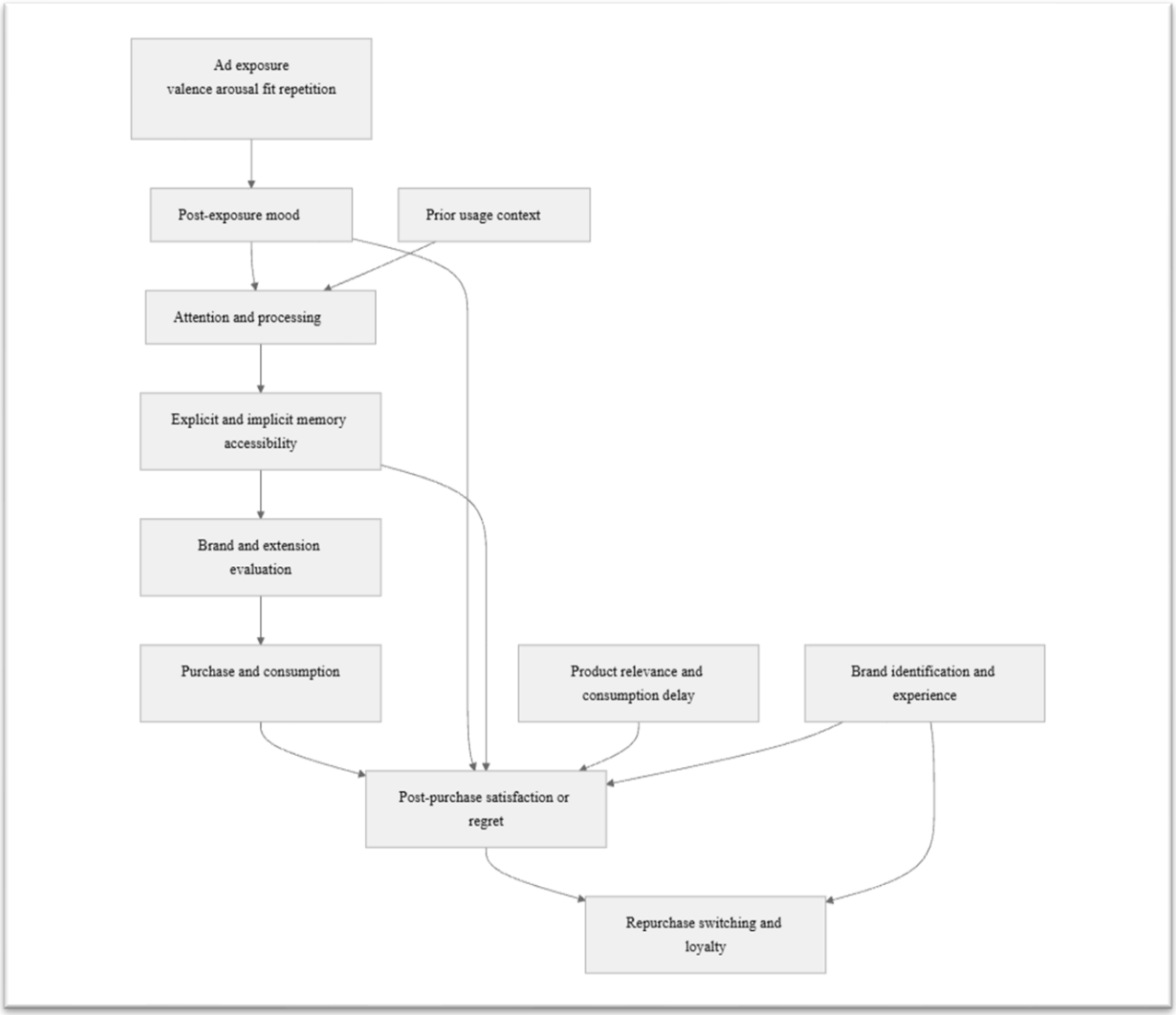


Diagram 1

The diagram implies several testable routes. Mood may carry forward directly into purchase and consumption, or indirectly by changing the accessibility and interpretation of brand memory. Affective brand experience then converts episodic responses into attachment, commitment, and loyalty; surveys of smartphones, cars, laptops, and sneakers associate experience with emotional attachment or affective commitment before loyalty emerges [48], [51]. The strongest synthesis is thus a conditional chain: advertising affect creates an opportunity for later influence, but actual repeat consumption requires congruent memory, satisfactory experience, and manageable regret.

Research Gaps and Future Tests of Advertising's Emotional Afterlife

The Missing Longitudinal Link Between Post-Exposure Mood and Actual Repeat Consumption

The central empirical gap is the absence of a sustained, person-level test connecting post-exposure mood to observed repeat purchasing. Existing studies establish immediate attitudes, delayed recall, later extension evaluations, or repurchase intentions, but these endpoints remain separated. The delayed mood studies show that hedonic excitement can intensify while utilitarian confidence fades, with corresponding changes in loyalty judgments [1]. Repetition research similarly follows annoyance and preference across time, yet it does not measure the intervening mood state and actual transactions together [28]. Future panels should collect mood immediately after exposure, memory at multiple delays, consumption evaluations, and verified purchases over subsequent category-relevant occasions.

Separating Advertising Effects from Preexisting Mood, Brand Experience, and Consumption Context

Causal attribution is difficult because mood precedes advertising, brand experience precedes exposure, and consumption context shapes both affect and recall. Preexisting positive mood increases imagery processing and brand attitudes, whereas negative mood supports more detail-oriented claim processing [2]. Prior brand usage also changes how visual attention translates into recall, particularly among light and non-users [20]. Researchers should therefore randomize advertising valence and arousal while

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measuring baseline mood, affect intensity, brand identification, prior usage, category involvement, and contextual relevance. Multilevel models can separate within-person mood changes from between-person differences in loyalty.

Needed Multimethod Designs Combining Physiological, Behavioral, Memory, and Purchase Data

A stronger design would combine self-reported valence and arousal with facial, cardiovascular, or other physiological indicators, eye tracking, explicit recall, implicit accessibility, experience sampling, and transaction records. Eye tracking identifies allocation of attention but does not establish encoding, while implicit memory can persist when explicit retrieval fails [15], [17]. A preregistered field experiment could randomize exposure frequency and emotional execution, measure mood before and after exposure, test memory after delays, and link participants to consented purchase data. Mediation models should compare direct mood carryover with memory-mediated and experience-mediated paths, while qualitative prompts can identify regret, mood repair, and reconstructed consumption narratives.

II. CONCLUSION

Conclusion: Why the Emotional Residue of Advertising Matters Beyond Immediate Persuasion

Implications for Advertising Evaluation, Creative Strategy, and Consumer Research

Advertising evaluation should treat immediate attitude and delayed memory as distinct outcomes, then connect both to consumption and loyalty. Emotional execution can improve brand evaluation, but arousal, fit, attention, repetition, product relevance, and prior usage determine whether affect becomes accessible memory or transient reaction. Creative testing should therefore include delayed implicit and explicit memory, post-exposure mood, and category-relevant behavioral measures rather than relying on same-session recall alone. Researchers should also assess regret and reconstructed experience, because advertising may influence how consumers interpret consumption after purchase. The practical question is not whether an advertisement is remembered immediately, but whether its emotional residue remains available when consumers choose, consume, compare, and decide whether to return.

REFERENCES

[1]. C. Chang, "Beating the news blues: Mood repair through exposure to advertising," *Journal of Communication*, vol. 56, no. 1, pp. 198–217, Mar. 2006, doi: 10.1111/j.1460-2466.2006.00010.x.

[2]. M. C. Campbell and K. L. Keller, "Brand familiarity and advertising repetition effects," *Journal of Consumer Research*, vol. 30, no. 2, pp. 292–304, Sep. 2003, doi: 10.1086/376800.

[3]. C. Yoo and D. J. MacInnis, "The brand attitude formation process of emotional and informational ads," *Journal of Business Research*, vol. 58, no. 10, pp. 1397–1406, Aug. 2005, doi: 10.1016/j.jbusres.2005.03.011.

[4]. B. Owolabi, "Effect of consumers mood on advertising effectiveness," *Europe's Journal of Psychology*, vol. 5, no. 4, Nov. 2009, doi: 10.5964/ejop.v5i4.243.

[5]. M. A. Sarwar, Z. Awang, M. D. Habib, J. Nasir, and M. Hussain, "Why did i buy this? purchase regret and repeat purchase intentions: A model and empirical application," *Journal of Public Affairs*, vol. 22, no. 1, Aug. 2020, doi: 10.1002/pa.2357.

[6]. C.-C. Lu, I. Wu, and W. Hsiao, "Developing customer product loyalty through mobile advertising: Affective and cognitive perspectives," *International Journal of Information Management*, vol. 47, pp. 101–111, Jan. 2019, doi: 10.1016/j.ijinfomgt.2018.12.020.

[7]. S. Y. Lee, "Ad-induced affect: The effects of forewarning, affect intensity, and prior brand attitude," *Journal of Marketing Communications*, vol. 16, no. 4, pp. 225–237, Feb. 2010, doi: 10.1080/13527260902869038.

[8]. Chaudhuri and M. B. Holbrook, "The chain of effects from brand trust and brand affect to brand performance: The role of brand loyalty," *Journal of Marketing*, vol. 65, no. 2, pp. 81–93, Apr. 2001, doi: 10.1509/jmkg.65.2.81.18255.

[9]. E. A. van Reijmersdal, N. M. Lammers, E. Rozendaal, and M. Buijzen, "Disclosing the persuasive nature of advergames: moderation effects of mood on brand responses via persuasion knowledge," *International Journal of Advertising*, vol. 34, no. 1, pp. 70–84, 2015, doi: 10.1080/02650487.2014.993795.

[10]. C. Baumann, H. Hamin, and A. Chong, "The role of brand exposure and experience on brand recall—Product durables vis-à-vis FMCG," *Journal of Retailing and Consumer Services*, vol. 23, pp. 21–31, Dec. 2014, doi: 10.1016/j.jretconser.2014.11.003.

[11]. L. Zollo, R. Filieri, R. Rialti, and S. Yoon, "Unpacking the relationship between social media marketing and brand equity: The mediating role of consumers' benefits and experience," *Journal of Business Research*, vol. 117, pp. 256–267, Jun. 2020, doi: 10.1016/j.jbusres.2020.05.001.

[12]. O. Iglesias, J. J. Singh, and J. M. Batista-Foguet, "The role of brand experience and affective commitment in determining brand loyalty," *Journal of Brand Management*, vol. 18, no. 8, pp. 570–582, Jan. 2011, doi: 10.1057/bm.2010.58.

[13]. R. G. M. Pieters and M. Wedel, "Attention capture and transfer in advertising: Brand, pictorial, and text-size effects," *Journal of Marketing*, vol. 68, no. 2, pp. 36–50, Mar. 2004, doi: 10.1509/jmkg.68.2.36.27794.

[14]. E. Kemp, M. Bui, and S. Chapa, "The role of advertising in consumer emotion management," *International Journal of Advertising*, vol. 31, no. 2, pp. 339–353, 2012, doi: 10.2501/ija-31-2-339-353.

ISSN :2584-2706 DOI: https://doi.org/10.5281/zenodo.24098977

[15]. H. Riemer and H. Noel, "The effect of emotionally-arousing ad appeals on memory: time and fit matter," *International Journal of Advertising*, vol. 40, no. 7, pp. 1024–1046, Oct. 2020, doi: 10.1080/02650487.2020.1822670.
[16]. E.-C. Chang, Y. Lv, T. Chou, Q. He, and Z. Song, "Now or later: Delay's effects on post-consumption emotions and consumer loyalty," *Journal of Business Research*, vol. 67, no. 7, pp. 1368–1375, Sep. 2013, doi: 10.1016/j.jbusres.2013.08.016.
[17]. S. Kumar and J. Hsieh, "How social media marketing activities affect brand loyalty? mediating role of brand experience," *Asia Pacific Journal of Marketing and Logistics*, vol. 36, no. 10, pp. 2300–2323, Apr. 2024, doi: 10.1108/apjml-09-2023-0900.
[18]. H. Zhang, J. Sun, F. Liu, and J. G. Knight, "Be rational or be emotional: advertising appeals, service types and consumer responses," *European Journal of Marketing*, vol. 48, no. 11/12, pp. 2105–2126, Nov. 2014, doi: 10.1108/ejm-10-2012-0613.
[19]. S. V. Tata, S. Prashar, and C. Parsad, "Examining the influence of satisfaction and regret on online shoppers' post-purchase behaviour," *Benchmarking An International Journal*, vol. 28, no. 6, pp. 1987–2007, Dec. 2020, doi: 10.1108/bij-06-2020-0332.
[20]. L. Simmonds, S. Bellman, R. Kennedy, M. Nenycz-Thiel, and S. Bogomolova, "Moderating effects of prior brand usage on visual attention to video advertising and recall: An eye-tracking investigation," *Journal of Business Research*, vol. 111, pp. 241–248, Mar. 2019, doi: 10.1016/j.jbusres.2019.02.062.
[21]. J. J. Brakus, B. H. Schmitt, and L. Zarantonello, "Brand experience: What is it? how is it measured? does it affect loyalty?," *Journal of Marketing*, vol. 73, no. 3, pp. 52–68, Mar. 2009, doi: 10.1509/jmkg.73.3.052.
[22]. R. Heath and A. C. Nairn, "Measuring affective advertising: Implications of low attention processing on recall," *Journal of Advertising Research*, vol. 45, no. 2, pp. 269–281, Jun. 2005, doi: 10.1017/s0021849905050282.
[23]. M. T. Pham, M. Geuens, and P. De Pelsmacker, "The influence of ad-evoked feelings on brand evaluations: Empirical generalizations from consumer responses to more than 1000 TV commercials," *International Journal of Research in Marketing*, vol. 30, no. 4, pp. 383–394, Jun. 2013, doi: 10.1016/j.ijresmar.2013.04.004.
[24]. Kronrod and J. C. Huber, "Ad wearout wearout: How time can reverse the negative effect of frequent advertising repetition on brand preference," *International Journal of Research in Marketing*, vol. 36, no. 2, pp. 306–324, Dec. 2018, doi: 10.1016/j.ijresmar.2018.11.008.
[25]. S. J. Newell, K. V. Henderson, and B. T. W. Wu, "The effects of pleasure and arousal on recall of advertisements during the super bowl," *Psychology and Marketing*, vol. 18, no. 11, pp. 1135–1153, Oct. 2001, doi: 10.1002/mar.1047.
[26]. T. A. Mitchell and M. R. Nelson, "Brand placement in emotional scenes: Excitation transfer or direct affect transfer?," *Journal of Current Issues & Research in Advertising*, vol. 39, no. 2, pp. 206–219, Apr. 2018, doi: 10.1080/10641734.2018.1428252.
[27]. K. A. Braun-LaTour, M. S. LaTour, J. E. Pickrell, E. F. Loftus, and S. U. is a Distinguished, "HOW AND WHEN ADVERTISING CAN INFLUENCE MEMORY FOR CONSUMER EXPERIENCE," *Journal of Advertising*, vol. 33, no. 4, pp. 7–25, Dec. 2004, doi: 10.1080/00913367.2004.10639171.
[28]. S. Sar, B. R. L. Duff, and G. Anghelcev, "If you feel it now you will think it later: The interactive effects of mood over time on brand extension evaluations," *Psychology and Marketing*, vol. 28, no. 6, pp. 561–583, May 2011, doi: 10.1002/mar.20401.
[29]. M. L. M. 2002- and D. S. A. 2002-, "Exploring the impact of emotional appeals in advertising: Effects on message recall," *Skemman*, 2025.
[30]. U. R. Orth, Y. Limon, and G. M. Rose, "Store-evoked affect, personalities, and consumer emotional attachments to brands," *Journal of Business Research*, vol. 63, no. 11, pp. 1202–1208, Nov. 2009, doi: 10.1016/j.jbusres.2009.10.018.
[31]. M. Geuens, P. De Pelsmacker, and T. Faseur, "Emotional advertising: Revisiting the role of product category," *Journal of Business Research*, vol. 64, no. 4, pp. 418–426, Mar. 2010, doi: 10.1016/j.jbusres.2010.03.001.
[32]. R. B. Mostafa and T. Kasamani, "Brand experience and brand loyalty: is it a matter of emotions?," *Asia Pacific Journal of Marketing and Logistics*, vol. 33, no. 4, pp. 1033–1051, Sep. 2020, doi: 10.1108/apjml-11-2019-0669.
[33]. S. Shapiro and H. S. Krishnan, "Memory-Based measures for assessing advertising effects: A comparison of explicit and implicit memory effects," *Journal of Advertising*, vol. 30, no. 3, pp. 1–13, Oct. 2001, doi: 10.1080/00913367.2001.10673641.
[34]. G. Guido, M. Pichierri, and G. Pino, "Place the good after the bad: effects of emotional shifts on consumer memory," *Marketing Letters*, vol. 29, no. 1, pp. 49–60, Oct. 2017, doi: 10.1007/s11002-017-9439-0.
[35]. S. M. C. Loureiro, K. H. Ruediger, and D. Vrontis, "Brand emotional connection and loyalty," *Journal of Brand Management*, vol. 20, no. 1, pp. 13–27, Feb. 2012, doi: 10.1057/bm.2012.3.
[36]. K. W. Graham and K. M. Wilder, "Consumer-brand identity and online advertising message elaboration," *Journal of Research in Interactive Marketing*, vol. 14, no. 1, pp. 111–132, Mar. 2020, doi: 10.1108/jrim-01-2019-0011.
[37]. L. Lee and C. I. Tsai, "How price promotions influence postpurchase consumption experience over time," *Journal of Consumer Research*, vol. 40, no. 5, pp. 943–959, Sep. 2013, doi: 10.1086/673441.
[38]. K. A. Stadlthanner, L. Andreu, M. A. Ribeiro, X. Font, and A. S. Mattila, "The effects of message framing in CSR advertising on consumers' emotions, attitudes, and behavioral intentions," *Journal of Hospitality Marketing & Management*, vol. 31, no. 7, pp. 777–796, Apr. 2022, doi: 10.1080/19368623.2022.2065399.

ISSN :2584-2706 DOI: https://doi.org/10.5281/zenodo.24098977

[39]. V. Davvetas and A. Diamantopoulos, "'Regretting your brand-self?' the moderating role of consumer-brand identification on consumer responses to purchase regret," *Journal of Business Research*, vol. 80, pp. 218–227, Apr. 2017, doi: 10.1016/j.jbusres.2017.04.008.
[40]. Mehta and S. C. Purvis, "Reconsidering recall and emotion in advertising," *Journal of Advertising Research*, vol. 46, no. 1, pp. 49–56, Mar. 2006, doi: 10.2501/s0021849906060065.
[41]. J. J. Lee* and L. D. Burns, "Deliver knowledge or touch the mind? the effect of informational and emotional advertisement strategy on fashion sportswear brand attitude and recall," *Journal of Global Fashion Marketing*, vol. 5, no. 2, pp. 135–148, Feb. 2014, doi: 10.1080/20932685.2013.878109.
[42]. P. Williams, "The Impact Of Emotional Advertising Appeals On Consumer Implicit And Explicit Memory: An Accessibility/Diagnosticity Perspective," 2000.
[43]. H.-H. Huang, "The Effects of Mood , Variety Seeking and Regret in Consumer Decision Making," 2017.
[44]. Raiyan Haider, "Forensic consumer psychology: An evidence-based framework for detecting deception and digital market manipulation," *nrfhh*, vol. 6, no. 16s, pp. 58–73, Oct. 2026, doi: 10.53365/nrfhh.3284.
[45]. R. Haider, T. Dwivedi, Dr. S. Nandy, D. C. Chugh, Dr. R. Khurana, and Dr. A. Pandey, "Managing viral misinformation and digital brand crises: Leadership, apology, speed, and trust recovery," *European Journal of Prosthodontics and Restorative Dentistry*, Sep. 2026, doi: 10.1922/ejprd.v34i9s.2064.
[46]. R. Haider, "The algorithmic memory of brands: Developing a longitudinal theory of how large language models learn, retain, distort and correct brand knowledge proposal field details," Jul. 2026, doi: 10.13140/rg.2.2.26017.36966.
[47]. R. Haider, "From search visibility to answer share: Developing and testing a causal theory of brand discoverability and conversion in generative engine optimization," Jul. 2026, doi: 10.13140/rg.2.2.24339.64807.
[48]. R. Haider, "Attention sovereignty in digital markets: Designing and testing consumer-owned preference agents as an alternative to surveillance-based advertising," Jul. 2026, doi: 10.13140/rg.2.2.27695.09125.
[49]. R. Haider, Md. R. Amin, Md. S. Arafat, I. Hossain, and R. Ahmad, "Smart Automation: Revolutionizing Business Operations, Advertising Costs and Customer Satisfaction Through Technology," 2026.
[50]. RaiyanHaider, "Generative AI and quantum-inspired optimization: Redefining portfolio risk management and real-time capital allocation in volatile markets," *Journal of Informatics Education and Research*, Mar. 2026, doi: 10.52783/jier.v6i1.4540.
[51]. R. Haider, T. Dwivedi, A. G. G. Girish, N. Verma, Dr. B. Kashyap, and V. S. Dubey, "Neuromarketing approaches to shaping healthy consumer choices: An integrative analysis of methods, efficacy, and ethical considerations," *CLOK (University of Central Lancashire)*, Mar. 2026, doi: 10.25258/ijddt.16.4s.62.
[52]. R. Haider, Md. F. I. Shaif, R. Ahmed, N. H. Nafi, M. R. Sumon, and M. Rahman, "Assessing the impact of influencer marketing on brand value and business revenue: An empirical and thematic analysis," *International Journal of Science and Research Archive*, vol. 16, no. 2, pp. 471–482, Aug. 2025, doi: 10.30574/ijsra.2025.16.2.2355.
[53]. R. Haider, Md. F. I. Shaif, R. Ahmed, N. H. Nafi, M. R. Sumon, and M. Rahman, "The influence of social media branding on consumer purchase behavior: A comprehensive empirical and thematic analysis," *International Journal of Science and Research Archive*, vol. 16, no. 2, pp. 460–470, Aug. 2025, doi: 10.30574/ijsra.2025.16.2.2354.
[54]. R. Haider, J. T. Juba, and S. Chowdhury, "Exploring the link between suicidal ideation and digital environments: The hidden impact of marketing content," *International Journal of Science and Research Archive*, vol. 16, no. 2, pp. 607–614, Aug. 2025, doi: 10.30574/ijsra.2025.16.2.2353.
[55]. R. Haider, W. A. Megha, J. T. Juba, A. Alamgir, and L. Ahmad, "The conversational revolution in health promotion: Investigating chatbot impact on healthcare marketing, patient engagement, and service reach," *International Journal of Science and Research Archive*, vol. 15, no. 3, pp. 1585–1592, Jun. 2025, doi: 10.30574/ijsra.2025.15.3.1937.
[56]. R. Haider, F. A. I. Bari, Osru, N. Afia, and M. A. khan Mugdho, "Leveraging internet of things data for real-time marketing: Opportunities, challenges, and strategic implications," *International Journal of Science and Research Archive*, vol. 15, no. 3, pp. 1657–1663, Jun. 2025, doi: 10.30574/ijsra.2025.15.3.1936.
[57]. R. Haider, M. F. A. I. Bari, Md. F. I. Shaif, M. Rahman, Md. N. H. Ohi, and K. M. M. Rahman, "Quantifying the impact: Leveraging AI-Powered sentiment analysis for strategic digital marketing and enhanced brand reputation management," *International Journal of Science and Research Archive*, vol. 15, no. 2, pp. 1103–1121, May 2025, doi: 10.30574/ijsra.2025.15.2.1524.
[58]. R. Haider, M. F. A. I. Bari, Md. F. I. Shaif, and M. Rahman, "Engineering hyper-personalization: Software challenges and brand performance in AI-driven digital marketing management: An empirical study," *International Journal of Science and Research Archive*, vol. 15, no. 2, pp. 1122–1141, May 2025, doi: 10.30574/ijsra.2025.15.2.1525.
[59]. R. Haider, M. F. A. I. Bari, Osru, N. Afia, and T. Karim, "Illuminating the black box: Explainable AI for enhanced customer behavior prediction and trust," *International Journal of Science and Research Archive*, vol. 15, no. 3, pp. 247–268, Jun. 2025, doi: 10.30574/ijsra.2025.15.3.1674.
[60]. R. Haider and J. Sabatina, "Harnessing the power of micro-influencers: A comprehensive analysis of their effectiveness in promoting climate adaptation solutions," *International Journal of Science and Research Archive*, vol. 15, no. 2, pp. 595–610, May 2025, doi: 10.30574/ijsra.2025.15.2.1448.
[61]. R. Haider, "Navigating the digital political landscape: How social media marketing shapes voter perceptions and political brand equity in the 21st century," *International Journal of Science and Research Archive*, vol. 15, no. 1, pp. 1736–1744, Apr. 2025, doi: 10.30574/ijsra.2025.15.1.1217.