Journal of the Academy of Marketing Science (2026) 54:977–988
https://doi.org/10.1007/s11747-026-01179-9

EDITORIAL

Taking the role of marketing in consumer well-being seriously: It is about time—the PACT framework

Andreas B. Eisingerich[1] · **Deborah J. MacInnis**[2] · **Barbara Duffek**[3] · **Winze Tam**[1]

Received: 2 June 2026 / Accepted: 19 June 2026 / Published online: 24 July 2026
© The Author(s) 2026

Abstract
The authors offer a systems-level, managerial and strategic framework that organizes cross-disciplinary evidence on how marketing has harmed consumers, and most importantly to offer thoughts on how marketing might instead make well-being a central component of value creation.

Keywords Consumer well-being · Product design · Choice architecture · Value creation · Relationship building

Introduction

To date, consumer well-being is still often treated as peripheral adjunct to profit maximization and market share. We define well-being as a multidimensional state of thriving (e.g., Disabato et al., 2025). In a consumer context, and as Fig. 1 illustrates, consumers high in well-being feel *emotionally* content, relaxed, satisfied, and high in self-esteem. *Physically*, they are in good health and feel safe and in control of their bodies. *Cognitively*, they have the motivation, ability and opportunity to make informed decisions by processing relevant information, assessing its truthfulness, and evaluating which options fit their needs. *Behaviorally*, they consume healthy and safe products that positively affect them and others. *Economically*, they are financially solvent and spend within their budgets. *Socially*, they have positive social relationships, experience social equality, and operate in positive collective circles. *Environmentally*, they are good stewards of the environment, buying from sustainable sources and minimizing the environmental impact of their consumption. The center boxes in Fig. 1 note these various dimensions of well-being.

In this article, we advance a systems-level, managerial and strategic framework that organizes cross-disciplinary evidence on how marketing has harmed consumers, and most critically to offer thoughts on how marketing might instead make well-being a central component of value creation. The latter would benefit multiple stakeholders: firms would gain loyal customers and authentic brand advocates; policy makers would face less pressure to legislate consumer protections; and society would benefit from having consumers who in an enriched state of thriving. The planet would itself benefit from more decisions by consumers and companies that protect the environment. Well-being is also a source of theoretical and pedagogical advance for the marketing discipline.

We structure our ideas around the PACT framework illustrated in Fig. 1: product and value design, choice architecture and interfaces, communication and value creation, and targeting and relationship building. The left-hand side of Fig. 1 uses the framework to indicate where marketing has harmed well-being. We argue that the same managerial levers that have created harm to well-being can be reoriented to create, amplify, and govern it. In doing so, we

✉ Andreas B. Eisingerich
a.eisingerich@imperial.ac.uk

Deborah J. MacInnis
macinnis@marshall.usc.edu

Barbara Duffek
bduffek@gsu.edu

Winze Tam
winze.tam21@imperial.ac.uk

[1] Imperial College Business School, South Kensington Campus, Exhibition Road, London SW7 2AZ, UK

[2] Professor Emeritus of Marketing and former Charles L. and Ramona I. Hilliard Professor of Business Administration, Marshall School of Business, University of Southern California, California, USA

[3] Georgia State University, J. Mack Robinson College of Business, 35 Broad St NW, Atlanta, GA 30303, USA

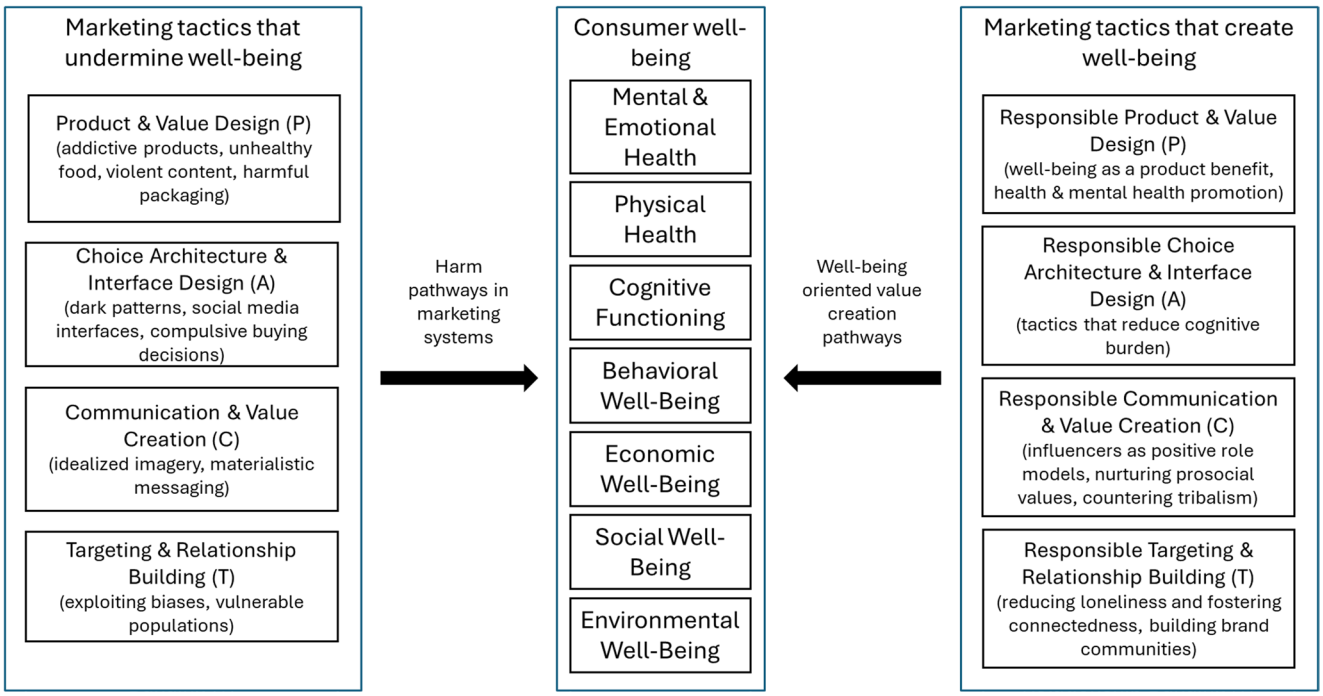

Fig. 1 The PACT framework: How marketing systems can undermine and create consumer well-being

reposition consumer well-being as central to value creation and competitive strategy. We end with conclusions and future research questions.

Marketing as undermining (harming) consumer well-being: The PACT framework

Some marketing practices not only fail to enhance consumer well-being but diminish it, producing harm. We define harm as a sustained negative drop in one or more well-being dimensions. Table 1 presents a thin slice of this evidence. We organize this knowledge using the PACT framework noted in Fig. 1, locating each documented harm within the marketplace lever through which it operates; Product and value design, Choice architecture and interfaces, Communication and value creation, Targeting and relationship building. The four short subsections that follow briefly synthesize the dominant issues within each element of the PACT framework. Table 1 expands on these issues, noting relevant practices/tactics, mechanisms and examples, well-being dimensions harmed, and key sources.

P—product and value design

At the product level, harm arises when product attributes are deliberately engineered against consumer well-being by maximizing consumption or short-term appeal while displacing physical health, emotional stability, financial security, and environmental sustainability. The harms span substances that produce dependency, such as opioids, alcohol, tobacco, and gambling, as well as ultra-processed foods, violent entertainment, and forever chemicals embedded in everyday packaging. What unites these categories is that the well-being trade-off is built into the product itself, not into how it is sold or to whom, so the mechanisms of harm operate at scale and persist across distribution channels and generations of consumers. As Table 1 indicates, these product and value design options reduce many of the types of well-being dimensions noted in Fig. 1. For example, hyperpalatable ultra-processed foods are linked to physical harms in the form of cancer, cardiovascular disease, and GI diseases. Weight gain from such products creates emotional harm in the form of drops in self-esteem and heightened body dysmorphia. The economic costs associated with these harms are striking. For example, obesity-related costs surpass $1.4 trillion annually in the USA alone (Lopez & Sagynbekov (2020).

A—choice architecture and interface design

At the choice architecture and interface design level, harm arises when choice architecture is engineered to bypass deliberation rather than support it. Three patterns dominate Table 1. The first are engagement-maximizing social-media

Table 1 Marketing practices harming consumer well-being

PACT Lever	Practice / Tactic	Mechanism & Examples	Well-Being Dimensions Harmed
P — Product & Value Design	Addiction engineering: opioids	Bonus-driven sales incentives, physician opinion leaders, and advertising that downplays addiction risk (Van Zee, 2009; Chisholm-Burns et al., 2019); ~25% of chronic-pain patients misuse, ~10% develop opioid use disorder.	Physical (overdose, premature death; Hébert & Hill, 2024); Emotional (depression; Sullivan, 2018); Social (stigma; Wakeman & Rich, 2018); Economic (>$1T in U.S. costs in recent years; Florence et al., 2021).
P	Addiction engineering: alcohol	Sweetened/flavored beverages mask taste; product and channel design encourages youth initiation, heavy drinking, and overall use (Pechmann et al., 2005; Noel et al., 2020).	Emotional (depression); Physical (injury, chronic disease, premature death); Social (family conflict, divorce); Economic (job loss) (Boden & Fergusson, 2011).
P	Addiction engineering: tobacco	Attractive advertising and media portrayals; bronchodilators, sugars, flavors, ammonia, and menthol increase addictiveness; youth-oriented marketing (Pechmann & Knight, 2002).	Physical (cancer, stroke, heart disease, reproductive harm, premature death) (National Cancer Institute, 2008).
P	Addiction engineering: gambling	Variable reinforcement, immersive design, ergonomics, cash-access systems, and ambient cues; expansion via online gambling and sports betting (Schull, 2014).	Cognitive (illusions of easy wealth, obscured odds; Schull, 2014); Economic (severe loss); Social (relationship dissolution) (Hodgins et al., 2011).
P	Compulsive online retail	Online retail environments enabling repeated, low-friction purchasing	Emotional (distress); Social (conflict); Economic (compulsive buying) (Faber & O'Guinn, 1992)
P	Nutrient-compromised food	Hyper-palatable ultra-processed foods; aggressive advertising, in-game placements, low prices, limited healthy access in low-income communities (Chandon & Wansink, 2012; Harris et al., 2009).	Physical (obesity, cancer, CVD, GI disease, mortality; Lane et al., 2024); Emotional (self-esteem, body dysmorphia, weight stigma; Puhl & Heuer, 2010); Economic (combined U.S. costs >$1.4T/yr; Lopez & Sagynbekov, 2020).
P	Breast-milk substitutes	Framing formula as modern, convenient, or scientifically superior; reshaping "good parenting" norms; undermining maternal confidence (Rollins et al., 2023; Piwoz & Huffman, 2015).	Physical (lost immunological/developmental benefits to infant; Victora et al., 2016); Emotional (maternal depression on early cessation; Ystrom, 2012).
P	Graphic entertainment (violent content)	Violent content in TV, film, video games, music, and comics (Bushman & Huesmann, 2006).	Behavioral (aggression; Anderson et al., 2010); Emotional (aggressive thoughts and feelings; Bushman & Huesmann, 2006); Social (desensitization to harm to others; Anderson et al., 2017).
P	Environmentally unfriendly products / packaging	PFAS ("forever chemicals") in takeout containers, cosmetics, and cleaners (Sunderland et al., 2019); planned obsolescence (40 M+ tons of e-waste/yr; Bisschop et al., 2022); fast fashion (water use, soil erosion, chemical pollution, microplastics; Aponte et al., 2024).	Physical (cancer, congenital disability, organ disease from PFAS; Sunderland et al., 2019); Environmental (water/soil contamination, e-waste, microplastics; Aponte et al., 2024; Bisschop et al., 2022); Behavioral (reduced pro-environmental behavior from marketing-driven materialism; Kilbourne & Pickett, 2008).
A — Choice Architecture & Interface Design	Engagement-maximizing social media	Algorithms exploiting fear of missing out, social validation, and variable reinforcement to extend session time (Bhargava & Velasquez, 2021).	Physical (sleep); Emotional (low self-esteem, loneliness, depression, anxiety; Twenge et al., 2018; Braghieri et al., 2022); Social (relationships, job performance, bullying, disinformation, polarization; Diaz Ruiz & Nilsson, 2023); overall welfare effects (Allcott et al., 2020).
A	Cognitive-bias exploitation	Anchoring, availability heuristic, representativeness, present bias (e.g., BNPL), scarcity / loss-aversion framing (Nill & Schibrowsky, 2007).	Cognitive (impaired decision quality; Nill & Schibrowsky, 2007); Economic (e.g., predatory lending uptake under disclosure failure).
A	Manipulative design / dark patterns	Hidden costs, default opt-ins, forced continuity, obstructive cancellation, confirmshaming, scarcity cues, social-proof manipulation, privacy Zuckering, gamified loops, nagging — see Table 2 (Mathur et al., 2019; Narayanan et al., 2020).	Cognitive (framing/anchoring/defaults; Acquisti et al., 2015); Emotional (FOMO, frustration, anger); Behavioral (rushed action, inertia traps); Economic (undisclosed fees) (Luguri & Strahilevitz, 2021).
C — Communication & Value Creation	Materialistic messaging	Idealized consumption imagery elevating materialism as a value (Chaplin & John, 2007).	Economic (credit overuse; Richins, 2011); Economic (compulsive buying; Dittmar et al., 2014); Emotional (lower life satisfaction; Burroughs & Rindfleisch, 2002); Emotional (loneliness; Pieters, 2013); Social (parent–child conflict; Buijzen & Valkenburg, 2003); Environmental (weaker pro-environmental attitudes/behaviors; Hurst et al., 2013).

Table 1 (continued)

PACT Lever	Practice / Tactic	Mechanism & Examples	Well-Being Dimensions Harmed
C	Polarizing messaging	Algorithmic curation, engagement optimization, ideologically aligned channels; outrage-driven incentives; misinformation and propaganda (Diaz Ruiz & Nilsson, 2023).	Emotional (anxiety, anger, depression, disgust; Weber et al., 2021); Cognitive (confirmation bias, motivated reasoning); Social (strained relationships, cross-partisan avoidance, eroded institutional trust; Iyengar et al., 2019).
T — Targeting & Relationship Building	Targeting children	Television, packaging, video games, TikTok, branded entertainment, and child influencers (De Veirman et al., 2019).	Cognitive (limited understanding of persuasive intent in children under 8; John, 1999); Behavioral (purchase requests; exposure to harmful product categories; John, 1999; Buijzen & Valkenburg, 2003).
T	Targeting older consumers	Deceptive advertising, high-pressure sales, and predatory financial products; exploiting reduced processing speed and affective reliance (Yoon et al., 2009; Williams & Drolet, 2005); higher baseline trust.	Cognitive (impaired evaluation of misleading advertising; Gaeth & Heath, 1987); Economic (fraud, predatory finance; James et al., 2014); Emotional (loneliness exploited by telemarketing fraud; Alves & Wilson, 2008).

interfaces that exploit fear of missing out, provide social validation, and utilize variable reinforcement (Bhargava & Velasquez, 2021). These social media interfaces have been shown to create physical, emotional and social harms as described in Table 1. Large-scale field experiments and quasi-experimental studies now document measurable effects on welfare and mental health (Allcott et al., 2020; Braghieri et al., 2022). Second are pricing tactics, such as presenting high prices as anchors to make lower prices seem attractive, together with framing and timing devices. These tactics exploit familiar cognitive biases like anchoring and adjustment and loss aversion (Nill & Schibrowsky, 2007), thereby harming decision quality. Unlike harms at the product level, interface harms are largely invisible in the moment of decision, the same interface that delivers the service also shapes which options feel salient, which costs feel acceptable, and which choices feel reversible. Third are dark patterns (described separately in Table 2) that obscure costs, default users into commitments, or make exit costly (Narayanan et al., 2020). In addition to cognitive harm, such patterns have been shown to create emotional, behavioral, and economic harm (Table 1).

C—communication and value creation

At the communication level, harm arises when messaging shapes values and worldviews in ways that erode psychological and social well-being. Two streams stand out in Table 1. Materialistic messaging, along with idealized consumption imagery and status appeals, are linked to credit overuse (Richins, 2011), compulsive buying (Dittmar et al., 2014), loneliness (Pieters, 2013), lower life satisfaction (Burroughs & Rindfleisch, 2002), weaker pro-environmental attitudes (Hurst et al., 2013), and parent–child conflict (Buijzen & Valkenburg, 2003; Chaplin & John, 2007). Polarizing messaging, algorithmic curation, outrage-driven engagement, and targeted misinformation (Diaz Ruiz & Nilsson, 2023), fuels affective polarization, confirmation bias, and avoidance of cross-partisan interaction (Iyengar et al., 2019; Weber et al., 2021). Both reflect communication systems optimized for engagement at the expense of the audience's longer-term well-being. What makes these harms distinctive is that their effects accumulate across exposures: any single ad or post is a small intervention, but years of materialistic framing or months of algorithmically curated outrage reshape goals, expectations, and group identities in ways that are difficult to reverse.

T—targeting and relationship building

At the targeting level, harm arises when marketing exploits asymmetries in cognitive resources, persuasion knowledge, or social context. Table 1 highlights two age groups for which the evidence is the most extensive. Children under eight lack the cognitive resources to fully recognize persuasive intent (John, 1999), yet they are intensively targeted across television, packaging, video games, and platforms such as TikTok, often via child influencers (De Veirman et al., 2019). Older consumers—who face slower information processing (Yoon et al., 2009), greater reliance on affective cues (Williams & Drolet, 2005), higher baseline trust, and elevated loneliness (Alves & Wilson, 2008), are disproportionately exposed to deceptive advertising (Gaeth & Heath, 1987), high-pressure sales and predatory financial products, and fraud (James et al., 2014).

Marketing as a facilitator of well-being

The issues documented in the preceding sections are not an indictment of marketing's potential but a stark reminder of its power; a power carrying profound ethical responsibilities involving well-being. The marketing discipline may stand at an inflection point: by leveraging its understanding of human behavior, communication efficacy, and system design, marketing has the potential to transcend traditional

Table 2 Common manipulative design elements

Type of Manipulative Design	Meaning / Mechanism	Common Contexts of Use
Hidden Costs	Extra fees revealed late in checkout after commitment momentum has formed	Travel booking, ticketing sites, e-commerce checkout flows
Default Opt-Ins	Preselected boxes or settings that enroll users in purchases, subscriptions, or data sharing	Software installs, newsletter signups, privacy settings, insurance add-ons
Forced Continuity	Free trials that automatically convert to paid subscriptions with limited reminders	Streaming services, apps, SaaS platforms, digital news subscriptions
Obstructive Cancellation ("Roach Motel")	Easy sign-up paired with difficult or confusing cancellation procedures	Gyms, subscription boxes, telecom services, online platforms
Confirmshaming	Opt-out language framed to induce guilt or embarrassment (e.g., "No thanks, I don't care about saving money")	Pop-ups, email capture forms, donation prompts, retail overlays
Scarcity / Urgency Cues	Countdown timers, low-stock alerts, or "only 2 left" messages to trigger impulsive decisions	Travel sites, event ticketing, flash sales, e-commerce product pages
Social Proof Manipulation	Inflated or ambiguous claims about popularity ("10,000 people bought today") to create herd pressure	Online retail, app stores, course platforms, marketplaces
Misdirection / Visual Interference	Design emphasizes the firm-preferred option while hiding or visually minimizing alternatives	Cookie consent banners, software installers, pricing pages
Bundled Consent	Users must agree to multiple data uses or terms at once, limiting meaningful choice	App onboarding, account creation, platform ecosystems
Privacy Zuckering	Interface nudges users toward greater data disclosure than intended	Social media, mobile apps, smart devices, loyalty programs
Gamified Engagement Loops	Rewards, streaks, and notifications designed to prolong usage beyond user intentions	Social media, mobile games, fitness apps, productivity tools
Nagging / Repeated Interruptions	Persistent prompts or notifications pressuring users to take a desired action	Mobile apps, operating systems, freemium services

commercial boundaries to become a significant force for well-being promotion. This requires embracing a broader conceptualization of value creation explicitly incorporating well-being as a core outcome—not just an opportunity but a responsibility inherent in the field's capacity to shape societal well-being.

Driving well-being through the PACT levers

We now turn to the same four PACT levers, demonstrating how *each mechanism that can harm consumers can also be deliberately reoriented toward enhancing well-being* (Fig. 1). This parallel structure highlights that the very tools through which marketing undermines physical and mental health, cognitive functioning, financial security, social connection, and environmental sustainability can instead promote these outcomes.

P—responsible product and value design

From addiction engineering to sustainable engagement Where addiction engineering exploits variable reinforcement, immersive design, and physiological manipulation to maximize consumption, responsible product design implements features that support self-regulation and healthier usage patterns. For digital services that optimize for continuous engagement through autoplay, infinite scroll, and push notifications, well-being–oriented design introduces usage reminders, time dashboards, and friction-based "pause points." Features such as Apple's Screen Time and YouTube's "Take a Break" notifications represent early steps, though their effectiveness depends on whether they function as genuine interventions rather than symbolic signals.

For products with inherent addiction potential, responsible design entails reformulation, transparent labeling, and honest risk communication, rather than additives that increase dependency or messaging that obscures harm. This contrast highlights a central choice for marketers: engineer for maximum consumption or for sustainable, well-being–compatible use. Interventions such as self-exclusion programs (e.g., GAMSTOP), timed "reality checks," and spending caps demonstrate that design can reduce harmful consumption (Gainsbury, 2014). A further barrier in addressing addiction-related harm is access to support systems. Marketing can help bridge this gap by connecting individuals with credible resources (hotlines, therapy platforms, and community support) thereby reducing information asymmetry and simplifying access, particularly for vulnerable or geographically isolated populations. Increasingly, digital platforms surface

crisis resources in response to relevant queries, illustrating how design can lower barriers to professional support.

From nutrient-compromised to health-promoting food Where the harm section documented ultra-processed foods engineered for hyper-palatability, aggressive advertising to children, and limited access to healthy options, responsible product design prioritizes nutritional value alongside taste (Chandon & Indaburu, 2026). This includes reformulating products to reduce sugar, sodium, and harmful additives, implementing clear front-of-package labeling, and expanding access in underserved communities. For example, RXBAR snack bars emphasize simple, minimally processed ingredients, such as egg whites, nuts, dates, and cacao, using natural sweeteners instead of refined sugars. Olipop positions itself as a healthier soft drink by combining good taste with gut health benefits, using plant-based ingredients (e.g., cassava, chicory, and botanicals) to deliver high fiber and low sugar compared to traditional sodas.

Social marketing and behavioral insights offer robust frameworks for health promotion. Marketing campaigns can normalize preventative health practices by leveraging gamification (making healthy routines engaging; Pereira et al., 2014), social proof (demonstrating that peers engage in healthy behaviors; Salmon et al., 2015), and nudges (small design changes guiding better choices; Thaler & Sunstein, 2008). Brands like Adidas and Fitbit have embedded goal setting, progress visualization, and peer challenges to encourage physical activity (Jang & Kim, 2025), while mindfulness platforms like Headspace and Calm use streaks and reminders to promote meditation and sleep routines.

From harmful content to well-being–promoting experiences Where the harm section documented violent content linked to aggression and desensitization, responsible entertainment design cultivates well-being. While general internet use can erode resilience, curated content, immersive experiences like well-designed video games can enhance childlike wonder and reduce burnout (Tam et al., 2025). These findings suggest that entertainment, publishing, and digital content can be designed as mental health–promoting interventions while still achieving commercial goals (Halbrook, O'Donnell, Msetfi 2019).

From environmental harm to sustainable design Where the harm section documented forever chemicals, non-recyclable packaging, planned obsolescence, and fast fashion's environmental toll, responsible product design embeds sustainability from the outset. Giesswein exemplifies this approach: in addition to virgin wool items and organic cotton, Giesswein offers shoes made from biodegradable mushroom leather, fast-growing eucalyptus fibers from FSC®-certified forests and recycled PET plastic. Stella McCartney has advanced ethical materials such as vegan leather, demonstrating that luxury fashion can operate without fur, leather, or feathers, while IKEA integrates recycled materials and energy-efficient design, aiming to become climate-positive. Beyond these examples, a responsible approach can embed biophilic principles into the customer experience, through redesigning retail and digital touchpoints to reduce environmental impact and clearly communicate it. Marketing can incorporate natural elements and shift messaging from nature as a resource to nature as a relationship, emphasizing stewardship and reciprocity (Bhattacharya et al., 2026; Dahl et al., 2025; Kellert et al., 2008; Plangger et al., 2025) and help promote effective technologies for eliminating waste (Chandy et al., 2021; De Ruyter et al., 2022; Grewal et al., 2024). Crucially, such claims must be backed by verifiable corporate actions, supply chain practices, and internal operations.

A—responsible choice architecture and interface design

From harmful to meaningful engagement with social media Social media companies have an obligation to protect consumers by promoting authentic, engaging social connections that reduce fatigue and loneliness. Both Apple (iOS 12+) and Google (Android) have embedded digital wellness tools, app usage dashboards, time limits, Downtime, Focus Mode, and Bedtime Mode, to support intentional use. The mindfulness-based One Sec app goes further, prompting users to pause before opening distracting apps, interrupting automatic scrolling and encouraging deliberate engagement.

Loneliness is a public health crisis with mortality risks comparable to smoking (Holt-Lunstad et al., 2015). Marketing's understanding of human motivation, community formation, and experience design offers unique potential to mitigate isolation. Brand communities and purpose-driven marketing can foster meaningful connections. Responsible community-building prioritizes interaction quality over sales: moderated peer support spaces, offline meet-ups, and norms that reward mutual help rather than consumption.

From manipulative to responsible dark patterns Whereas Table 2 documented hidden costs, forced continuity, confirmshaming, and privacy Zuckering, Table 3 presents the mirror image: *responsible design patterns* that protect consumer autonomy and enhance decision-making. For instance, Warby Parker disrupted the eyewear industry with a single transparent price point ($95 for prescription glasses, including frames

Table 3 Responsible design patterns (countering dark patterns)

Dark Pattern	Responsible Alternative	Implementation	Well-Being Dimension Enhanced
Hidden Costs	Transparent Pricing	All fees visible from first interaction; total cost shown before checkout	Cognitive, Economic
Default Opt-Ins	Informed Opt-Ins	No pre-checked boxes; clear explanation of each option's implications	Cognitive, Behavioral
Forced Continuity	Proactive Notification	Clear trial end dates; reminder emails before conversion; easy cancellation	Economic, Emotional
Obstructive Cancellation	Symmetric Effort	Cancellation as easy as sign-up; single-click unsubscribe	Behavioral, Emotional
Confirmshaming	Neutral Language	Respectful opt-out wording without guilt induction	Emotional, Cognitive
Scarcity/Urgency Cues	Honest Availability	Accurate stock and timing information without artificial pressure	Cognitive, Emotional
Social Proof Manipulation	Verified Social Proof	Authentic reviews with verified purchase badges; transparent metrics	Cognitive, Social
Visual Interference	Equal Visual Weight	All options equally visible; decline buttons same size as accept	Cognitive, Behavioral
Privacy Zuckering	Privacy by Default	Most protective privacy settings as default; clear data use explanations	Cognitive, Social
Gamified Engagement Loops	Mindful Engagement	Usage dashboards; natural stopping points; opt-out from notifications	Behavioral, Emotional, Physical

and lenses), eliminating hidden fees and helping grow from zero to $1 billion in six years, showing that clarity builds trust and drives results. Similarly, Everlane provides detailed cost breakdowns (materials, labor, transport, markup), building loyalty through transparency, while Honest By goes further by disclosing all costs and suppliers for each garment. Beyond pricing, Zappos demonstrates that reducing friction through hassle-free returns and clear policies strengthens customer relationships rather than eroding value.

From cognitive burdens to cognitive enhancements Cognitive overload, caused by excessive information, poor design, or unclear processes, exacerbates stress and diminishes well-being (Ji, 2023). Responsible choice architecture simplifies decision-making and reduces unnecessary friction (Johnson et al., 2012): clear and intuitive navigation, upfront cost disclosure, and transparent terms of service. Calming aesthetics, such as balanced color palettes, minimalistic layouts, and intuitive visual cues, can reduce anxiety in digital and physical environments. Physical retail spaces can incorporate biophilic design elements (natural light, greenery, water features) to promote calm and improve mood (Kellert et al., 2008). Digital environments can adopt accessibility standards supporting neurodiverse users and those with sensory sensitivities: customizable contrast settings, simplified content modes, and reduced visual clutter (W3C, 2025).

From exploiting cognitive biases to supporting better decisions Where the harm section documented anchoring, framing effects, and present bias exploitation, responsible architecture uses these same insights to support consumer welfare. CAPiTA, for example, not only developed the industry's first clean energy manufacturing facility, using sustainable materials in its localized supply chain, but also offers a user-friendly "Board Finder" that helps people find the snowboard that best meets their needs and snowboarding style vs. upselling and pushing people towards the most expensive board available. Further, product design can also address cognitive needs through clear labeling and readable fonts, step-by-step interfaces, and curated choices that reduce decision fatigue rather than overwhelm users. Embedding these principles improves usability and inclusivity while enhancing mental well-being and quality of life.

C—responsible communication and value creation

From materialistic messaging to purpose-driven communication Where materialistic messaging contributes to credit overuse, compulsive buying, reduced life satisfaction, and environmental harm (Dittmar et al., 2014; Hurst et al., 2013; Richins, 2011), responsible communication shifts emphasis from acquisition to experience: from having to being. This does not require abandoning commercial goals; rather, it positions products as means to meaningful outcomes such as personal growth, relationships, and societal or environmental contribution. In practice, this involves reframing value away from status and ownership toward use, impact, and lived experience. Such messaging reduces the psychological pressure of material accumulation while still driving engagement by aligning consumption with consumers' intrinsic goals. Over time, this shift can mitigate

the well-being costs of materialism and foster more durable brand relationships grounded in purpose, authenticity, and shared values. The Andechs Monastery brewery has been combining Benedictine brewing tradition with a focus on select raw materials, slow brewing, uncompromising quality and responsible drinking "enjoyment for the body and soul" philosophy with the latest, sustainable brewing technology since 1455.

From polarizing to bridging communication Where algorithmic curation and engagement optimization create echo chambers, fueling anxiety, anger, confirmation bias, and social fragmentation (Weber et al., 2021), responsible platform design and marketing communication can counter tribalism. This includes exposing users to diverse perspectives, creating content that emphasizes shared values, and positioning brand (and political) missions around collective well-being. By moving beyond stereotypes in imagery, messaging, and design, marketing can highlight shared vulnerabilities and reduce "othering." Framing brand and candidate positions in terms of collective well-being (e.g., shared value frameworks) further reinforces these empathic connections.

Influencers as positive role models In communications, influencer marketing illustrates both the creative potential and ethical responsibility of marketing. By humanizing brands and reaching audiences at scale, influencers act as powerful agents of market creation (Beichert et al., 2024), requiring careful partner selection, transparency, and avoidance of exploiting consumer vulnerabilities. When used responsibly, influencer marketing can enhance consumer well-being. Perceived authenticity enables influencers to shape attitudes, norms, and behaviors (Duffek et al., 2025), constructing aspirations and consumption patterns. This influence can foster connection and prosocial behavior, but also perpetuate unrealistic ideals and overconsumption. A positive example is Simone Biles' partnership with Athleta, which emphasized mental health and well-being. When Biles withdrew from the Tokyo Olympics due to mental exhaustion, Athleta publicly stated, "We stand by Simone and support her well-being both in and out of competition. Being the best also means knowing how to take care of yourself." (NPR 2021).

T—responsible targeting and relationship building

From targeting children to protecting them Responsible targeting requires heightened protection. This includes age-gating, avoiding promotion of unhealthy products, clearly separating content from advertising, and designing for children's developmental needs rather than exploiting vulnerabilities across various media platforms. For example, Nintendo Switch parent controls enables parents to monitor and limit usage, restrict content, and manage GameChat features and access. Marketing can also serve children positively, through promoting healthy foods, educational content, and prosocial behaviors using the same engaging techniques currently used to sell less healthy products.

From harming to supporting older consumers Where older consumers face heightened vulnerability to deceptive advertising, high-pressure sales, and fraud (James et al., 2014), responsible targeting implements protections (Kannan et al., 2026), such as simplified interfaces, extended decision windows, and fraud safeguards. Marketing can also address loneliness, which increases susceptibility to fraud (Alves & Wilson, 2008), through community-building and connection platforms tailored to older users. Several examples illustrate this approach. The American Association for Retired Persons (AARP) supports older consumers through resources on fraud prevention, healthcare, finances, and employment, alongside member benefits. OXO Good Grips designs products with accessible features (e.g., easier grips) to support users with arthritis or low vision. GrandPad, a tablet designed for older users, offers simple navigation, readable interfaces, and loud speakers. GrandieChat, an integrated AI voice assistant, helps older users ask questions and get answers, while its closed network blocks spam and scams.

From targeting to empowering economically vulnerable populations Financial inclusion initiatives can leverage marketing to connect underserved populations with responsible financial products, literacy resources, and pathways to economic stability, using targeting for empowerment rather than exploitation. Fintech company Chime exemplifies this approach, positioning itself as an alternative to predatory services. Its features include fee-free banking, SpotMe overdraft protection (up to $200), early paycheck access, high-yield savings, and credit-building tools. In 2025, Chime launched Chime Workplace, offering employers tools for early wage access, savings, and credit building. The company reports that 97% of members experience financial progress using its services.

Conclusion

Taking consumer well-being seriously is not philanthropy at the expense of profit; it is enlightened self-interest, intellectual integrity, and ethical leadership. Sustainable business success

is inextricably linked to the flourishing of consumers and communities, and firms that embed well-being into their strategies are better positioned to build durable relationships, strengthen brand equity, and generate long-term returns. The well-being of marketers themselves is part of this argument: survey evidence suggests they are among the least likely to believe their work benefits society, and individuals who struggle to find meaning in their work are less able to enrich the lives of others. Marketing possesses unparalleled tools to understand and influence human behavior. It is time to harness that power deliberately to enhance, rather than diminish, the well-being of consumers, communities, and the discipline itself.

What a shift to well-being means

Traditional conceptualizations of customer value have emphasized functional benefits and economic utility. We propose broadening value to explicitly include well-being dimensions: physical health, mental health, financial security, social connection, engagement with nature, and sense of purpose. Integrating these dimensions enables firms to co-create value enhancing not only transactional outcomes but also customers' long-term quality of life.

A well-being–oriented marketing agenda requires embedding well-being into managerial decision-making rather than treating it as a peripheral outcome. Well-being metrics should be tied to managerial actions, organizational choices, and market structures, shifting focus beyond short-term KPIs toward longitudinal outcomes such as reduced stress, financial health, life satisfaction, and sustainable behaviors. In this regard, effective measurement scales may be developed (Hulland et al., 2026) and "Well-Being Return on Investment" (WBROI) could serve as a complementary dashboard metric; given measurement challenges, firms can operationalize WBROI using observable proxies such as interaction quality: capturing the depth of engagement and meaningful exchanges that enhance connection and trust (Arnould & Thompson, 2026; Duffek et al., 2025; Henderson et al., 2026; Vargo & Wieland, 2026).

The above issues notwithstanding, it is also clear that additional research on consumer well-being is needed. We outline future research directions in Table 4.

Table 4 Future research directions

PACT Lever	Future Research Questions
P — Product & Value Design	• When do well-being–oriented product features (e.g., usage limits, transparency cues) meaningfully change consumer behavior versus being ignored or backfiring?
	• Under what conditions do consumers reward versus penalize firms for reformulating products to be healthier or more sustainable?
	• How do alternative consumption models (e.g., delayed delivery, subscription redesign) shift perceived value versus inconvenience?
A — Choice Architecture & Interface Design	• Do non-manipulative interfaces reduce short-term conversion but increase long-term customer value and trust?
	• What level of friction (e.g., reminders, confirmations) improves consumer decision quality without triggering reactance?
	• How can algorithms be optimized for consumer well-being rather than engagement, and what are the trade-offs?
	• When do consumers perceive nudges as helpful versus manipulative?
	• How does cognitive load in digital environments affect financial, health, and privacy decisions in real-world settings?
C — Communication & Value Creation	• When does purpose-driven or sustainability messaging meaningfully change behavior versus functioning as mere signaling?
	• Can marketing communications reduce polarization and foster shared identity without sacrificing engagement?
	• What metrics can capture "well-being return on marketing" beyond traditional engagement or sales outcomes?
T — Targeting & Relationship Building	• How can firms ethically identify and target vulnerable consumers without exploiting them?
	• What interventions reduce susceptibility to persuasion among children and older consumers in digital environments?
	• When does personalization enhance versus undermine consumer autonomy and well-being?
	• Can marketing-driven financial inclusion tools (e.g., fintech, credit-building products) improve long-term consumer outcomes?
	• How do brand communities influence loneliness, belonging, and sustained engagement over time?

Acknowledgements The authors thank Charles H. Noble and Stephanie M. Noble for their excellent insights and suggestions.

Supporting data Not applicable (this is a conceptual/theoretical paper).

Funding No external funding is to be reported.

Declarations

Ethics approval Approval obtained at the Departmental Level (Analytics, Marketing & Operations) at Imperial College Business School, Imperial College London.

Competing interests There are no competing interests to report.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

Acquisti, A., Brandimarte, L., & Loewenstein, G. (2015). Privacy and human behavior in the age of information. *Science*, *347*(6221), 509–514.

Allcott, H., Braghieri, L., Eichmeyer, S., & Gentzkow, M. (2020). The welfare effects of social media. *American Economic Review*, *110*(3), 629–676.

Alves, L. M., & Wilson, S. R. (2008). The effects of loneliness on telemarketing fraud vulnerability among older adults. *Journal of Elder Abuse & Neglect*, *20*(1), 63–85.

Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. R., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in eastern and western countries: A meta-analytic review. *Psychological Bulletin*, *136*(2), 151–173.

Anderson, C. A., Bushman, B. J., Bartholow, B. D., Cantor, J., Christakis, D., Coyne, S. M., et al. (2017). Screen violence and youth behavior. *Pediatrics*, *140*(Suppl. 2), S142–S147.

Aponte, O. N., Hernández, G. J., Torres, A. V., & Smith, E. D. (2024). Fast fashion consumption and its environmental impact: A literature review. *Sustainability: Science Practice and Policy*, *20*(1), 2381871.

Arnould, E. J., & Thompson, C. J. (2026). Re-imagining CCT for crisis times: Theorizing collaborative consumer culture. Journal of the Academy of Marketing Science, forthcoming.

Beichert, M., Bayerl, A., Goldenberg, J., & Lanz, A. (2024). Revenue generation through influencer marketing. *Journal of Marketing*, *88*(4), 40–63.

Bhargava, V. R., & Velasquez, M. (2021). Ethics of the attention economy: The problem of social media addiction. *Business Ethics Quarterly*, *31*(3), 321–359.

Bhattacharya, C. B., Sen, S., Hildebrand, D., & Lindrud, K. (2026). Doing better at doing good: A unifying framework for consumer responses to corporate social responsibility. Journal of the Academy of Marketing Science, forthcoming.

Bisschop, L., Hendlin, Y., & Jaspers, J. (2022). Designed to break: Planned obsolescence as corporate environmental crime. *Crime Law and Social Change*, *78*(3), 271–293.

Boden, J. M., & Fergusson, D. M. (2011). Alcohol and depression. *Addiction*, *106*(5), 906–914.

Braghieri, L., Levy, R. E., & Makarin, A. (2022). Social media and mental health. *American Economic Review*, *112*(11), 3660–3693.

Buijzen, M., & Valkenburg, P. M. (2003). The effects of television advertising on materialism, parent–child conflict, and unhappiness: A review of research. *Journal of Applied Developmental Psychology*, *24*(4), 437–456.

Burroughs, J. E., & Rindfleisch, A. (2002). Materialism and well-being: A conflicting values perspective. *Journal of Consumer Research*, *29*(3), 348–370.

Bushman, B. J., & Huesmann, L. R. (2006). Short-term and long-term effects of violent media on aggression in children and adults. *Archives of Pediatrics & Adolescent Medicine*, *160*(4), 348–352.

Chandon, P., & Indaburu, A. (2026). When and how simplified nutrition labels improve fast-food choices. *Journal of the Academy of Marketing Science*, *54*, 490–512.

Chandon, P., & Wansink, B. (2012). Does food marketing need to make us fat? A review and solutions. *Nutrition Reviews*, *70*(10), 571–593.

Chandy, R. K., Johar, G. V., Moorman, C., & Roberts, J. H. (2021). Better marketing for a better world. *Journal of Marketing*, *85*(3), 1–9.

Chaplin, L. N., & John, D. R. (2007). Growing up in a material world: Age differences in materialism in children and adolescents. *Journal of Consumer Research*, *34*(4), 480–493.

Chisholm-Burns, M. A., Spivey, C. A., Sherwin, E., Wheeler, J., & Hohmeier, K. (2019). The opioid crisis: Origins, trends, policies, and the roles of pharmacists. *American Journal of Health-System Pharmacy*, *76*(7), 424–435.

Dahl, D. W., Noble, C. H., Schreier, M., & Toubia, O. (2025). Better innovation for a better world. *Journal of Marketing*, *89*(6), 100–118.

De Ruyter, K., Keeling, D. I., Plangger, K., Montecchi, M., Scott, M. L., & Dahl, D. W. (2022). Reimagining marketing strategy: Driving the debate on grand challenges. *Journal of the Academy of Marketing Science*, *50*(1), 13–21.

De Veirman, M., Hudders, L., & Nelson, M. R. (2019). What is influencer marketing and how does it target children? A review and direction for future research. *Frontiers in Psychology*, *10*, 2685.

Diaz Ruiz, C., & Nilsson, T. (2023). Disinformation and echo chambers: How disinformation circulates on social media through identity-driven controversies. *Journal of Public Policy & Marketing*, *42*(1), 18–35.

Disabato, D. J., Goodman, F. R., & Kashdan, T. B. (2025). The hierarchical framework of wellbeing (HiFWB). *Frontiers in Psychology*, *16*, 1515423.

Dittmar, H., Bond, R., Hurst, M., & Kasser, T. (2014). The relationship between materialism and personal well-being: A meta-analysis. *Journal of Personality and Social Psychology*, *107*(5), 879–924.

Duffek, B., Eisingerich, A. B., Merlo, O., & Lee, G. (2025). Authenticity in influencer marketing: How can influencers and brands work together to build and maintain influencer authenticity? *Journal of Marketing*, *89*(5), 21–46.

Faber, R. J., & O'Guinn, T. C. (1992). A clinical screener for compulsive buying. *Journal of Consumer Research*, *19*(3), 459–469.

Florence, C., Luo, F., & Rice, K. (2021). The economic burden of opioid use disorder and fatal opioid overdose in the United States, 2017. *Drug and Alcohol Dependence*, *218*, 108350.

Gaeth, G. J., & Heath, T. B. (1987). The cognitive processing of misleading advertising in young and old adults: Assessment and training. *Journal of Consumer Research*, *14*(1), 43–54.

Gainsbury, S. M. (2014). Review of self-exclusion from gambling venues as an intervention for problem gambling. *Journal of Gambling Studies, 30*(2), 229–251.GBL4. (2024). Press start to heal: Video games for mental health.

Grewal, D., Guha, A., Noble, S. M., & Bentley, K. (2024). The food production-consumption chain: Fighting food insecurity, loss, and waste with technology. *Journal of the Academy of Marketing Science*, *52*(5), 1412–1430.

Halbrook, Y. J., O'Donnell, A. T., & Msetfi, R. M. (2019). When and how video games can be good: A review of the positive effects of video games on well-being. *Perspectives on Psychological Science*, *14*(6), 1096–1104.

Harris, J. L., Pomeranz, J. L., Lobstein, T., & Brownell, K. D. (2009). A crisis in the marketplace: How food marketing contributes to childhood obesity and what can be done. *Annual Review of Public Health*, *30*, 211–225.

Hébert, A. H., & Hill, A. L. (2024). *Impact of opioid overdoses on US life expectancy and years of life lost, by demographic group and stimulant co-involvement: A mortality data analysis from 2019 to 2022* (Vol. 36, p. 100795). The Lancet Regional Health–Americas.

Henderson, C. M., Steinhoff, L., & Palmatier, R. W. (2026). Cooperation: An enduring theory of relationship marketing. Journal of the Academy of Marketing Science, forthcoming.

Hodgins, D. C., Stea, J. N., & Grant, J. E. (2011). Gambling disorders. *The Lancet*, *378*(9806), 1874–1884.

Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, *10*(2), 227–237.

Hulland, J., Sample, K. L., & Houston, M. B. (2026). Standards for scale development in marketing: Elevating the role of theory. *Journal of the Academy of Marketing Science*, *54*, 359–380.

Hurst, M., Dittmar, H., Bond, R., & Kasser, T. (2013). The relationship between materialistic values and environmental attitudes and behaviors: A meta-analysis. *Journal of Environmental Psychology*, *36*, 257–269.

Iyengar, S., Lelkes, Y., Levendusky, M., Malhotra, N., & Westwood, S. J. (2019). The origins and consequences of affective polarization in the United States. *Annual Review of Political Science*, *22*, 129–146.

James, B. D., Boyle, P. A., & Bennett, D. A. (2014). Correlates of susceptibility to scams in older adults without dementia. *Journal of Elder Abuse & Neglect*, *26*(2), 107–122.

Jang, S., & Kim, M. (2025). Digital fitness revolution: User perspectives on Fitbit's role in health management. *Behavioral Sciences*, *15*(2), 231.

Ji, X. (2023). The negative psychological effects of information overload. *BCP Education & Psychology*, *9*, 250–255.

John, D. R. (1999). Consumer socialization of children: A retrospective look at twenty-five years of research. *Journal of Consumer Research*, *26*(3), 183–213.

Johnson, E. J., Shu, S. B., Dellaert, B. G. C., Fox, C., Goldstein, D. G., Häubl, G., Larrick, R. P., Payne, J. W., Peters, E., Schkade, D., Wansink, B., & Weber, E. U. (2012). Beyond nudges: Tools of a choice architecture. *Marketing Letters*, *23*(2), 487–504.

Kannan, P. K., Zhang, L., Zhou, D., & Grewal, D. (2026). Strategies in the silver economy: A framework and a research agenda. *Journal of the Academy of Marketing Science*, *54*, 349–358.

Kellert, S. R., Heerwagen, J., & Mador, M. (2008). *Biophilic design: The theory, science, and practice of bringing buildings to life*. Wiley.

Kilbourne, W. E., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, *61*(9), 885–893.

Lane, M. M., Gamage, E., Du, S., Ashtree, D. N., McGuinness, A. J., Gauci, S. (2024). Ultra-processed food exposure and adverse health outcomes: Umbrella review of epidemiological meta-analyses. *Bmj*, 384, e077310.

Lopez, C., & Sagynbekov, K. (2020). *Weighing down America: 2020 update*. Milken Institute.

Luguri, J., & Strahilevitz, L. J. (2021). Shining a light on dark patterns. *Journal of Legal Analysis*, *13*(1), 43–109.

Mathur, A., Acar, G., Friedman, M. J., Lucherini, E., Mayer, J., Chetty, M., & Narayanan, A. (2019). Dark patterns at scale: Findings from a crawl of 11K shopping websites. *Proceedings of the ACM on Human-Computer Interaction*, *3*(CSCW), Article81.

Narayanan, A., Mathur, A., Chetty, M., & Kshirsagar, M. (2020). Dark patterns: Past, present, and future: The evolution of tricky user interfaces. *Queue*, *18*(2), 67–92.

National Cancer Institute. (2008). *The role of the media in promoting and reducing tobacco use (Tobacco Control Monograph No. 19; NIH Publication No. 07-6242)*. U.S. Department of Health and Human Services.

Nill, A., & Schibrowsky, J. (2007). Research on marketing ethics: A systematic review of the literature. *Journal of Macromarketing*, *27*(3), 256–273.

Noel, J. K., Sammartino, C. J., & Rosenthal, S. R. (2020). Exposure to digital alcohol marketing and alcohol use: A systematic review. *Journal of Studies on Alcohol and Drugs Supplement*, (s19), 57–67.

NPR. (2021). Simone Biles' Olympic sponsors praise her for putting mental health first.

Pechmann, C., & Knight, S. J. (2002). An experimental investigation of the joint effects of advertising and peers on adolescents' beliefs and intentions about cigarette consumption. *Journal of Consumer Research*, *29*(1), 5–19.

Pechmann, C., Levine, L., Loughlin, S., & Leslie, F. (2005). Impulsive and self-conscious: Adolescents' vulnerability to advertising and promotion. *Journal of Public Policy & Marketing*, *24*(2), 202–221.

Pereira, P., Duarte, E., Rebelo, F., & Noriega, P. (2014). A review of gamification for health-related contexts. In A. Marcus (Ed.), *Design, user experience, and usability: User experience design for diverse interaction platforms and environments* (Vol. 8518, pp. 742–753). Springer. (Lecture Notes in Computer Science.

Pieters, R. (2013). Bidirectional dynamics of materialism and loneliness: Not just a vicious cycle. *Journal of Consumer Research*, *40*(4), 615–631.

Piwoz, E. G., & Huffman, S. L. (2015). The impact of marketing of breast-milk substitutes on WHO-recommended breastfeeding practices. *Food and Nutrition Bulletin*, *36*(4), 373–386.

Plangger, K., Montecchi, M., de Ruyter, K., Keeling, D. I., Scott, M. L., & Dahl, D. W. (2025). We could be heroes: Reflections on reimagining marketing strategies for a better world. *Journal of the Academy of Marketing Science*, *53*, 301–309.

Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health*, *100*(6), 1019–1028.

Richins, M. L. (2011). Materialism, transformation expectations, and spending: Implications for credit use. *Journal of Public Policy & Marketing*, *30*(2), 141–156.

Rollins, N., Piwoz, E., Baker, P., Kingston, G., Mabaso, K. M., McCoy, D., et al. (2023). Marketing of commercial milk formula: A system to capture parents, communities, science, and policy. *The Lancet*, *401*(10375), 486–502.

Salmon, S. J., De Vet, E., Adriaanse, M. A., Fennis, B. M., Veltkamp, M., & De Ridder, D. T. D. (2015). Social proof in the supermarket: Promoting healthy choices under low self-control conditions. *Food Quality and Preference*, *45*, 113–120.

Schull, N. D. (2014). *Addiction by design: Machine gambling in Las Vegas*. Princeton University Press.

Sullivan, M. D. (2018). Depression effects on long-term prescription opioid use, abuse, and addiction. *The Clinical Journal of Pain*, *34*(9), 878–884.

Sunderland, E. M., Hu, X. C., Dassuncao, C., Tokranov, A. K., Wagner, C. C., & Allen, J. G. (2019). A review of the pathways of human exposure to poly- and perfluoroalkyl substances (PFASs) and present understanding of the health effects. *Journal of Exposure Science & Environmental Epidemiology*, *29*(2), 131–147.

Tam, W., Hou, C., & Eisingerich, A. B. (2025). Super Mario Bros. and Yoshi games' affordance of childlike wonder and reduced burnout risk in young adults: In-depth mixed methods cross-sectional study. *JMIR Serious Games*, *13*, e84219.

Thaler, R. H., & Sunstein, C. R. (2008). *Nudge: Improving decisions about health, wealth, and happiness*. Yale University Press.

Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science*, *6*(1), 3–17.

Van Zee, A. (2009). The promotion and marketing of OxyContin: Commercial triumph, public health tragedy. *American Journal of Public Health*, *99*(2), 221–227.

Vargo, S. L., & Wieland, H. (2026). An update of service-dominant logic: Extending the systems turn. Journal of the Academy of Marketing Science, forthcoming.

Victora, C. G., Bahl, R., Barros, A. J. D., França, G. V. A., Horton, S., Krasevec, J., et al. (2016). Breastfeeding in the 21st century: Epidemiology, mechanisms, and lifelong effect. *The Lancet*, *387*(10017), 475–490.

W3C (2025). Making the web work. World Wide Web Consortium. https://www.w3.org/

Wakeman, S. E., & Rich, J. D. (2018). Barriers to medications for addiction treatment: How stigma kills. *Substance Use & Misuse*, *53*(2), 330–333.

Weber, T. J., Hydock, C., Ding, Y., Gardner, M., Jacob, C., Mandel, N., Sprott, D., & Van Steenburg, E. (2021). Political polarization: Challenges, opportunities, and hope for consumer welfare, marketers, and public policy. *Journal of Public Policy & Marketing*, *40*(2), 184–205.

Williams, P., & Drolet, A. (2005). Age-related differences in responses to emotional advertisements. *Journal of Consumer Research*, *32*(3), 343–354.

Yoon, C., Cole, C. A., & Lee, M. P. (2009). Consumer decision making and aging: Current knowledge and future directions. *Journal of Consumer Psychology*, *19*(1), 2–16.

Ystrom, E. (2012). Breastfeeding cessation and symptoms of anxiety and depression: A longitudinal cohort study. *BMC Pregnancy and Childbirth*, *12*, 36.

Publisher's note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.