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**AI AND CONSUMER PROTECTION: RE EXAMINING LIABILITY
FOR DEFECTIVE AND MISLEADING AI SYSTEMS**

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ABSTRACT

Artificial intelligence (AI) technologies now occupy a central position in consumer markets, shaping decision-making in areas such as finance, healthcare, e-commerce, digital services, and smart products. While these systems promise efficiency, personalization, and enhanced consumer welfare, they simultaneously introduce risks that challenge the core assumptions of consumer protection and product liability law. This article critically re-examines how the legal notion of product defectiveness should be understood in the context of AI systems capable of autonomous and adaptive behaviour. It contends that defectiveness remains the primary doctrinal tool for allocating responsibility between producers and users, but that its interpretation must be recalibrated to reflect the distribution of control over, and knowledge of, AI-related risks. Owing to algorithmic opacity, continuous learning, and limited user oversight, AI systems disrupt traditional liability frameworks by concentrating risk awareness with developers and deployers while reducing consumers' ability to detect or mitigate harm. The article analyses challenges relating to causation, evidentiary burdens, biased and discriminatory outcomes, and misleading AI practices. It advances a regulatory approach that combines existing consumer protection principles with AI-specific obligations, including risk-based regulation, transparency and explain ability requirements, and strengthened mechanisms for consumer redress. A comparative assessment of the European Union and India illustrates emerging regulatory trends and remaining gaps. The article concludes that a redefined, control-sensitive standard of defectiveness is essential to ensure accountability, consumer autonomy, and sustainable innovation.

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Introduction

Artificial intelligence has rapidly moved from experimental deployment to widespread integration within consumer-facing products and services. Automated systems now influence how consumers search for information, access credit, purchase goods, receive medical or financial advice, and interact with digital platforms. Algorithmic recommendation engines, virtual assistants, personalised pricing tools, and automated decision-making systems are increasingly embedded in everyday transactions.

From a regulatory standpoint, AI presents a dual narrative. On the one hand, it offers significant consumer benefits by reducing information costs, improving efficiency, and enabling tailored services. On the other hand, it generates complex risks that are not easily addressed by traditional legal frameworks. These include opaque decision-making, systemic bias, behavioural manipulation, and difficulties in identifying responsibility when harm occurs. The scale and speed at which AI systems operate amplify these risks and expose structural weaknesses in existing consumer protection regimes.

Consumer protection law has historically been designed to preserve consumer autonomy and ensure fair dealing in markets characterised by information asymmetry between traders and consumers. Product liability law complements this objective by allocating responsibility for harm caused by unsafe or defective products. Both frameworks are grounded in assumptions of human control, predictability, and the possibility of ex ante risk assessment. AI systems challenge these assumptions by functioning autonomously, evolving after deployment, and relying on complex data-driven processes that are largely inaccessible to consumers.

This article explores how consumer protection and product liability law should respond to AI-induced harm. It focuses on the legal concept of defectiveness as the primary mechanism for assigning liability and argues that defect standards must be reinterpreted in light of the control and risk awareness asymmetries inherent in AI systems. By doing so, the law can better align liability with those best positioned to prevent harm.

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AI refers broadly to computational systems capable of performing tasks that typically require human intelligence, including learning, pattern recognition, reasoning, and language processing. Advances in machine learning, access to large datasets, and improvements in computational power have enabled AI to move beyond laboratory settings into mass consumer markets.

AI-enabled products and services can enhance consumer welfare in multiple ways. Automated fraud detection systems improve financial security, recommendation algorithms assist consumers in navigating complex choices, and smart technologies increase convenience and efficiency in daily life. In principle, AI can support informed decision-making by processing information at a scale beyond human capacity.

Despite these advantages, AI introduces structural risks that distinguish it from traditional consumer products. Algorithmic systems may replicate or intensify social biases present in training data, leading to discriminatory outcomes. Personalisation techniques can be deployed to influence consumer behaviour in ways that undermine genuine choice. Moreover, AI systems often operate as 'black boxes', preventing consumers from understanding how outcomes affecting them are produced.

These risks are compounded by the adaptive nature of AI. Systems that continue to learn after deployment may change behaviour in ways not anticipated at the time of market entry, complicating safety assessments and regulatory oversight. When such systems cause economic or physical harm, consumers may find it difficult to identify the source of the problem or the party responsible.

Challenges for Consumer Protection Law

1. Autonomy, Information, and Power Imbalances

Consumer protection law assumes that information disclosure can mitigate power imbalances between businesses and consumers. In AI-driven environments, however, meaningful disclosure becomes increasingly difficult. Technical explanations may be incomprehensible to average consumers, while personalised interfaces can exploit cognitive vulnerabilities.

2. Misleading and Manipulative AI Practices

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AI has enhanced the sophistication of misleading commercial practices. Conversational agents may simulate human interaction without disclosure, and generative AI technologies can produce convincing synthetic content. These developments strain existing legal prohibitions on deceptive advertising and unfair trade practices, which were not designed for dynamically personalised persuasion.

3. Regulatory and Enforcement Constraints

Regulators face significant challenges in monitoring AI-driven markets. The personalised and adaptive nature of AI outputs complicates detection of systemic unfairness. Enforcement mechanisms that rely on ex post identification of wrongdoing may be inadequate where harm arises incrementally or affects consumers asymmetrically.

Product Liability and AI: Rethinking Defectiveness

1. Traditional Liability Concepts

Product liability law typically categorises defects as manufacturing defects, design defects, or failures to warn. These categories presume that products have stable characteristics that can be evaluated against safety expectations at the time of distribution.

2. The Inadequacy of Conventional Defect Standards

AI systems challenge these categories because harm may arise even when the system functions according to its design specifications. A decision-making algorithm may operate exactly as intended yet generate harmful outcomes due to biased data or unforeseen interactions with its environment. The dynamic evolution of AI systems further blurs the distinction between design and use.

3. Control and Risk Awareness as Normative Anchors

This article proposes that defectiveness in AI systems should be assessed by reference to the allocation of control and knowledge of risk. Developers and deployers possess superior insight into system architecture, training data, and potential failure modes, while consumers lack the ability to detect or correct harmful behaviour. Aligning liability with this asymmetry promotes both fairness and efficiency by incentivising risk prevention at the source.

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Causation and Evidence in AI-Related Claims

Proving causation remains one of the most significant barriers for consumers seeking redress for AI-related harm. The opacity of algorithmic processes and the proprietary nature of AI models limit access to relevant evidence. Traditional evidentiary standards may therefore place an unrealistic burden on consumers.

To address this imbalance, legal systems may need to adopt procedural adaptations, such as disclosure obligations, presumptions of defect or causation for high-risk AI systems, or burden-shifting mechanisms. Such measures would not eliminate innovation incentives but would recalibrate responsibility towards those best positioned to explain and control AI behaviour.

Comparative Regulatory Approaches

1. European Union

The European Union has emerged as a frontrunner in AI governance through its risk-based regulatory strategy. The proposed AI Act classifies AI systems according to their potential impact and imposes heightened obligations on high-risk applications, including requirements relating to transparency, human oversight, and risk management. Parallel reforms to product liability law seek to modernise defect standards and ease evidentiary burdens for claimants harmed by AI-driven products.

2. India

India's regulatory response to AI remains in a formative stage. Existing consumer protection legislation addresses unfair trade practices, misleading advertisements, and product liability in general terms but does not explicitly account for the distinctive features of AI systems. Data protection and sector-specific regulations provide partial coverage, yet the absence of AI-specific liability standards leaves consumers vulnerable and creates legal uncertainty.

Policy Recommendations

To strengthen consumer protection in AI-driven markets, this article proposes:

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1. The adoption of AI-specific defect standards grounded in control and risk awareness.
2. Mandatory transparency and explain ability obligations for high-risk AI systems.
3. Procedural mechanisms to address evidentiary asymmetries, including burden-shifting where appropriate.
4. Enhanced consumer redress mechanisms, including collective actions and specialised oversight bodies.
5. Capacity-building initiatives for regulators and adjudicatory bodies to develop AI expertise.

Conclusion

The rapid integration of artificial intelligence into consumer markets exposes the structural limits of traditional consumer protection and product liability frameworks, which were developed for predictable, human-controlled products. Although existing legal principles remain normatively valuable, they require careful reinterpretation to account for the autonomy, opacity, and adaptive behaviour of AI systems. These characteristics complicate the identification of defects, the attribution of causation, and the allocation of responsibility when consumer harm occurs.

This article has argued that redefining defectiveness with reference to relative control over, and awareness of, AI-related risks provides a principled and efficient basis for liability allocation. Such an approach aligns responsibility with those best positioned to prevent harm, while avoiding an undue shift of risk onto consumers who lack meaningful oversight or understanding of AI systems. At the same time, liability rules must be complemented by targeted regulatory interventions, including risk-based governance, transparency obligations, and procedural mechanisms that address evidentiary asymmetries.

Ultimately, ensuring effective consumer protection in AI-enabled markets requires a combination of doctrinal adaptation, proportionate regulation, and institutional capacity-building. Together, these measures can promote accountability and consumer trust without stifling innovation, thereby supporting the development of AI technologies that are not only efficient but also fair, safe, and socially legitimate.

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