



Reflections on marketing ethics in the face of the challenges posed by artificial intelligence and big data: rethinking values and rules in the digital age

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ABSTRACT

The field of marketing has evolved considerably over the years and continues to face a recurring ethical dilemma, torn between moral considerations and the pursuit of profit. At present, major companies specialising in technology-driven marketing are making extensive use of databases, data analytics, targeting based on users' past behaviour, precision

targeting and even micro-targeting. When addressing the issue of ethics and governance of artificial intelligence in the digital marketing sector, it is essential to engage first and foremost with the key players in the advertising industry. Their business model relies on the exploitation of users' personal data and the sale of advertising space. Users of these high-quality, free services have tacitly agreed to pay for them by sharing their personal data. This issue has a significant impact on global society, and it appears that further debate is needed. At a

global level, one challenge is to rethink the current social contract and strike a balance between innovation and risk mitigation. Several principles relating to the governance of artificial intelligence have been set out by organisations such as the UN, the OECD, the European Union, the World Economic Forum and the IEEE. Although these guidelines share many similarities, the question arises as to how well they are suited to specific sectors, such as digital marketing. These policies are not legally binding and can only be implemented at government level. However, marketing technologies operate on a global scale, data centres are spread across the globe, and ethical considerations are influenced by culture, which complicates the adoption of new standardised approaches.

Keywords: Marketing Ethics; Artificial Intelligence (AI); Big Data Analytics (BDA); Digital Marketing; Consumer Privacy; Data Governance; Corporate Responsibility; Algorithmic Transparency; Consumer Trust; Ethical AI.

1. Introduction

The evolution of the marketing sector over the years has led to the emergence of a profound ethical dilemma, characterised by a tension between moral considerations and the relentless pursuit of profit. In the digital age, large companies specialising in technology-driven marketing make extensive use of databases, data analytics, behavioural targeting and micro-targeting to optimise their market strategies. Whilst this approach generates significant added value, it raises important ethical questions, particularly regarding the use of users' personal data. In this context, the governance of artificial intelligence (AI) in the digital marketing sector is becoming a key issue, requiring close collaboration with the main players in the advertising industry, whose business model relies on the exploitation of this data and the sale of advertising space. Users, in exchange for free access to high-quality services, tacitly consent to the monetisation of their personal data, thereby posing a significant challenge on a global scale. This trade-off calls for an in-depth debate to rethink the current social contract and strike a balance between innovation and mitigating the risks associated with these practices. Principles of governance for AI have been set out by international organisations such as the UN, the OECD, the European Union, the World Economic Forum and the IEEE. Whilst these principles share many similarities, they raise the question of how they apply specifically to digital marketing. Transposing these ethical policies into the digital marketing sector is complex. Although they provide a framework, these guidelines are not legally binding and their implementation depends largely on governments.

However, marketing technologies operate on a global scale, with data centres scattered across the globe, and ethical considerations vary significantly from one culture to another, making the harmonisation of practices a major challenge. This literature review aims to explore the ethical considerations and corporate responsibilities associated with the use of AI and BDA in marketing, highlighting the importance of a balanced ethical approach that respects consumers' rights whilst harnessing the potential benefits of these technologies to enhance marketing strategies.

2. Literature review

The integration of Artificial Intelligence (AI) and Big Data Analytics (BDA) into marketing strategies significantly improves customer acquisition and retention, offering a competitive advantage in the digital age. Anshari et al. (2019) explore the transformative potential of these technologies in Customer Relationship Management (CRM), highlighting personalised and bespoke services through big data analysis. This approach enables businesses to adopt more aggressive marketing strategies, such as targeted push notifications, thereby enhancing the customer experience and engagement. Similarly, Bolton et al. (2018) discuss the role of technological disruptions, such as AI and the Internet of Things (IoT), in transforming marketing strategies towards a more customer-centric approach, emphasising the co-creation of superior customer experiences across digital, physical and social spheres.

Principles relating to the governance of artificial intelligence (AI) have been widely discussed and set out by several leading international organisations, each offering its own unique perspective on how AI should be developed, deployed and regulated. The United Nations (UN), through various initiatives and declarations, emphasises the importance of AI ethics, the protection of human rights and social inclusion. In 2019, the Organisation for Economic Co-operation and Development (OECD) published principles on AI, highlighting transparency, robustness and safety as essential foundations for trust in AI systems (OECD, 2019). The European Union, through its approach to excellence and trust in AI, has emphasised the need for reliable AI, whilst proposing strict regulations to guarantee the safety and fundamental rights of citizens (European Union, 2021). The World Economic Forum (WEF) has also contributed to these discussions by fostering a global dialogue on AI for the common good, with a focus on collaboration between the public and private sectors. Finally, the Institute of Electrical and Electronics Engineers (IEEE) has published ethical standards for the design and deployment of AI, emphasising

the need to prioritise human well-being in the development of AI (IEEE, 2020).

Positive psychology, as outlined by Seligman and Csikszentmihalyi (2000), has opened up new avenues in understanding human well-being, highlighting the importance of cultivating positive experiences and traits to improve quality of life. This approach is echoed in the field of marketing, where the integration of artificial intelligence (AI) promises to transform marketing strategies by enabling greater personalisation and a better understanding of consumers' needs and preferences. Davenport et al. (2020), as well as Huang and Rust (2017, 2020), discuss how AI is reshaping the future of marketing by offering technology-driven service strategies and proposing a strategic framework for its integration, highlighting AI's potential to enhance efficiency and customer engagement. Similarly, Grewal et al. (2020) consider the future of technology and marketing from a multidisciplinary perspective, recognising the growing importance of technology in creating innovative and effective marketing strategies. Furthermore, the study by Rouhani et al. (2016) on the impact of business intelligence on decision support and organisational benefits highlights the importance of data analysis in informing and optimising marketing practices.

Campbell et al. (2020) elaborate further on the widespread adoption of AI across industries, highlighting the opportunities that AI presents for creating personalised customer experiences whilst also pointing out the ethical challenges relating to privacy and trust. The work highlights the need for marketers to leverage AI to understand customer behaviour and improve engagement strategies, whilst navigating the ethical implications of data use and automation. Floridi et al. (2018) propose an ethical framework for the deployment of AI, emphasising the principles of beneficence, non-maleficence, autonomy, justice and explainability to harness the benefits of AI whilst preventing harm and promoting equity. Jobin, Ienca and Vayena (2019) analyse AI ethics guidelines, identifying key ethical principles and the challenges of translating them into practical AI governance, whilst highlighting the importance of ethical considerations in the deployment of AI technologies in marketing.

Belkhir & Elmeligi (2018) and related studies highlight the rebound effects of information and communication technologies on energy consumption and emissions, criticising the environmental sustainability of technological advances in marketing. These studies offer a critical perspective on the environmental impact of the development, production and deployment of AI technologies, emphasising

the need for sustainable practices in the field of digital marketing.

Despite advances in AI and big data analytics for marketing, further research is needed to explore in depth the ethical implications of these technologies, particularly in relation to consumer privacy, data security and the potential for bias. Furthermore, future research should also focus on sustainable practices in digital marketing to mitigate the environmental impact of these technologies, exploring strategies for green marketing and the use of eco-friendly technologies in customer engagement.

AI and BDA offer significant opportunities to enhance marketing strategies through personalised customer experiences, but they also pose ethical and environmental challenges that require careful consideration. The literature suggests a growing recognition of the importance of ethical frameworks and sustainable practices in harnessing the benefits of digital technologies in marketing. Consequently, future research should address these challenges, ensuring that the deployment of AI and BDA in marketing is aligned with societal values and environmental sustainability.

3. Research methodology

The aim of this literature review is to synthesise current knowledge on the impact of artificial intelligence (AI) and big data analytics (BDA) on marketing strategies, whilst examining the associated ethical considerations and corporate responsibilities, as well as the environmental implications of these technologies. This review also aims to identify gaps in existing research and suggest directions for future studies.

3.1. Source Selection Criteria

The selection of sources for this literature review was based on several key criteria:

1. **Relevance:** The selected articles deal directly with AI, BDA and their applications in marketing, with particular attention paid to ethical and environmental aspects.
2. **Authority:** The sources include articles from peer-reviewed journals, books, reports from reputable organisations and academic conferences.
3. **Recency:** Priority was given to recent publications (within the last five years) to ensure the relevance of the data within the rapidly evolving technological context. However, earlier seminal and significant works were also included to provide historical context.

4. Diversity: Efforts have been made to include a diverse range of perspectives, including case studies, theoretical analyses and methodological critiques.

3.2. Research Process

1. Initial search: A preliminary search was conducted in major academic databases, such as Google Scholar, PubMed, JSTOR and IEEE Xplore, using keywords such as 'artificial intelligence and marketing', 'big data analytics in marketing', 'ethics in AI' and 'environmental impact of digital marketing'.
2. Selection and Screening: The titles and abstracts of the articles identified during the initial search were reviewed to assess their relevance to the review's objective. Articles deemed relevant were subjected to a thorough reading to confirm their contribution to the review.
3. Thematic organisation: The selected articles were organised into thematic categories, such as the impact on marketing strategies, ethical considerations, corporate responsibilities and environmental implications, to structure the literature review.
4. Critical analysis: A critical analysis of the sources was carried out to identify trends, convergences and divergences in existing research, as well as to note gaps and opportunities for future research.
5. Synthesis: The information gathered was synthesised to produce the literature review, highlighting the main findings, ongoing debates and recommendations for future research.

This methodology has limitations inherent to any literature review, notably the risk of selection bias in the sources and the possibility that relevant studies may not have been included. Furthermore, the rapid evolution of AI and BDA technologies can render certain information obsolete quickly. Finally, cultural and regulatory diversity may influence the interpretation of ethical and environmental issues, necessitating a cautious approach to the analysis and generalisation of results.

The methodology adopted for this literature review aims to provide a comprehensive and critical analysis of recent developments and ongoing debates regarding the use of AI and BDA in marketing, with a particular focus on ethical and environmental considerations. By identifying gaps in the existing literature, this review aims to guide future research towards under-explored or critical areas.

4. Results and discussion

The rapid advancement and integration of Artificial Intelligence (AI) and Big Data Analytics (BDA) into marketing practices have raised important ethical considerations and significant corporate responsibilities. These technologies promise improved customer engagement, personalised marketing strategies and operational efficiencies. However, their deployment also introduces complex challenges relating to privacy, autonomy, fairness and accountability. This literature review explores the ethical considerations and corporate responsibilities associated with the use of AI and BDA in marketing, drawing on recent academic contributions to propose a framework for ethical decision-making and responsible corporate behaviour.

Ethical Considerations in the Deployment of AI and BDA:

Floridi et al. (2018) introduce an ethical framework for the deployment of AI, centred on the principles of beneficence, non-maleficence, autonomy, justice and explainability. This framework aims to guide the development and adoption of AI to benefit society whilst minimising risks. The authors argue for the need to harness the potential of AI responsibly, ensuring that technologies are designed and implemented in a way that respects human rights and dignity. Jobin, Ienca and Vayena (2019) review global ethical guidelines for AI, identifying key principles such as transparency, justice, fairness, non-maleficence, accountability and privacy.

Their analysis highlights the convergence around these ethical principles but also points to the challenges of applying these high-level ethical considerations to the practical governance of AI. This underscores the gap between ethical guidelines and their operationalisation in the context of marketing practices. Campbell et al. (2020) examine the emerging ethical challenges posed by AI's capabilities for in-depth customer insights and personalised experiences. They highlight ethical dilemmas relating to discrimination, privacy breaches and the erosion of trust, advocating a balanced approach that respects consumer rights whilst harnessing AI for improved marketing effectiveness.

Corporate Responsibilities:

The discussion on corporate responsibility in the context of AI and BDA centres on the implementation of ethical principles in business practices. Floridi et al. (2018) and Jobin et al. (2019) both highlight the role of businesses in promoting fairness, ensuring accountability and maintaining transparency in AI applications. This involves not only complying with existing legal frameworks but also

proactively engaging in ethical self-regulation and public discourse on the ethics of AI.

Kaplan and Haenlein (2019) discuss the implications of AI for marketing practices, emphasising the importance of ethical considerations in business strategies. They argue that AI should augment rather than replace human decision-making, highlighting the role of human oversight in ensuring the ethical deployment of AI. Milano, Taddeo and Floridi (2020) discuss the ethical challenges relating to data privacy, potential biases and the transparency of AI algorithms in marketing. They call on companies to adopt ethical frameworks to guide the development and use of recommendation systems and other AI applications, ensuring that these technologies serve the interests of both companies and their customers in a responsible manner.

Framework for Ethical Decision-Making and Corporate Responsibility:

Drawing on the literature, a framework for ethical decision-making and corporate accountability in the deployment of AI and BDA in marketing can be proposed. This framework should include:

- **Adherence to Ethical Principles:** Aligning the deployment of AI and BDA with fundamental ethical principles such as beneficence, non-maleficence, autonomy, justice, fairness and privacy.
- **Transparency and Accountability:** Ensuring clear communication regarding the use of AI and BDA, the decision-making processes involved, and who is accountable for these decisions.
- **Consent and Consumer Privacy:** Implement robust mechanisms to obtain informed consent and protect the privacy of consumer data.
- **Mitigating Bias:** Actively work to identify and mitigate bias in AI algorithms to prevent discrimination and ensure fairness.
- **Human Oversight:** Maintain human oversight of AI systems to ensure that ethical considerations are integrated into automated decision-making processes.
- **Stakeholder Engagement:** Engage stakeholders, including consumers, regulators and civil society, to discuss ethical considerations and corporate

responsibilities, fostering a shared understanding and commitment to the responsible use of AI.

The ethical deployment of AI and Big Data Analytics (BDA) in marketing is not merely a technical challenge but a moral imperative. Whilst businesses utilise these technologies to drive marketing innovation, they must also navigate the complex ethical landscape in which they operate. By adhering to established ethical principles, committing to transparent and responsible practices, and ensuring a human-centred approach to technology deployment, businesses can fulfil their corporate responsibilities whilst fostering trust and promoting the sustainable and ethical use of AI and BDA in marketing.

The findings of these studies highlight the complexities inherent in adopting Artificial Intelligence (AI) and Big Data Analytics (BDA) in marketing strategies, revealing a nuanced landscape of opportunities and challenges. On the one hand, the integration of these technologies promises to enhance customer engagement, personalise marketing strategies and optimise operational efficiency, highlighting their transformative potential in the field of marketing.

On the other hand, their deployment raises significant ethical considerations, particularly regarding privacy, autonomy, fairness and accountability, which require deliberate attention and action on the part of businesses. The need for a robust ethical framework, as proposed by Floridi et al. (2018), Jobin, Ienca, and Vayena (2019), and supported by other researchers, underscores the crucial importance of navigating these challenges with caution.

Companies therefore bear a corporate responsibility not only towards their customers but also towards society as a whole, to ensure that the use of AI and BDA in marketing respects human rights and promotes an ethic of responsibility.

The implementation of principles such as transparency, non-discrimination, informed consent and human oversight is becoming imperative to maintain consumer trust and ensure the ethical use of these advanced technologies. These findings call for in-depth reflection on the balance between technological innovation and ethical integrity in modern marketing, laying the groundwork for future research aimed at exploring pragmatic solutions to these ethical dilemmas.

Conclusion

In conclusion, this literature review has explored in depth the complex dynamics between the integration of Artificial Intelligence (AI) and Big Data Analytics (BDA) into marketing, and the resulting ethical considerations and corporate responsibilities. Technological advances in these

fields offer unprecedented opportunities to revolutionise marketing strategies, enabling advanced personalisation and improved operational efficiency. However, they also introduce significant challenges relating to privacy protection, fairness, user autonomy and transparency in decision-making processes, requiring rigorous ethical reflection and responsible action on the part of businesses.

The ethical frameworks proposed by researchers such as Floridi et al. (2018) and Jobin, Ienca, and Vayena (2019) provide fundamental principles to guide the responsible adoption and deployment of AI and BDA in marketing. These principles include beneficence, non-maleficence, autonomy, justice, transparency and respect for privacy, which are essential for maintaining consumer trust and ensuring the ethical use of these technologies. Furthermore, the need for human oversight, informed consent, bias mitigation and stakeholder engagement underscores the importance of human interaction and accountability in the governance of AI and BDA technologies.

It is imperative that businesses and researchers continue to collaborate to develop strategies that not only harness the potential of AI and BDA to transform marketing, but do so in a way that respects ethical values and promotes social wellbeing. This requires an ongoing commitment to research, responsible innovation and open dialogue amongst all stakeholders – including consumers, regulators, researchers and civil society – to navigate the evolving landscape of ethics in digital marketing.

Ultimately, whilst the challenges are significant, the opportunities offered by AI and BDA in marketing can be realised in an ethical and responsible manner. The future of marketing in this digital age will depend on the ability to balance innovation with ethical integrity, ensuring that technological progress serves the public interest and strengthens trust and transparency in business-consumer relationships. Further research in this field will be crucial to inform future practices and ensure that technological development in marketing continues to adhere to fundamental ethical principles.

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