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Between Algorithmic Autonomy and Human Responsibility: Emerging Ethical Dilemmas in Artificial Intelligence Governance

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Abstract

The accelerated progress of artificial intelligence (AI) and its deployment in increasingly sensitive domains—such as healthcare, criminal justice, autonomous transportation, and the creative industries—has generated unprecedented opportunities for innovation, efficiency, and social welfare. At the same time, this rapid diffusion has exposed society to significant ethical risks, including bias and discrimination, opacity of decision-making, and the potential erosion of accountability. The central issue emerging from these transformations concerns the tension between algorithmic autonomy, expressed through the ability of systems to perform complex tasks and make decisions with minimal human intervention, and human responsibility, which remains indispensable for legitimacy, trust, and the protection of fundamental rights.

This paper examines these dilemmas through an interdisciplinary lens that combines perspectives from ethics, law, and technology studies. It argues that algorithmic autonomy should not be conceptualized as the transfer of moral or legal responsibility to machines but rather as a functional feature that requires embedding within a broader framework of human-centered governance. Without such integration, societies risk facing “responsibility gaps” and the externalization of moral agency to technical systems.

Building on this premise, the study proposes a model of distributed responsibility in which human actors—developers, policymakers, institutions, and end-users—retain decisive roles in oversight, accountability, and remediation. The model emphasizes the necessity of transparency, auditability, and fairness as guiding principles, operationalized through mechanisms such as algorithmic auditing, contestability, and the monitoring of social impacts.

By aligning technological innovation with ethical and legal safeguards, the paper outlines the foundations of an ethical AI governance model oriented toward equity, human dignity, and democratic legitimacy.

Keywords: Algorithmic Autonomy, Human Responsibility, Ai Governance, Distributed Responsibility, Ethics of Artificial Intelligence