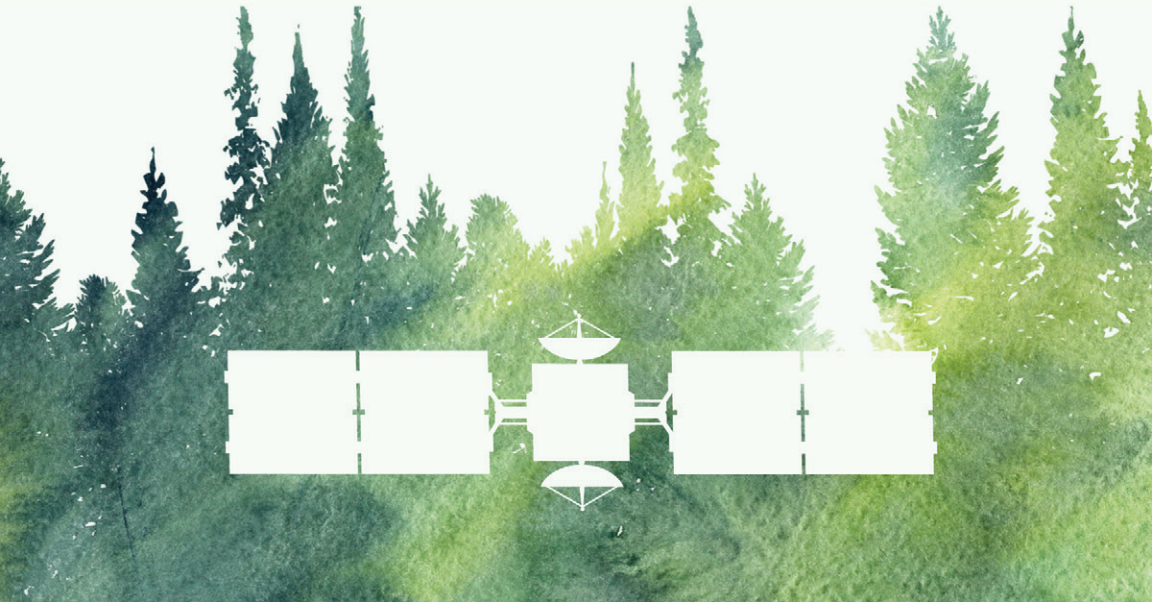
EMERALD STUDIES IN SUSTAINABLE INNOVATION MANAGEMENT

SUSTAINABLE INNOVATION REPORTING AND EMERGING TECHNOLOGIES

PROMOTING ACCOUNTABILITY THROUGH ARTIFICIAL INTELLIGENCE, BLOCKCHAIN, AND THE INTERNET OF THINGS

GENNARO MAIONE



Sustainable Innovation Reporting and Emerging Technologies

EMERALD STUDIES IN SUSTAINABLE INNOVATION MANAGEMENT

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Innovation management aims to drive a repeatable, sustainable innovation process within an organization. Such initiatives focus on disruptive or step changes that transform businesses in a significant way. *Emerald Studies in Sustainable Innovation Management* considers innovation management from an interdisciplinary perspective: technological (such as digitalization) and environmental (such as green transition, energy, transportation, etc.) elements, as well as unexpected pandemics and wars that challenge innovation in both concept and practice. Volumes in this series explore scientific developments to provide new innovation principles to overcome turbulent environments, uncertainty, sustainability issues, and outdated technology.

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Sustainable Innovation Reporting and Emerging Technologies: Promoting Accountability Through Artificial Intelligence, Blockchain, and the Internet of Things

BY

GENNARO MAIONE
University of Salerno, Italy

United Kingdom – North America – Japan – India – Malaysia – China

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To my daughter, Alessandra.
To the freshness of her smile.
To the scent of her skin.
To the sweetness of her eyes.

A mia figlia, Alessandra.
Alla freschezza del suo sorriso.
Al profumo della sua pelle.
Alla dolcezza dei suoi occhi.

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About the Author

Gennaro Maione is a researcher in Business Economics at the Department of Economics and Statistics (DISES) of the University of Salerno, Italy, where he teaches Business Administration and Accounting. He is the Guest Editor of the journal Sustainability, Topic Editor of the journal Systems, and Editorial Board Member of the Open Journal of Accounting, the Journal of Business Administration Research, the Journal of Business and Economics, the American Journal of Accounting, and the American Journal of Economics. He is the author of scientific articles presented at conferences in Italy and abroad and published in national and international journals. His main research interests focus on accounting and accountability and include sustainability, the environment, and technological innovation.

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Preface

Amidst the intricate fabric of human pursuits, the communal yearning for a world that functions harmoniously encounters the relentless progress of nascent technological breakthroughs, which entice us toward unexplored domains and challenge established socioeconomic frameworks. In exploring the nexus of innovation, sustainability, technology, and accounting, the book weaves a narrative transcending disciplinary boundaries and fostering awareness of humanity's shared responsibilities.

The fundamental inquiry of this work resides in the acknowledgment of a novel construal of accounting, which was formerly perceived as a mere mirror of economic transactions but has since burgeoned into an influence that molds the essence of human existence. The Greek philosopher Heraclitus wisely observed that "all entities move, and nothing remains still." In this perpetual motion and relentless evolution spirit, this book explores sustainable innovation reporting, seeking to forge new paths and enrich human understanding by answering the following three research questions (RQs).

RQ1. To what extent did the historical transformation of accounting, from a passive reflection of economic transactions to an active force shaping our societal fabric, affect the trajectory of sustainable innovation reporting?

RQ2. In light of the progression outlining the worldwide accounting domain, what are the predictable obstacles and prospects that await sustainable innovation reporting?

RQ3. How can accounting scholars and practitioners converge to create synergies, exchange knowledge, and contribute to the ongoing discourse on sustainable innovation reporting to foster transparency, accountability, and ethical conduct within organizations?

With five thought-provoking chapters on various aspects of sustainable innovation reporting, this work promotes the realization of accountability through the implementation of emerging technologies.

Chapter 1 sheds light on the origins of accounting thought, sustainable innovation reporting principles, and technological advancements' transformative potential. The historical, ethical, and philosophical foundations of accounting and accountability-innovation relationships are examined. This chapter examines

the history of accounting thought, from double-entry bookkeeping to the modern discipline and the rise of sustainability and social responsibility.

It concludes by considering the paradox of control and flexibility, risk-taking and technological advancement, the complex equilibrium between conventional accounting principles and innovative approaches, and stakeholder expectations at the accountability-innovation nexus.

Chapter 2 expounds on the multifaceted interconnection between ethical facets, transparency, trust, and the influence of technology on accounting and accountability. The historical roots of ethical principles, professional conduct, decision-making, and corporate governance are debated. Questing for an ethically accountable culture, this chapter also examines the repercussions of unethical practices on stakeholders and the role of accounting education and professional development in molding ethical values.

Subsequently, the discussion moves toward highlighting the possibilities of emerging technologies in promoting openness and overcoming the obstacles that arise due to the lack of trustworthiness and reliability within the accounting industry. Afterward, the discourse focuses on ethical reporting and methodologies, accentuating the pivotal role of cross-disciplinary research on accounting ethics. This chapter closes by examining the role of accounting bodies and regulators in light of the evolution of professional standards.

Chapter 3 dives into the nuances surrounding accounting applications powered by Artificial Intelligence (AI). It contemplates ethical deliberations on data privacy, security, algorithmic bias, and impartiality. Subsequently, the discourse shifts toward the obligations of professional organizations and regulatory bodies to guarantee the ethical execution of AI-driven accounting practices.

This chapter culminates in a case study, illustrating the intersection between AI and sustainable innovation reporting. The analysis delves into the results and best practices of actual implementation, thereby providing a tangible representation of this convergence.

Chapter 4 focuses on the impact of blockchain technology on sustainable innovation reporting. At first, the underpinnings of blockchain in accounting are unfolded to delve into the theoretical foundations elucidating the transformative potential of this technology, including double-entry bookkeeping, triple-entry accounting systems, and the ramifications of information asymmetry and Agency theory in blockchain-based accounting.

This chapter discusses the pivotal function of stakeholder engagement in decentralized accountability mechanisms. It also provides insight into the revolutionary capacity of blockchain as a stimulant for trust and transparency in accounting. Finally, a case study shows how blockchain technology promotes decentralized accountability.

Chapter 5 examines the connection between the Internet of Things (IoT) and sustainable innovation reporting to investigate how the former could change accounting and society. An overview of how IoT is reconfiguring the modus operandi of accounting experts in terms of data-centric discernment and judgment is proposed to outline the limitless prospects for solutions that this technology offers while also underscoring the significance of embracing a human-centric

approach to propel the causes of sustainable preservation and ethical responsibility. Ultimately, a case study analysis shows how IoT may affect the reporting of sustainable innovation while also considering its possible hazards associated with digital inclusion and access, standardization, and interoperability issues.

Given these premises, this book is intended to act as a boost for thoughtful reflection and transformative action. May the stimuli gleaned from these pages inspire the reader to join the quest for sustainable innovation and contribute to the ongoing discourse on promoting accountability through emerging technologies.

Thus, with great enthusiasm and profound humility, I welcome you to "Sustainable Innovation Reporting and Emerging Technologies: promoting Accountability through Artificial Intelligence, Blockchain, and the Internet of Things."

The author
Gennaro Maione

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Chapter 1

Conceptualizing Sustainable Innovation Reporting in the Age of Technological Advancements

1.1 The Foundations of Sustainable Innovation Reporting

The study of accounting foundations reveals the progression of human civilization's socioeconomic customs. Seeking knowledge in this field implies exploring the intricacies of the past and uncovering the origins of sustainable innovation reporting (Maione et al., 2023a, 2023b). This discipline originated from converging ancient accounting traditions, double-entry bookkeeping, ecological, societal, and administrative considerations, and technological advances (Bebbington & Larrinaga, 2014).

Accounting procedures played a significant role in society's management and business throughout history; the papyrus ledgers of Egypt and the prehistoric clay tablets from Sumeria attest to the discipline's continued relevance.

The Italian Renaissance introduced double-entry bookkeeping, revolutionizing modern accounting (Soll, 2014). Industrialization and modernization fostered the development of several accounting theories and approaches, requiring regulatory organizations and standards (Nobes et al., 2008). This strengthened accounting's position as a worldwide economic pillar (Maione, 2023).

With the advent of the new millennium, the call for sustainability and corporate social responsibility (CSR) started reverberating among the clamor for expansion and advancement, stimulating a moral awareness that organizations must be stewards of our future (Gray & Milne, 2018).

Sustainable innovation reporting has progressively developed as an area of study to address the complicated relationship between accounting practices, social and environmental issues, and the transformational potential of technology (Eccles & Serafeim, 2014; Tommasetti, Mussari, et al., 2020). This trend inspired new accounting approaches and frameworks to link financial performance with environmental, social, and governance (ESG) goals (Adams & Larrinaga, 2019).

For some years, emerging technologies, such as artificial intelligence (AI), blockchain, and the Internet of Things (IoT), have been transforming accounting

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(Appelbaum et al., 2017; Lytras et al., 2019; Lytras & Visvizi, 2018, 2021). This has resulted in an augmentation of accuracy and efficacy in traditional methodologies while facilitating the dissemination of sustainable innovation reports through novel conduits (Cohen & Simnett, 2018). The connection between these technological advancements and sustainable innovation reporting opened up a new horizon in accounting scholarship, stimulating innovative contemplation and reflection (Busco, Frigo, Quattrone, et al., 2013).

1.1.1 Key Principles and Values of Sustainable Innovation Reporting

In the vast domain of accounting thought, sustainable innovation reporting emerges as a multifaceted endeavor, seeking to weave together the threads of sustainability, innovation, and accountability in reporting procedures. The principles and values of sustainable innovation reporting include materiality, relevance, completeness, accuracy, transparency, clarity, comparability, and consistency.

Materiality refers to determining which aspects hold particular pertinence and influence in depicting an organization's value-creation process. In sustainable innovation, materiality assumes a significantly elevated role in shaping the fabric of an organization's disclosures (Eccles & Serafeim, 2013; Milne & Gray, 2013). In light of the nature of sustainable innovation, materiality is an instrumental paradigm for effectively navigating the diverse spectrum of stakeholder demands and conflicting objectives. The complex relationship between materiality and its amalgamation with ecological responsibility and novelty is pivotal in constructing a fabric that accurately mirrors a corporation's strategic goals and achievements (Adams, 2015).

The notion of relevance is linked to the idea that disclosed information must possess the power to influence the decision-making processes of its intended audience. Within the context of sustainable innovation, it assumes a heightened significance, shaping the contours of the narrative that elucidates an organization's strategic endeavors and performance in sustainability (Unerman & Zappettini, 2014). The practice of relevance invites practitioners to engage in an ongoing dialogue between the organization and its stakeholders to ensure the faithful representation of the journey toward sustainable value creation (Adams et al., 2016).

The focal point of completeness depicts organizations' efficacy, encompassing all notable facets across the economic, social, and environmental domains. Completeness guarantees that no salient aspects of an organization's operations are neglected or downplayed, affording stakeholders a more comprehensive understanding of the organization's undertakings and ramifications.

The attainment of completeness entails contemplating not solely the present undertakings of the organization but also how these may metamorphose in the future owing to strategic realignments, developing market circumstances, or shifting societal norms. Moreover, completeness implies that organizations should provide a well-rounded depiction of their conduct's favorable and unfavorable

consequences. This necessitates accentuating accomplishments and positive contributions and recognizing and confronting obstacles, defeats, and adverse effects of the actions undertaken.

Accuracy is founded upon the principle that information divulged ought to be veracious and precise, devoid of inaccuracies or distortions. It requires technical accuracy and impartial, comprehensive reporting of the organization's efforts, successes, and impacts.

Accuracy involves data presentation without bias or misrepresentation to avoid incorrect conclusions or assumptions. To achieve sustainable innovation, organizations must use sustainable business models, technologies, and practices (Deegan, 2017). To help stakeholders understand their sustainability performance, organizations must clearly and accurately explain their goals and methods (Cho et al., 2015).

Transparency lies in the complete and unequivocal revelation of relevant data, cultivating an environment of reliance and answerability between organizations and their diverse interested parties (Maione et al., 2022). Within sustainable innovation, transparency guarantees that an organization's sustainability is communicated in all aspects (Christensen et al., 2017; Crane & Matten, 2010).

Transparency embodies the virtue of forthrightly revealing knowledge that may affect the interests of a given organization's stakeholders. In pursuing sustainable innovation, transparency emerges as a pivotal element in an organization's communication strategy, guaranteeing that its sustainability efforts are revealed in an all-encompassing way.

Clarity is central to determining what constitutes lucid and comprehensible information (Laine et al., 2021; Unerman et al., 2021). It pertains to conveying information, emphasizing simplicity and accessibility for all parties involved. Obtaining clarity demands abstaining from using ambiguous terminology or a lexicon that may obscure the intended communication or deceive the recipients (Farneti & Guthrie, 2009; Solomons, 1991). Within sustainable innovation, clarity connotes the capacity for diverse stakeholders to readily comprehend an organization's sustainability endeavors and their resultant effects (Rimmel & Jonäll, 2013). This favors discernment in decision-making, participation by all parties, and accountability. To ensure that knowledge is accessible, meaningful, and applicable, clarity is crucial (Flower, 2015).

The concept of comparability pertains to the capacity to gauge and juxtapose organizational performance across temporal intervals (Cho et al., 2015). It facilitates the comprehension of stakeholders regarding the advancement of an organization's sustainability endeavors and their comparison with the established benchmarks or paradigms of the industry (Unerman et al., 2021).

The attainment of comparability necessitates the implementation of uniform gauges and criteria that are consistently applied across various establishments and temporal dimensions (Flower, 2015). The act of assessing advancement, recognizing the best methodologies, and promoting comparative analysis and knowledge acquisition can greatly assist (Lozano, 2013). Moreover, the comparability concept bestows stakeholders with the ability to exercise informed judgment (Eccles & Serafeim, 2014).

Consistency in accounting and reporting is predicated upon an unyielding dedication to utilizing coherent methodologies and protocols throughout a specified period. The principle in question is paramount: ensuring the reliability and uniformity of data and information (Lozano, 2013).

In sustainable innovation, preserving constancy is critical to establishing an organization's sustainability reporting as a dependable source of knowledge (Laine et al., 2021). It facilitates the execution of longitudinal scrutiny and comparative evaluation, thereby augmenting the general equilibrium and permanence of the organization (Cho et al., 2015). The consistency principle also enlightens stakeholders regarding the trends and patterns in an organization's sustainability performance (Flower, 2015).

1.2 Emerging Technologies in Accounting Scholarship: AI, Blockchain, and the IoT

Throughout the chronicles of the accounting discipline, the unrelenting advancement of society has observed the revolutionary influence of emerging technologies on the bedrock tenets and methodologies of the field (Maione & Leoni, 2021). The unstoppable wave of technological advancement gave rise to a diverse range of tools transforming the terrain of accounting academia (Appelbaum et al., 2017), including AI, blockchain, and IoT.

AI is leading these emerging technologies because it combines computational methods that give machines human-like reasoning, learning, and perception (Russell & Norvig, 2016). Machine learning and natural language processing have revolutionized financial analysis, risk management, and auditing (Janvrin et al., 2014) and are among the AI subfields that hold particular relevance for accounting (Leoni et al., 2021; Maione & Leoni, 2021).

Delving into the array of AI's manifold accounting applications, we notice many revolutionary innovations. From machine learning algorithms to turn complex financial data into actionable insights to natural language processing to decipher regulatory texts and financial reports, AI will transform accounting.

Similarly, blockchain technology promises to instigate a transformative shift in accounting by enhancing and streamlining various processes and operations, such as recording, authentication, and disclosing financial data. The advent of this technological breakthrough, founded upon the deployment of a decentralized, immutable, and transparent digital ledger, is presently engendering noteworthy prospects within the discipline of accounting.

Its scope of influence spans a broad range of functions, including the monitoring of assets, the secure conveyance of data, and the fortification of audit trails (Dai & Vasarhelyi, 2017). This technology presents manifold challenges and opportunities for both accounting practitioners and scholars. The promise of enhanced transparency, security, and efficiency beckons, yet the road ahead is fraught with uncertainty and the weight of uncharted territory (Alderman & Jollineau, 2020).

In the triptych of emerging technologies shaping new and innovative accounting scholarship, the IoT has the potential to revolutionize financial information collection, computation, and evaluation (Mattern & Floerkemeier, 2010). IoT advances include instantaneous financial information acquisition, automated inventory supervision (Li et al., 2016), and asset monitoring (Atzori et al., 2010).

1.3 The Accountability–Innovation Gap

The accountability–innovation gap illustrates the complex relationship between two seemingly opposing forces in accounting. Understanding this gap implies deepening the intricacies of reconciling accountability and innovation, scrutinizing the paradoxical interplay between control and flexibility, the reluctance to embrace change, and the persistence of organizational inertia. It also requires examining the potential synergies that can be leveraged to augment sustainable innovation reporting.

The interdependent correlation between accountability and innovation underscores the mutual influence of these notions, whereby accountability serves as a guiding principle for innovative methodologies while innovation propels advancements in accountability. The link between various aspects of accounting demands a nuanced equilibrium between upholding conventional principles and promoting inventive methods.

The challenge of reconciling control and flexibility and surmounting resistance to change and organizational inertia engenders challenges and prospects for achieving such an equilibrium. Identifying strategies to manage this challenge is pivotal in enabling organizations to cultivate a culture that values accountability and innovation.

Additionally, studying accountability and innovation may help create a framework that effectively integrates these concepts. This would help accounting move forward and create more value while making reporting on sustainable innovation easier.

1.3.1 The Relationship Between Accountability and Innovation

The accounting discipline is situated at a fascinating crossroads where the concepts of accountability and innovation engage in a dialectical interplay, mutually influencing and propelling progress within the domain. The interdependent correlation between accountability and innovation within accounting is paramount to preserving the discipline's authenticity while accommodating a constantly evolving environment (Busco, Frigo, & Riccaboni, 2013).

Accountability assumes a crucial position in the advancement and execution of pioneering methodologies. It serves as a rudimentary structure of norms and doctrines that upholds the authenticity and reliability of financial data in the face of any plausible breach. Contrarily, it can be argued that the driving force behind innovation is to promote the progression of accountability by ushering in novel

methodologies and technologies that enhance accounting practices' effectiveness, accuracy, and clarity (Haller & van Staden, 2014).

Balancing accounting norms with innovation is challenging (Ezzamel et al., 2007). To achieve equilibrium, accounting practices must combine novelty with accountability. A flexible mindset, a corporate culture that embraces change, and technological innovations to improve accounting methods are needed to adapt to the ever-changing business environment (Christensen & Raynor, 2013).

Novelty and advancement require some risk-taking, which may conflict with accounting methodology accountability (Knechel & Willekens, 2006). The interaction between innovation and accounting practices necessitates implementing proficient risk management strategies. The performance of a sturdy risk management framework enables organizations to recognize, evaluate, and alleviate the hazards that are linked with pioneering pursuits, thus achieving a harmonious balance between venturing into uncertainty and being accountable for the consequences of such actions (Tekathen & Dechow, 2013).

The influence of stakeholder expectations on the equilibrium between accountability and innovation in accounting practices is of paramount significance. Given the elevated demands of stakeholders for transparency, accuracy, and efficiency in financial reporting and disclosure, the accounting community has to face the arduous task of harmonizing potential contradictions between the quest for novelty and the unwavering commitment to established tenets of accountability. Participation in innovation can help stakeholders align their expectations with accounting practices, promoting a mutually beneficial balance between accountability and innovation (Gray, 2002).

1.3.1.1 The Interdependence of Accountability and Innovation

The connection between accountability and innovation within the accounting domain is profoundly enmeshed within the very fabric of the discipline (Brown & Dillard, 2015). Considering the historical, philosophical, and empirical aspects of accounting may help to attain a comprehensive understanding of this complex interrelation.

The progression of accounting over time was characterized by a perpetual interplay between the exigencies of accountability and the impetus of innovation (Zeff, 2015). Accounting practices emerged to meet the demands of more complex financial transactions. According to Soll (2014), the principles of accountability are essential to ensure that these novel practices align with ethical standards and promote transparency. Innovation engendered the evolution of novel instruments and methodologies that amplified the accounting profession's aptitude to cater to the requisites of burgeoning economies (Carmona & Trombetta, 2008). This ongoing interaction between accountability and innovation persisted throughout the centuries, shaping the trajectory of accounting as we know it today (Zeff, 2015).

Dialectical reasoning can help understand the complex relationship between accountability and innovation. The Hegelian dialectic method combines opposing

and seemingly incompatible elements like the thesis and antithesis to advance knowledge and understanding (Hegel, 1807). When we apply this theoretical conception to accounting, we can discern that accountability is the thesis, while innovation assumes the antithesis role. Incorporating these ostensibly contradictory forces begets a more resilient and versatile accounting discipline proficient in tackling the requisites of a swiftly transforming terrain (Boland et al., 2008).

Empirical evidence confirms the existence of a profound interconnectedness between accountability and innovation. Gendron et al. (2007) found that pioneering performance measurement systems like the Balanced Scorecard increased accountability by providing a more comprehensive framework for assessing organizational performance. Granlund and Lukka (2017) consistently expound that adopting novel accounting information systems engendered a heightened sense of responsibility by augmenting the efficacy and precision of financial reporting.

The close connection between accountability and innovation significantly impacts the accounting discipline's response to unprecedented challenges like the emergence of AI, blockchain technology, and IoT (Brynjolfsson & McAfee, 2014). Given the impact of these groundbreaking advancements on traditional accounting methodologies, this discipline must consider the ethical and pragmatic implications of emerging technology integration (Hysa et al., 2022; Kokina et al., 2017; Kruja et al., 2019).

1.3.1.2 The Balance Between Traditional Accounting Principles and Innovative Approaches

The pursuit of balance between conventional principles of accounting and novel approaches necessitates profound contemplation of the influence of technology, which arose as an essential power in determining the destiny of the accounting profession. The accounting discipline is pressured to engage with technological advancement's ethical and practical ramifications in light of its extensive effects, particularly in AI, blockchain, and IoT (Appelbaum et al., 2017).

This discourse revolves around the deep-seated influence that technology wields over the underlying tenets of accounting. The combination of sophisticated tools and methodologies risks upsetting the customary mores and conventions that the profession has followed for a long time. To adequately confront this pressing matter, accounting scholars and practitioners must engage in a comprehensive and reflective process to thoroughly examine the fundamental assumptions and principles woven into the fabric of conventional accounting doctrines and modern technological advancements (Janvrin et al., 2014).

Due to technological advancement, the accounting profession must be proactive and vigilant about ethical issues (Kokina et al., 2017). Recognizing the societal and ethical duties intrinsic to the accounting profession embodies a crucial ethical archetype that must be maintained to preserve the genuineness and dependability of accounting methodologies amidst the extensive changes of our time (Gendron et al., 2007).

Balancing conventional accounting doctrines and cutting-edge techniques requires a complex and nuanced strategy (Beattie, 2014). Pursuing technological progress necessitates a delicate balance between integrating novel methodologies within established convictions, establishing an environment that fosters perpetual learning and cogitation, and contemplating the moral implications of technological advancement (Barth, 2015).

The quest for knowledge and its pragmatic application present a captivating prospect for fostering synergistic alliances between accounting scholars and professionals, encompassing information technology, administration, and ethics (Appelbaum et al., 2017). Engaging in collaborative endeavors can be a powerful catalyst for generating innovative ideas and enhancing the accounting discourse surrounding the equilibrium between conventional approaches and cutting-edge methodologies (Haller & van Staden, 2014).

1.3.1.3 The Tension Between Risk-Taking and Accountability

The relationship between venturing into uncertainty and assuming accountability epitomizes the essence of innovative endeavor (Malsch & Gendron, 2013). The coexistence of a fundamental dichotomy in engaging in innovative methodologies while concurrently upholding ethical and professional principles underscores the intricate equilibrium that must be achieved. The attainment of this equilibrium necessitates a comprehensive scrutiny of the fundamental forces at play (Boland et al., 2008).

Taking risks to explore new territory, challenge norms, and embrace uncertainty to solve complex problems requires boldness (Simnett & Huggins, 2015). In accounting, this can materialize through pioneering methodologies, avant-garde technologies, and innovative reporting frameworks. The advent of these novel advancements harbors the possibility of a transformative impact on the conventions of the accounting profession, thereby amplifying its capacity to conform to the incessantly evolving requisites of a changing society (Christensen et al., 2017).

Accountability concerns accountants' ethical and professional obligation to ensure the information's transparency, adequacy, and correctness (Gray et al., 1996). This concept counterbalances the human tendency toward heedlessness and promotes a culture of obligation that safeguards the genuineness and soundness of accounting techniques (Malsch & Gendron, 2013).

The relationship between the inclination toward risk-taking and accountability can be perceived as a manifestation of the broader discourse between the principles of innovation and established traditions. Risk management balances risk-taking and accountability (Haller & van Staden, 2014).

Risk management, which uses a systematic and forward-thinking approach to identify, assess, and mitigate risks and opportunities, may bridge the desire to create a moral obligation. A balance between novelty and caution in accounting practices can lead to flexible and robust methods (Simnett & Huggins, 2015).