

RESEARCH PAPER

Ecological Anthropology and Sociology Applications to Accounting Education and Practice

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PURPOSE: The ecological framework in anthropology and sociology is an integrated approach that studies sustainability within the broader context of the environment, business and society. The framework is applied to study the integration of sustainability into the accounting curriculum.

APPROACH: The paper has integrated ecological ethics and land ethics from ecological anthropology, and the resources-based approach from organisational ecology-sociology to study the integration of sustainability into the accounting curriculum.

FINDINGS: Ecological anthropology has examined how cultural and social forces have evolved in ecological and land ethics in business education. Organisational ecology has related the resource-based transaction cost approach for the integration of sustainability into the accounting curriculum.

ORIGINALITY/VALUE: Ecological anthropology and organisational sociology disciplines have been concerned with sustainability, environmental management, and conservation of natural resources for many years. These issues have now become the cornerstones in sustainability education in the accounting curriculum and professional practice.

KEYWORDS: *Ecological Anthropology; Organisational; Sociology; Accounting; Sustainability*

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INTRODUCTION

The ecological framework has been the underlying framework in environmental and sustainable development. The contribution of this paper is to extend the ecological approach from anthropology and sociology to study the integration of sustainability in accounting education and practice. It augments prior research that the ecology of sustainability has expanded the scope of environmental education of universities' curricula (Sterling, 2013), including accounting education and practice (Hopwood, 2009, 2010).

PRIOR RESEARCH IN SUSTAINABILITY ACCOUNTING

Hopwood (2009) highlighted the need for environmental and sustainability information in sustainability reporting to account for their consequences and presentation in a “connected reporting framework” to report “the economic costs and benefits of environmental considerations”. He argued that sustainability should become a “more mainstream part of business”, thus making the management of environmental issues “an increasing material factor in many sectors of the economy in the years to come” (p.141, see also Hopwood, 2010). Hopwood (2009) placed a sustainability agenda in an organisational life cycle that has the potential to impact corporate actions and policies to develop the “connected reporting system” (p.141).

Similarly, Gray (2019) suggested an interdisciplinary social sciences approach to sustainability education. Sociology and anthropology have examined the fundamental questions of demography, culture, climate, ecosystems, history and political practices that impact sustainability. However, most studies have focused on ethics and corporate governance with limited coverage in sustainability science from sociology and anthropology. This paper expands and advances Hopwood's (2009, 2010) and Gray's (2019) recommendations that sustainability be integrated in accounting education, and in corporate economic, social and environmental performances.

RESEARCH FRAMEWORK

The Ecology of Anthropology and Sociology

Ecology is an integrated approach that studies sustainability within the broader context of the environment, business and society. Accounting principles are assumed to have evolutionary ecological functional roles that are beneficial for sustainability development in communities and regions. The ecological approach in anthropology and sociology has been concerned with natural resources, cultures and environmental impacts, land management and earth sciences. In this context, the integration of sustainability into accounting education and practice follows an evolutionary process of organisational change and development.



The paper is divided into five parts. The first part addresses the evolution of sustainable development in the social sciences literature from the disciplines of ecological anthropology and sociology, followed by a section describing the ecological anthropology approaches from ecological ethics and land ethics; the organisational ecology construct from the transactional cost analysis is formulated to study the evolutionary process of sustainable development in business and society. The third section extends these ecological approaches and their integration of sustainability into accounting education and practice, while the next section specifically examines how sustainability has been incorporated into the accounting curriculum. The last section contains the conclusions, summarising the contribution of the research. It highlights the significance of both the ecological anthropology and organisational ecology approaches in advancing sustainability accounting education and practice.

ECOLOGICAL ANTHROPOLOGY AND ORGANISATIONAL ECOLOGY (SOCIOLOGY) APPROACHES TO SUSTAINABLE DEVELOPMENT

Ecology broadly covers natural and environmental resources, and cultural relationships and interdependencies. Both ecological anthropology and organisational sociology assume that sustainable development is an evolutionary process that transforms societal development over time. Ecological anthropology has addressed culture, language, beliefs and religion as being part of social and political systems. In contrast, organisational ecology has broadly addressed the sociological implications for the process of environmental, structural and social changes, and how organisations adapt to these changes (Sisaye, 2006).

Ethnography and Cultural Studies in Ecological Anthropology: Approaches to Community Development

In anthropology, ecological studies have utilised ethnographic and socio-cultural approaches. Ecological anthropology has expanded research on ethnographic, culture and nature-environmental relationships and how human activities can affect the preservation, destruction, neglect and use of land, forests, vegetation, wild animals and other habitats, and forms of natural resources (Bennett, 2017). Ethnographic studies have described indigenous social and cultural practices, and political expressions of social justice that are used to formulate policies to protect the ecology and the environment (Willow and Wylie, 2014, p.229). In addition to culture, technology, organisational typologies, and accounting, information systems consist of human and industrial ecological systems that can influence and shape politics and governance issues in sustainable development.

Anthropologists have documented the ethnography of religion, faith, worship, and the interactions and intersections through dialogue and conversations to understand how local people live,

shape and inhabit the environment (Stringer, 2016). Kopnina (2015) has suggested the importance of incorporating culture, ethnographic practices, and political institutions into conservation policies as the underlying principles for ecological justice in environmental and sustainability development.

The ecological anthropological approach overlaps with the functional assumptions of organisational ecology-sociology that organisations contribute to the maintenance of social systems. In terms of functionality, organisational systems influence the formation and operations of class and economic structures to regulate social and political order as well as environmental resources and sustainability management.

Organisational Ecology (Sociology) Approaches to Sustainable Development

Organisational ecology “focuses on the demography of organizational populations (births and deaths of organizations)” (Baker *et al.*, 1998, p.173). The approach describes the “relationship between population density and rates of founding, failure and growth” (Barron, 1999, p.424). Organisational (population) ecology has broadened sustainability by linking environmental resources management to business performance, quality, production, service and managerial systems (Sisaye, 2006).

Businesses are concerned with sustainability development for environmental conservation: they attempt to limit industrial growth by focusing on natural resources conservation. Accordingly, sustainable development and sound environmental management constitute the primary components for establishing organisational and anthropological ecological relationships.

The Common Themes in both Ecological Anthropology and Sociology in Sustainable Development

While both sociology and anthropology agree that sustainability has its primary focus on community and national development programmes, they differ in their approaches of how to proceed. Ecological anthropology specifically examines the influence of national and local organisational and political systems and their subsequent influences on culture, people, and socio-cultural systems in general. On the other hand, an evolutionary organisational ecological sociological analysis integrates sustainability with other activities, including community development plans, resources management, geographical locations, and boundaries. This approach is consistent with the view that business organisations as living ecological systems are in a constant sustenance mode of operation to adapt their economic growth and industrial development strategies within their organisational population community, as well as the social wellbeing and cultural development programmes of society at large.

Both organisational ecology and ecological anthropology assume that business organisations have self-interest and concern to align their business activities with the welfare of external parties.

Accordingly, strategy, competition and cultural adaptations are intertwined to form the foundation for sustainable development. They both suggest that business sustainability interfaces with societies' community development and well-being, as well as the educational practices related to conservation, environmental health, ecological and land ethics, and organisational transactions.

ECOLOGICAL CONSTRUCTS OF SUSTAINABLE DEVELOPMENT

Anthropology and sociology have developed ecological theories and methods that can be extended to examine the inter-relationships of ecology and sustainable development. Sustainability development can best be studied as an ecological issue from the perspective of ecological anthropology and organisational sociology. There are three constructs that are formulated to describe sustainable development. The first two are ecological ethics and land ethics from ecological anthropology. The third is transactional costs analysis from organisational ecology-sociology.

Ecological Ethics

Sustainability is embedded in ecological ethics; this suggests that those who are in positions of power and influence have the responsibility not to harm the environment, but to use it in a manner that morally and equitably shares the ecological resources for the survival of humans and other species, today and in the future (Curry, 2007). There is a consciously intended social aim to use resources morally and responsibly to manage and sustain long-living systems. Accordingly, sustainable development and sound environmental management constitute the primary components for establishing organisational and anthropological ecological relationships.

Ecological ethics focuses on the anthropological concerns of the environment addressing social justice issues of redistribution and growth, agriculture and land use management, exploitation of valuable natural resources, empowerment and social change, as well as conflict resolutions (Kopnina, 2012). Thiele (1999) suggested that ecological ethics has morality dimensions that “require viewing others along with the self as integrated parts of the larger whole. Ethics is largely about the obligations we must sustain the community that sustain us” (p.30). The moral obligation of ethics is rooted in religious and humanitarian issues where the common good (general welfare) of public life (goods) becomes intrinsically valuable for individual actions and relationships to fulfil community and society well-being (Cowdin, 2008). This paper expands both Thiele (1999) and Cowdin (2008) approaches of ecological ethics that goes beyond the spatial/geographical and temporal extension of environmental ethics to the human community through analysis of the interdependence in the moral and cultural aspects in accounting education.

Ecological (Land) Ethics' Linkage to Environmental Ethics

Ecological ethics has broader implications for environmental and resources management. It focuses on human relationships with nature, utilisation, and conservation of natural resources (Cowdin, 2008). Sustainable management addresses how the use of natural resources and keeping the viability of the earth's ecosystems are integrated into the products and services of organisations for market planning and growth. In essence, sustainability development is a subset of ecological ethics.

Anderson-Wilk (2008) related sustainability efforts in environmental conservation to land ethics. Land stewardship has emerged as an ecological conscience for environmental conservation, land management, sustainability of eco-systems for future use of production, and resources to preserve land health and protect biodiversity. The ecological community has thus formed the core of land health ethics focusing on biological systems as part of the environmental community (Curry, 2007). When land ethics is collectively viewed regarding humans and other animals that live on land, the ecological interdependence of the entire community is recognised.

Evanoff (2005) outlined three objectives for environmental ethics that are pertinent to ecological approaches to accounting ethics and sustainability education. The first aspect deals with maintaining ecological autonomy for society and nature whereby individual and societal interests are balanced. The second objective focuses on promoting ecological sustainability and integrity where humans are viewed as a subset of natural and ecological systems. The third factor is related to the transactional approach that focuses on maximisation of resources use to meet human's material needs. Evanoff (2005) redefined environmental ethics and sustainability as being based on a "transactional paradigm [that] would encourage human flourishing, social equality, and environmental integrity" (p.111). These environmental objectives are embedded in organisational ecology-sociology transaction cost analysis dimension.

Transaction Costs, Organisational Development and Sustainability

The inter-relationship of ecology and environmental sustainability in sociology has its basis in Williamson's (1981) transactional cost and economics paradigm. The transaction cost approach assumes that human and societal decisions have economic consequences that impact sustainability business, and these transactions transcend economic and ecological objectives. Moreover, there are moral and ethical dimensions that are rooted in institutional arrangements that impact ecological transaction management (Evanoff, 2005).

Transaction analysis assumes trade-offs will be made between economic profitability goals and ecologically formulated accounting principles. Accordingly, accounting and auditing ethics education should be restructured to include both normative, profitability and corporate governance, as well as moral dimensions of institutional legitimacy and accountability.



The Integration of Three Ecological Constructs in Accounting for Sustainability

Ecological and land ethics have expanded the scope of conventional ethics education beyond the accounting professional code of ethics in business and society. It has broadened accounting ethics education to integrate auditor professional codes of conduct with environmental, social, and economic accounting reporting issues. Accounting ethics is now broadly embedded in ecological and philosophical ethics, where compliance reports of sustainability in environmental and natural resources management have become part of accounting reporting systems.

The ecology of anthropology and sociology approaches have well-established and published research on sustainability, conservation and ecological resource management. Sustainability accounting research, education and professional practice can benefit from the work being done in ecological anthropology and sociology.

AN OVERVIEW OF SUSTAINABILITY EDUCATION IN ACCOUNTING PROGRAMMES

Virtue ethics and professional identity and/or image have been suggested as ways and means for restoring transparent and credible financial reporting systems (Lail *et al.*, 2017). Ethical issues in accounting are commonly pronounced when there is fraudulent financial reporting that has a significant effect on the performance of business organisation and the welfare of society. Thompson and McCoy (2016) noted that the accounting practicing profession are more prone to consider ethical issues when there is a financial crisis compared to academicians.

The Fraudulent Financial Crisis and the Call for Ethics in Accounting Education

Business schools and accounting programmes have reacted to the financial crisis by encouraging faculty members to address ethical issues in their courses. Courses in accounting and business ethics advocate proactive learning through dialogue and inquiry to address ethical issues. In accounting, these methods included cases, group projects, role playing, and guest and instructor lectures that involve students in the learning process through participation in class discussions (Sisaye, 2011).

Effects of External Environmental Factors on Accounting Ethics Education: The Background to Sustainability Education

The accounting and auditing education environment has significantly changed since the mid-1980s. The stock market crash, dissolution of savings and loans institutions, increases in business bankruptcies, and liability suits against public accounting firms have all impacted accounting and auditing education. The 2000s financial scandals at Enron, Arthur Andersen, and WorldCom

significantly increased governmental and public inquiries into whether or not accountants and auditors participated in covering these scandals.

The outcomes of financial scandals at Enron and Arthur Anderson, followed by the collapse of the housing industry and the stock market, generated increased interest in accounting ethics instruction in higher education. These ethical failures were noted by the Sarbanes Oxley (SOX) Act of 2002 that called for regulating the accounting profession and establishing an oversight body to monitor accounting firms to avoid future crises (West, 2018). The accounting profession has been subject to criticism for not meeting its professional obligations.

It should be noted that ethics is a sustainability issue that is incorporated in corporate social responsibility (CSR). It became apparent to accounting educators that ethics education should be incorporated in the curriculum for training students as well as accounting and auditing professionals to make them aware of the moral and social issues arising in an organisation's decision-making processes.

However, the theory and methods in accounting ethics education has focused primarily on professional ethics and social responsibility. An ecological approach for designing and delivering a course in sustainability accounting has not yet materialised. Accordingly, sustainability has been viewed as a subject of CSR that is consonant with accounting and business ethics.

The Background for Sustainability in the Accounting Curriculum

Sustainability accounting has been largely limited to the triple bottom line (TBL) approaches of social and environmental reporting, focusing on accountability and performance (Collison *et al.*, 2014). A review of the research by Wu and Shen (2016) indicated that sustainability development research varies widely and has focused on popular topics related to ethics and the environment. There is an awareness among colleges and universities that the theory and development of sustainability should be integrated into accounting education.

Sustainability has incorporated both national and international development organisations' concern of environmental and ecological management into accounting and auditing education. The sustainability framework has related ecological and economic assumptions in corporate practices and behaviours to develop critical and reflective thinking by applying new and different perspectives from the social and environmental sciences (Brown *et al.*, 2017). Accounting and auditing ethics education focusing on sustainability initiatives and reporting would now become part of the integrated business sustainability and accounting education curriculum.

A sociological and anthropological ecological oriented sustainability education encompasses a systemic/holistic integration rather being limited to stakeholder issues into the accounting and business curriculum in standalone courses. In accounting, the process of sustainability integration

is currently at the earliest stage of the ecological evolutionary process of educational development. Accordingly, the accounting curriculum is likely to go through the process of evolutionary changes in natural and resources management, the environment, competitive forces, as well as other external factors that shape ecological processes of organisational change and development and accounting education.

The teaching of ethics in accounting is commonly associated with upper-level accounting courses, most notably in auditing courses. Most universities have found integration instrumental in teaching ethics in upper-level courses. From a sociological and anthropological perspective, the most viable alternative approach is for the integration of sustainability and ecology into accounting education and professional practices.

The Ecology of Anthropological and Sociological Implications for the Integration of Sustainability in Financial Accounting Reports

The argument in favour of integration of sustainability into the accounting curriculum in financial and auditing courses is assumed to have the potential role of enabling students to understand the overall picture of the business enterprise and implications in organisational resources allocation decisions. Recent developments in business and governmental policies towards environmental and sustainability issues have increased the need for an holistic view of business. The approach calls for the integration of sustainability into accounting education.

In accounting, there is a movement towards integration of topics that cover social, environmental and resource issues. Integration of sustainability in accounting education has focused on CSR and TBL reporting: financial, social and environmentally sustainable reporting.

THE INTEGRATION OF SOCIAL SCIENCES DISCIPLINARY APPROACHES OF SUSTAINABILITY IN BUSINESS AND ACCOUNTING EDUCATION

Sustainability has been a subject of interest in sociology and anthropology for many years because it addressed ecological resources, organisational development, community welfare, economic growth and national geographical boundaries. Accordingly, the integration of sustainability into the accounting curriculum has been influenced by evolutionary changes in natural and resources management, the environment and competitive forces, as well as other external factors that have shaped accounting education. The most notable change from accounting ethics is the shift to sustainability education and practice.

Within the ecological approach, there is the presupposition that organisational systems undergo an evolutionary process of change and development. Accordingly, organisational sociology and ecological anthropology provide the evolutionary context for the integration of sustainability into the financial, managerial accounting, and auditing courses.

The Ethics of Sustainability in Accounting Education

Sustainability goes beyond environmental concerns. It addresses a wide range of ecological and resource management ethical issues that are associated with economic and financial indicators of performance that affect the overall strategic planning processes of business organisations.

Formal education in ethics has provided the framework for addressing questions of moral obligations and societal responsibilities. However, accounting and auditing policies impact public policy decisions with broader financial, economic, and societal implications. Accounting policy choices are contingent upon environmental and ecological factors that involve moral choices of sustainability affecting organisations and society. Sustainability of ecological and natural resources management issues are topics beyond accounting ethics education. Ecological issues call for collaborative research with other disciplines to make them relevant in addressing broader social and environmental issues pertinent to sustainability accounting and reporting.

The culmination of ecological and environmental issues in sustainability accounting and their subsequent impact within local, regional, national, and global/international communities is a subject of ecological ethics that has the potential to broaden business ethics research beyond corporate normative practices. Ecological and environmental accounting has thus broadened the functional focus of accounting ethics education beyond auditors' professional codes of conduct and corporate governance to incorporate ecological and environmental issues as central to sustainability accounting education.

Ecological and Environmental Approaches to Sustainability in Accounting Education

When universities offer courses in sustainable development, they can positively impact the sustainability and ethical behaviour of students in ecological and land preservation, waste management, and mode of transportation (Sisaye, 2011). Sustainability has impacted the scope of accounting education to incorporate social and environmental issues (Collison *et al.*, 2014; and Boyce *et al.*, 2019).

A study by Hutaibat (2019) highlighted that the integration of sustainability reporting in financial and managerial accounting courses created an element of cognitive dissonance since it challenged students' existing knowledge of financial reporting. In general, the students' reaction to the project was mixed: some considered that sustainability reporting was beneficial to their discipline and expanded their horizons beyond financial reporting. Others did not find relevance in the introduction of sustainability into the courses and preferred the financial focus in accounting reporting. Despite these constraints, the passage of the SOX Act has formalised these concerns and broadened the scope of accounting reports to include environmental conservation and sustainability development.

There is the realisation that there are ethical obligations for both corporations and society at large to use natural resources responsibly, with a focus on sustainability for the future generations. It is, therefore, appropriate in accounting contexts to support ecological concerns that can develop to individual convocation and responsibility to sustain ecological ethics for the preservation of the health of the land: in this context, land includes soil, water, plants, animals, and other living organisms. The land ethics approach has an accounting ethics component that advocates land use practices that are environmentally beneficial to restore ecological health to sustain community welfare (Anderson-Wilk, 2008, pp.142-144; Palmer, 2007).

To this effect, Thiele (1999) elaborated the evolving relationships among ecology, environmental ethics and sustainability (see also Cowdin, 2008). She formulated that “ecology pertains to the study of relations of interdependence within biological communities. Ecology is inherently related to sustainability. The two concerns stand together” (Thiele, 1999, p.29). In general, ecosystems are made up of interdependent co-existing environmental and social systems that have enduring and sustaining relationships. Ecology and natural resources management have sustainable relationships that are “amenable to ethical formulation. Ethics might be defined as a system of mores that arises out of and sustains certain relations of social interdependence” (Thiele, 1999, p.29). These ethical considerations provide the foundation to sustain and conserve resources for future generations.

Therefore, ecological ethics education has become central in sustainability management training. When ecological ethics focuses on sustaining the interdependence of social and biological relationships, sustainability accounting education can be broadened to include environmental concerns and issues that are related to human morality and individual responsibility. Sustainability education is inherently an ethical issue that is embedded in the conservation decisions and the management of ecological and natural resources to balance the economic, social, and environmental objectives of organisations, communities, and societies. Accordingly, social and environmental reporting has constituted business sustainability programmes.

CONCLUSIONS

An Overview of the Ecological Anthropology and Organisational Ecology (Sociology) Contributions to Sustainability Accounting Education

This paper has presented the extent to which the ecology of sustainability, particularly from ecological anthropology, and organisational sociology can be applied to examine the extent to which ecological factors have shaped accounting ethics education and practice. Ecological anthropology has related ecological and land ethics to cultural and social forces that have shaped sustainability development and education. On the other hand, the organisational ecological (sociological) view of sustainability development has related the resources-based transactions costs approaches overall

framework for the integration of sustainability into the accounting curriculum. The research has elaborated that sustainability accounting education can best be taught effectively if it is integrated in the overall accounting curriculum in both financial accounting and auditing courses.

Central to the organisational ecology (sociology) and ecological anthropology assumptions is that a business enterprise is a sustainable living organisation that has a functional commitment to conserve ecological, natural resources, to promote environmental management of sustainability beyond financial and economic performances. The premises in the ecology of sustainability suggest that accounting reports (for example, TBL) provide sustainability reporting of social and environmental data. These reports present part of the information that are intertwined, and interdependently linked with existing ecological, natural resources, and geographical systems. Organisational systems, including accounting reporting systems as living organisms, have enduring and sustaining characteristics and relationships with both the internal and external environmental factors over the course of an organisation's life. These are functional objectives that are consonant with the values, mores, cultural and traditional values that govern the behaviours and actions of individuals, groups and community for the conservation of existing resources to sustain future generations.

Both ecological anthropology and organisational ecology (sociology) of sustainability are embedded in the conceptual framework of functionality and sustainability for the conservation and development of ecological and natural resources to balance the Darwinian population ecology underpinnings of economic, social, and environmental objectives of organisations, communities and societies. The contribution of this paper to the accounting education research is the extension of the functional assumptions of anthropology/sociology, suggesting that sustainability accounting education has a functional role in expanding the scope of the curriculum by incorporating environmental and ecological issues in the education and training of accountants and business professionals. Simultaneously, the functionality of accounting education is to lay the foundation that it has a purposive role in the accounting practice profession. The functional goal is to promote sustainability reporting that advances TBL reports as having purposive roles for improving business performance, promoting the sustenance and long-term management of a nations' natural resources. It is argued that the ecology of the functionality of sustainability education in accounting contributes to the economic and financial accounting reporting objectives of business organisations' profitability. This is augmented when these functional roles are in congruence with social and environmental goals that promote the well-being of individuals, communities, and societies at large.

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BIOGRAPHY



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