The Sustainability Framework in Anthropology: Applications to Accounting Ethics

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The anthropology literature has examined sustainability within the broader context of ecological environment, and business and society. Anthropology has addressed how cultural and social forces have evolved in ecological and land ethics in accounting education and practice. The research contribution of anthropology in accounting education is that anthropology has been concerned for a long time with sustainability, ecology, environmental management, and conservation of natural resources. The purpose is to integrate ecological and land ethics to study the integration of sustainability into the accounting curriculum. When anthropology is integrated with accounting ethics, it broadens the attitudes of students and accounting professionals.

Keywords: accounting ethics education, sustainability development, ecological ethics, ecological anthropology, land ethics

INTRODUCTION

Sustainability in anthropology has been associated with the ecological anthropology. The ecological approach in anthropology explains changes and developments within the environment as continuous processes. Ecology thus argues that the environment is an important factor in the organizational adaptation and selection process (Aldrich, 1979: and Carroll, 1984). Ecology shapes political systems and governance structures (Robbins, 2011). Environmental changes affect the population of organizational systems, structure, strategy, functions, procedures, and day-to-day activities (Barron, 1999). The political and cultural ecological and environmental systems of nations and countries shape variations and similarities of accounting procedures and practices (Gernon and Wallace, 1995). Environmental changes may lead to the development of new policies and procedures in organizations to address these issues at the institutional level. Any substantial shifts in the environment call for changes in strategies and policies to maintain organizational stability and functional adaptation.

The organization-environment interrelationships to sustainability shapes the adaptation processes of education to environmental resources management, improvements in production, services, and management systems. Anthropological research has noted the importance of sustainability in environmental and natural resources conservation. Sustainable development and sound environmental management programs comprise the primary components of ecology for establishing anthropological ecological and educational systems relationships.

The ecological approach has become prominent in the education of sustainable development in the environmental and social sciences. Sustainability has now become the emerging business discipline that has incorporated both national and international development organizations concern of environmental and

ecological management into accounting education. The anthropological sustainability framework has related ecological and economic assumptions in corporate practices and behaviors to develop critical and reflective thinking by applying new and different perspectives from the social and environmental sciences (Brown et al., 2017). Anthropology has developed the underlying social sciences framework that can be integrated into accounting ethics education by incorporating integrated sustainability reporting of financial/economic, social, and environmental performances.

Anthropology and Sustainable Development

The Brundtland Report (1987) has addressed the important contributions of the social science disciplines to sustainable development in developing economies. Sub-fields in ecology and evolution, such as ecological anthropology, organizational ecology, among others have developed theories and methods to facilitate the study of sustainable development in developing economies. The report has presented a transactional cost analysis approach that related natural resources management, agricultural production, food supply, environmental protection, and global climatic changes with ecological changes brought by drought, floods, and other natural disasters. Accordingly, resources transactions cover all areas of production and consumption that occur when humans interact with the environment to exploit and conserve natural resources.

The anthropological ecological approach is advanced because the subject of sustainability, conservation and ecological resource management have been well established and published before it got contemporary research interests in the business disciplines. Sustainability accounting research, education and practice can benefit from the work being done in anthropology.

Anthropology as a social science discipline has been involved in sustainable development primarily in developing agrarian economies. Prior research on sustainability have argued the importance of environmental education in universities educational curriculum (Sterling, 2013), including the accounting education and practice (Hopwood, 2009; and Hopwood and Fries 2010). The ecology of sustainability development in business has focused on ethics, corporate social responsibilities, and environmentally sustainable management. There are two constructs from anthropology: ecological and land ethics that are integrated to establish a functional synergy with accounting ethics education.

Research Framework: The Sustainability Approach in Anthropology

Sustainability has been a subject of interest for many years because it addressed ecological resources, organizational development, community welfare, economic growth, and national geographical boundaries. Within the anthropological approach, there is the presupposition that organizational systems undergo an evolutionary process of change and development. Accordingly, anthropology provides the evolutionary context for the integration of sustainability into the accounting education and practice. Accounting has primarily focused on financial and economic practices. The anthropological approach can be applied to broaden the scope to include ecological environmental and social issues of sustainability in addition to financial reporting to accounting principles and practices. It can be argued that sustainability is a broad subject with a mix of several interdependent environmental factors as it relates to economic and social development. Accordingly, accounting principles have evolutionary ecological functional roles that are beneficial for sustainability development in communities and regions.

The ecological anthropology, which is founded on the evolutionary change processes provides the context within which sustainability accounting education can be studied as having a transformational educational process, has two dimensions: cultural and political. Cultural anthropology has been concerned with natural resources, cultures and environmental impacts, land management and earth sciences (Kopnina, 2013). Political ecology has broadened the scope by studying how policy makers can mobilize political power in managing land use and distribution, and the management and utilization of natural resources (Robbin, 2011). The ecological framework of cultural and political ecology of anthropology has two constructs: ecological and land ethics. It has been extended to study the evolution of sustainability education and its integration in the accounting ethics education and practice.

The paper is divided into four sections. Section one addresses the evolution of sustainable development in the social sciences literature from the disciplines of ecological anthropology. Section two describes how the ecological anthropology approaches from ecological ethics and land ethics are formulated to study the evolutionary process of sustainable development in business and society. Section three extends these ecological approaches and their integration of sustainability into the accounting ethics education, and practice. The last section, section four, is the conclusion. It highlights the significance of the ecological anthropology approach in advancing sustainability accounting ethics education and practice.

Section One: The Anthropology View of Sustainable Development

The anthropology literature to sustainable development has focused on ecology. Ecology broadly covers, natural and environmental resources, and cultural relations and interdependencies. Ecological anthropology assumes that sustainable development is an evolutionary process that transforms societal development over time. As an evolutionary change perspective, the ecological approach views sustainability within the broader context of the organization environment: community, nation, and ecosystems focusing on cultural or social transformation.

Anthropology has addressed culture, language, beliefs, and religion as being part of the social and political systems. The discipline has focused on the influence of national and local organizational, and political systems and their subsequent influences on culture, people, and, in general, socio-cultural systems.

THE CULTURAL AND ETHNOGRAPHY STUDIES IN ANTHROPOLOGY: APPROACHES TO COMMUNITY DEVELOPMENT

In anthropology, ecological studies have utilized ethnographic and socio-cultural approaches. Anthropology has expanded research on ethnographic, culture and nature-environmental relationships and how human activities can affect either the preservation, destruction, neglect and use of land, forests, vegetations, 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 (Wilow and Wylie, 2014, p. 229). In addition to culture, technology, organizational typologies, and accounting information systems comprise 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 habitat the environment (Stringer, 2016). Kopnina (2013) has stressed the importance of incorporating culture, ethnographic insights in sustainability development. The premise is that anthropology and ecology can provide the social and environmental contexts to explain why sustainable development is relative which can result in economic inequality and differential standards of living among communities. When education is presented within the context of culture, it is teaching students that that there are "cultural and universal variations in human relationship with nature" (Kopnina, 2013, p.223). She suggested that sustainable development education is beyond economics and involves culture and ecological issues. Anthropological approaches can thus contribute to the understanding of traditions, cultures and social attributes of indigenous populations which can enhance sustainability education.

Crate (2011) argued that ethnographic and cultural anthropology studies have examined global climate change within the context of local, national, and international contexts. While cultural studies are important in climate change that affect agricultural practices and environmental change, ethnographic studies have examined physical and sociocultural practices that influence the interactions of culture, local people, and ecology. Anthropological studies that document community observations, perceptions, and responses to local people for climate change and their adaptive strategies to these changes have called for an interdisciplinary approach that combines both cultural and ethnographic studies (pp. 177-181). The agricultural practices of local people inhabitation in the utilization of natural resources including water, land, and forests, have subsequent ecological implications.

POLITICAL ANTHROPOLOGY AND SOCIAL SOUNDNESS ANALYSIS (SSA): THE EVOLUTION OF SUSTAINABLE DEVELOPMENT IN ANTHROPOLOGY

Political anthropology has long recognized the role of administrative and organizational systems in societies and communities as governing agricultural land use, farming practices, pastoral herding activities, and population migration movements. It has focused on conservation policies with local land management and farming practices as sustainability concerns for emerging economies. Ecological anthropologists have primarily studied the economies and political systems of emerging societies in developing nations. They have incorporated the study of cultural and economic development, industrial and business growth to the social systems adaptation process. These social systems that affect sustainable development include population distribution, land use, and local agrarian practices in the management and use of natural environmental resources and conservation patterns.

Anthropology is the primarily field that developed the social soundness analysis (SSA) approach to sustainable development programs. The approach has focused on how the needs of the people can be aligned with technological developments to minimize the effect of technology on altering/changing indigenous/local modes of living and social life. Kottack (1999) has related the SSA approach to "sustainable development aims at culturally appropriate, ecologically sensitive, self-regenerating change" (p. 26). SSA framework suggests that accounting sustainability reports could include environmental resources conservation and management. The contribution of political ecological anthropology to sustainability development is that the influence of policy makers on the level of acceptance of sustainability programs depends on how well these programs can best promote economic development programs that are compatible with existing cultural practices (Bozzoli, 2000; Latour et al., 2018; and Stone, 2003). The SSA has been used by the United Nations and other international donor organizations in the United States and Europe to develop both quantitative and qualitative indicators of sustainability development to manage and fund agricultural and industrial development projects in developing countries.

According to the Brundtland (1987) Report, the objective of sustainable development is to balance the present and future needs of both present and future generations consistent with existing cultures and levels of economic development. The report embraced the SSA framework to advance agricultural and economic development programs in developing countries. Consonant with SSA, Custance and Hilier (1998) suggest that there is the need for the development of social indicators. These indicators are primarily ecological and environmental related to land, soil, water, air, and natural resources that are not substitutable (p. 283). They elaborated that "economic growth does not merely cause pressures on the environment. It brings benefits – income, employment and goods and services which people need and improve their welfare. One may argue about the relative merits of sustaining economic growth and improving environmental quality. But a balanced assessment of sustainable development must report on both aspects – not just the pressures caused by economic growth, but also the benefits that it brings. The model now also needs to incorporate the social aspects of welfare" (p. 284).

Custance and Hilier (1998) proposed that a balanced indicator that utilizes social, economic, environmental, and ecological resources is the viable approach to promote sustainable development. The approach specifies the targets at both the local and national scale levels. In most cases, the data that are required are available at all sectors of the economy – environment, transport, energy, industry among others. These are pertinent to sustainable development when they are developed using "standard definitions and classifications" recommended by the United Nations (UN), the European Organization for Economic Cooperation and Development (OECD), and other international development organizations (p. 286). In 2015, the United Nations established a sustainable agenda with the goal of establishing by 2030 a world environment that is sustainable, equitable, prosperous and healthy for all inhabitants (UNSDG, 2021).

Kopnina (2016) suggested that policy makers concerned with development and conservation can benefit from political anthropological approaches that suggest community involvement of local people in utilizing indigenous traditional practices. Conservation policies is an ecological justice approach in environmental management if it is directed to benefit, not to disadvantage them. This is consistent with an

SSA approach to local development that calls for participatory involvement of indigenous people in the development process. It has an ethical foundation for the managing and conservation of natural resources.

Political ecological anthropologists have been concerned with national and local politics that govern human land relations and interactions with the natural and social environments. They have applied functional approaches to examine the role of political institutions in the management of environmental and structural changes, and how politics shape the process of social change and adaptation strategies involving culture, people, and society. The ecological anthropological approach overlaps with the functional assumptions of organizational ecology-sociology that organizations contribute for the maintenance of the social systems. In terms of functionality, organizational systems influence the formation and operations of class and economic structures to regulate social and political order as well as environmental resources management. The process of natural selection within a population of organizations influences social behavior and interactions among groups, physical and psychological adaptations, and the social structure of organizations (Carroll, 1984; and Hannan, 1998).

THE ANTHROPOLOGY VIEW OF BUSINESS SUSTAINABILITY

Anthropology has focused on community and societal perspectives that sustainability has for community and national development programs. Anthropology has specifically examined the influence of national and local organizational and political systems and their subsequent influences on culture, people, and in general socio-cultural systems. This approach is consistent with the view that business organizations as living ecological systems are in a constant sustenance mode of operation to adapt their economic growth and industrial development strategies within their organizational population community, as well as the social wellbeing and cultural development programs of the society at large.

Anthropology assumes that business organizations have self-interest and concern to align their business activities with the welfare of external parties. It has the premise that planned ecological and economic systems for economic growth constitute the foundations for redistributive justice under capitalist development (Latour et al., 2018). Businesses promote balanced development and redistribution of growth when they undertake economic development practices in the communities and regions where they have their business operations. Notable examples in the United States are the Hershey Candy in Hersey Pennsylvania, and Cocoa Cola in Atlanta, Georgia. Accordingly, business strategy, competition and cultural adaptations have ecological practices that are intertwined to form the foundation for sustainable development. In other words, when business sustainability interfaces with societies' community development and well-being, the educational practices can be related to conservation, environmental health, ecological and land ethics.

Section Two: Anthropology Constructs of Sustainable Development: Ecological Ethics and Land Ethics

Anthropology has been concerned with the subject of sustainability and has developed ecological theories and methods that can be extended to examine the interrelationships of ecology and sustainable development. Sustainability development has ethical implications when studied as an ecological issue from the perspective of ecological anthropology. There are two constructs: ecological ethics and land ethics, that are relevant for the study of accounting and business professional ethics education.

ECOLOGICAL ETHICS

From anthropological perspective, sustainability has economic, technological, as well as market development dimensions and social components to safeguard and protect the environment and natural resources. Therefore, sustainability is embedded in ecological ethics which suggests that those policy makers 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. 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 organizational and anthropological ecological relationships.

Ecological ethics focuses on the anthropological concerns of the environment addressing social justice concerns of redistribution and growth, agriculture and land use management, exploitation of valuable natural resources, empowerment, social change as well as conflict resolutions (Kopnina, 2012). In developing economies, ethics in agricultural sustainability assumes those resources: land and water, among others are available and managed with care and equity to sustain locality livelihood. However, the danger is that as resources like water, air, soil become scarce, the attempt to monopolize these scarce resources is intensified particularly by business interests. The provision of access to these resources assumes equity in resources distribution. Equity and sustainability are basic ecological principles that are consonant with "ethical values of conservation" (Clark, 1995: 242). Clark (1995) argued that there must be collaboration among historians, ecologists, and development specialists to work together to nurture economic development, conservation of land and preservation of natural resources. Thiel (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 fulfill community and society well-being (Cowdin, 2008). Thiel (1999) and Cowdin (2008) approaches of ecological ethics of spatial/geographical and temporal extension of environmental ethics can be extended to accounting ethics education of the human community through analysis of the interdependence in both genetic and cultural aspects of business and society.

ECOLOGICAL (LAND) ETHICS' LINKAGE TO ENVIRONMENTAL ETHICS

Ecological ethics has broader implications for environmental and resources management. Environmental ethics, as a subset of ecological ethics, focuses on human relationships with nature, utilization, and conservations of natural resources (Rozzi, 1999, p. 118). Sustainable environmental management and use of natural resources and keeping the viability of the earth's ecosystems are integrated into the products and services of organizations for market planning and growth. Accordingly, sustainability development can be referred as 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 recognized.

Kopnina (2012) suggested that environmental ethics has shifted the focus of environmental education to education for sustainable development (ESD). ESD focuses on resource distribution and environmental conservation that incorporates biology, history in addition to culture and ethnography. The principal rational in that ESD education can teach students about history of society, agriculture, poverty and land resources, human health, animal rights and reproduction. ESD can broaden anthropological based education that focuses on culture, ethnography, and ecology. While ecology is more integrative in orientation than environmental concerns, ESD approaches environmental ethics within the context of sustainability.

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 maximization 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 organizational ecology transaction cost analysis dimension.

The transaction cost approach assumes that there are differences among organizations "because transactions differ so greatly, and efficiency is realized only if governance structures are tailored to the specific needs of each type of transaction" (Williamson, 1987, p.568). Transaction then becomes the unit of analysis. He noted that managing transaction costs are necessary because they constitute "the crucial importance of organizations for economizing on such costs. This brings organization theory to the fore since choice of an appropriate governance structure is preeminently an organization theory issue" (p.568). In other words, transactions cost analysis become the key in programs that involve tradeoffs between economic development and the exploitation of environmental and natural resources. Managing transaction costs can enable organizations to adapt to their environmental surroundings, and institute sustainable environmental management program.

The transaction cost approach assumes that human and societal decisions have economic consequences that impacts sustainability business; and these transactions transcend economic and ecological objectives. Moreover, there are moral and ethical dimensions that are rooted in institutional arrangements which impact ecological transaction management (Beckman and Pies, 2008). Transaction analysis assumes tradeoffs 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 LAND/ECOLOGICAL ETHICS CONSTRUCTS IN ACCOUNTING FOR SUSTAINABILITY

Ecological and land ethics can be integrated to expand the scope of the conventional ethics education beyond the accounting professional code of ethics in business and society. The ecological framework of sustainability has broadened accounting ethics education to integrate auditor professional codes of conduct with environmental, social, and economic accounting reporting issues presented in triple bottom line (TBL) reports of financial, social, and environmental performances (AICPA, 2021).

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 the TBL accounting reporting systems. Ecological anthropology provides an integrative framework to study the integration of sustainability into the accounting education. The focus is on the professional accounting education practices as it relates to financial reporting.

Section Three: An Overview of Sustainability Education in the Accounting Program

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). While academic research compared to the practice journals in the accounting profession have maintained consistent interest in ethical and sustainability issues in accounting reporting, the scope of research interest has been limited and influenced whether there is sufficient interest in the subject among accounting policy makers and practioner. Despite these constraints, in business administration and accounting, sustainability has attracted scholarly research and pedagogical publications.

Ethical issues in accounting are commonly pronounced when there is a financial fraudulent reporting that have significant effect on the performance of business organization 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. These ethical failures have called for regulating the accounting profession and establishing an oversight body to monitor accounting firms to avoid future crisis (West, 2018). The accounting profession has been subject to criticism for not meeting its professional obligations.

THE FINANCIAL FRADULENT CRISIS AND THE CALL FOR ETHICS IN ACCOUNTING EDUCATION

Business schools and accounting programs have reacted to the financial crisis by encouraging faculty members to address ethical issues in their courses. Courses in accounting and business ethics advocate a proactive learning through dialogue and inquiry to address ethical issues. In accounting, active learning involved cases, group projects, role playing, guest and instructor lectures that involve students in the learning process through participation in class discussions (Loeb, 2015; and Sisaye, 2011). The scope of active learning has been advocated in the integration of ethics in the accounting curriculum and standalone accounting ethics course.

The movement towards integration of ethics in business and accounting has been spear headed by the Association to Advance Collegiate Schools of Business (AACSB International), the organization responsible for accrediting business school and accounting programs. AACSB has recommended in favor of integration of topics related to corporate governance, ethics, and social responsibility into the business curriculum (Sisaye, 2011). Following the AASCB International guidelines, business school deans and accounting program administrators have advocated the implementation of integration as the best approach to overhaul the business curriculum. They have called for integration of sustainability, ethics and social responsibility in functional business courses including accounting to provide the students with an overall picture of the economy, polity and society that affect business organizations' resource allocation decisions and competitive behavior. Resource constraints, staffing shortages, limited availability of faculty expertise in the relevant subject areas coupled with changes in the business environment have supported integration as the best approach for incorporating current topics such as ethics and sustainability into the business and accounting curriculum.

Following AACSB International recommendations, there has been an increasing trend towards the integration of social and behavioral approaches of sustainability into business and accounting courses. These recent developments in sustainability management and reporting have been influenced largely by the ecological conceptual framework derived from external environmental factors.

EFFECTS OF EXTERNAL ENVIRONMENTAL FACTORS ON ACCOUNTING ETHICS EDUCATION: THE BACKGROUND FOR SUSTAINABILITY EDUCATION

The accounting and auditing education environment have significantly changed since the mid-1980's. 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 2000's financial scandals at Enron, Arthur Andersen, and WorldCom significantly increased governmental and public inquiries into whether or not accountants' and auditors' participation in covering these scandals.

The outcomes of financial scandals: Enron and Arthur Anderson and followed by the collapse of the housing industry and the stock market generated increased interest in accounting ethics instruction in higher education. It should be noted that ethics is a sustainability issue that is incorporated in corporate social reporting (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 organization's decision-making processes (Ponemon and Glazer, 1990).

For example, Hopwood (2009) suggested that an accounting theory with accompanying measurement techniques for sustainability has not yet been developed. It is at present only in preliminary stage as the subject of sustainability has focused exclusively on public interest and corporate governance issues of business. Accordingly, sustainability has been viewed as a subject of corporate social responsibility that is consonant with accounting and business ethics.

The Background for Sustainability in the Accounting Curriculum

The triple-bottom-line (TBL) reporting of environmental, social, and economic objectives reflects business sustainability development strategies that are integrated into business organizations' core businesses. Transparency, accountability, and sustainability have become indicators of both ethical and economical performances. Accordingly, corporations and accounting firms (EY, 2021: and KPMG, 2010) have expressed interest on the impact that sustainability has on the well-being of communities where they conduct business.

Corporate boards are realizing that sustainable development is an essential part of corporate ethical governance (AICPA. 2021; and EY, 2021). Accordingly, the number of companies publishing sustainability--or corporate economic, environmental, and social responsibility (TBL)--reports continues to grow. These reports highlights policies and programs that companies have targeted on economic, environmental, and social objectives. Sustainability accounting has been largely limited to the TBL approaches of social and environmental reporting, focusing on accountability and performance (Gibassier and Unman, 2014).

Parker (2005) argued that social and environmental accounting falls under the general framework of stakeholder theory. Corporations provide social and environmental disclosures voluntarily in response to the interests/demands of stockholders. The stakeholder theory views profitability goals as requiring a tradeoff between social-environmental and economic objectives (pp. 845-846) thereby expanding the scope of the groups to which the corporations perceive an obligation.

Ecology embodies stakeholder theory along with corporate governance structures as determinant of corporate sustainability. The stakeholder theory assumes that business organizations have several stakeholders besides stockholders, including employees and customers: both institutional and individual; the local community; creditors; government regulatory organizations and/or agencies; public interest groups; environmental groups; trade associations; and competitors. (Parmar et al., 2010). In accounting, the stakeholder theory focuses on environmental and social reporting and management awareness's and interests to responding to contending groups with the business external environment. The stakeholders' approach is nested in legitimacy theory as part of a corporation's role in educating the public about those environmental issues that affect society.

The legitimacy theory is focused on ensuring that the social, political, and economic interests of corporations are in balance (Suddaby et al., 2017). Financial accountability then becomes a legitimate duty that requires corporations to provide reports of their business actions so that they can be made accountable and held responsible for utilization of the corporations' financial assets. Accordingly, moral, and ethical dimensions are incorporated to justify financial accountability and legitimacy for the preservation and conservation of environmental resources. Corporations can prepare reports that integrate ecological anthropological framework to highlight the impact of their businesses on social and environmental programs such as pollution control, resources, and environmental conservation to achieve broader market penetration which can sustain their products and services.

An anthropological oriented sustainability education encompasses a systemic/holistic integration rather than limiting to stakeholder issues into the accounting and business curriculum. 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, and other external factors that shape ecological processes of organizational change and development and accounting education.

The argument in favor of integration of sustainability into the accounting curriculum in financial and auditing courses is assumed to have the potential role to enable students to understand the overall picture of the business enterprise and implications in organizational resources allocations decisions. Recent developments in business and governmental policies towards environmental and sustainability issues have increased the need for a holistic view of business. The approach calls for the integration of sustainability into accounting education curriculum. These concerns go beyond the public and/or stakeholder approach

of business ethics. They are broader addressing the ecological, sociological, and anthropological dimensions of business performance in societies.

THE ETHICS OF SUSTAINABILITY IN THE ACCOUNTING EDUCATION

The underlying rationale in formal accounting ethics education in the classroom is "based on the premise that moral development can be enhanced through the educational process" (Huss and Patterson, 1993, p. 235). Ethics increases the moral depth, cognitive development, analytical and ethical reasoning of students (Ponemon and Glazer, 1990). Accordingly, ethics and social responsibility are now incorporated in the auditing curriculum. However, ethics courses have limited coverage of environmental issues. 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 organizations.

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. Gray (2013) applied the interpretive-critical framework and noted the difficulty of teaching sustainability in accounting conceptually and practically, because the literature in finance and accounting is theoretically in conflict with sustainability. This criticism alludes to the current limitations in developing a single report that integrates financial, environmental, and social data/measures. An incremental approach is conceptually in conflict with the concept of sustainability, which is an integrative and calls for an interpretive approach. Consonant with the interpretive approach (see also, Gray, 2019), Saravanamuthu (2015) suggested a transformative learning pedagogy of deep learning that challenges the existing accounting framework of economic and financial dominance in reporting by a sustainability framework that focuses on ecological and environmental concerns. The transformative framework is student focused enabling them to critically evaluate existing financial reporting in relation to ecological and societal issues. Boyce et al. (2019) extended the sociological approach to incorporate liberal arts perspective in accounting ethics education. Whether the approaches are interpretive, sociological or transformative, they all suggest the learning process will enable to enlighten students perspectives by raising their level of consciousness to critical issues that accounting may impact on the economy and the society.

The inference from these studies is that accounting choices are contingent upon environmental and ecological factors which involve moral choices of sustainability affecting organizations and society. Sustainability of ecological and natural resources management issues are topics beyond accounting ethics education. This is necessitated by the realization that prospects for growth and survival of all levels of species are linked to current ecological and sustainability efforts to maintain reasonable living standards by protecting the environment. These issues are rich and complex, but they also have a long-term impact on society and the world community at large (Parker, 2005, pp. 856-857). 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 at the local, regional, national, and global/international communities is a subject of ecological ethics which 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.

ANTHROPOLOGICAL AND ENVIRONMENTAL APPROACHES TO SUSTAINABILITY IN ACCOUNTING EDUCATION

There is a trend among colleges and universities to incorporate sustainability as mechanisms for promoting changes in their educational programs (Albis, 2017). There is coordination of resources to teach environmental management, sustainable resources management, energy usage, garbage, and recycling

programs. They are leading in sustainability efforts to transform their administrative structures and academic programs (Rosen, 2020). When universities offer courses in sustainable development, they can positively impact the sustainability and ethical behavior of students in ecological and land preservation, waste management, and mode of transportation.

Sustainability education has positively impacted and have altered student and consumer behaviors about consumption of goods and services that favor companies with environmental management programs. These programs have improved the environmental and natural resources management performance of universities consistent with business and community interests. Sustainability practices are used to support water management, energy, and solid waste reduction, as well as facilities and hazardous materials management. Sustainable health education has been advocated to minimize the effect of industrial wastes on human health. Many universities have integrated sustainability concerns of public health, to educate students about a wide range of ecological issues addressing environmental preservation and maintaining the well-being of human populations (Bajracharya, 2009). The integration of sustainability in health education has broadened the scope of health management to encompass environmental and ecological resources for the sustenance of health and wellness in communities of local, national, and international boundaries.

Sustainability has impacted the scope of accounting education to incorporate social and environmental issues (Collison et al., 2014). Within the context of ecological anthropology, it can be assumed to be appropriate in accounting 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, Thiel (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" (Thiel, 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" (Thiel, 1999, p. 29). These ethical considerations provide the foundation to sustain and conserve resources for future generations.

Thus, 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 organizations, communities, and societies. Accordingly, social, and environmental reporting has constituted business sustainability programs.

Section V: Conclusion: An Overview of the Contributions of Anthropology to Sustainability Accounting Education

This paper has presented the extent to which the ecology of sustainability, particularly from ecological anthropology can be applied to examine the extent to which ecological factors have shaped environmental resources, industrial organizational structures, technological developments, government regulatory agencies, and natural resources endowment differences in communities and regions. Anthropology has related ecological and land ethics to cultural and social forces that have shaped sustainability development and education.

The research has discussed in depth the evolution of sustainability education by linking with accounting ethics, as well as the integration of social sciences disciplines in accounting education. It 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.

The outcome of sustainability in accounting is the Triple Bottom Line (TBL) reporting of financial, social, and environmental reports (Savitz and Weber, 2006; and Isaksson et al., 2015). Central to the ecological anthropology assumptions is that a business enterprise is a sustainable living organization 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 suggests that accounting reports, for example, TBL provide sustainability reporting of social and environmental data. These reports present part of the information that are interwind, and interdependently linked with existing ecological, natural resources, and geographical systems. Organizational systems including accounting reporting systems as living organisms have enduring and sustaining characteristics and relationships with the internal and external environmental factors over the course of the organization life.

More importantly, future research can examine the potential contributions from extending the anthropology approach to sustainability in accounting education in academia. The premise is that ecological anthropology of sustainability education in accounting promotes ethical and sustainable utilization of natural resources management. Sociologically, the assumptions are explicit in organizational ecology, when sustainability education has functional objectives that are consonant with the values, mores, cultural and traditional values that govern the behaviors and actions of individuals, group, and community. These functional behaviors have normative values when they govern the preservation and conservation of natural and environmental resources to sustain future generations.

The paper has highlighted that sustainability integration in accounting education has been influenced by anthropology (cultural and ethnographic). Anthropological constructs of ecological and land ethics 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 ecological transformations of organizations, communities, and societies. Given the co-evolution history of sustainability, the anthropological approach suggests that external environmental conditions have influenced the integration of sustainability materials into the accounting ethics education curriculum.

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REFERENCES

Albis, J.M. (2017). University sustainability: Assessing college sustainability rating systems. *Journal of Environmental Sustainability*, *5*(1), 1–24.

Aldrich, H.E. (1979). *Organizations and environments*. Englewood Cliff, NJ: Prentice-Hall.

American Institute of Certified Public Accountants (AICPA). (2021). E&Y- Seven Things CEOs and Boards Should Ask About Triple-Bottom-Line Reporting (aicpa.org). Retrieved December 16, 2021, from https://us.aicpa.org/interestareas/businessindustryandgovernment/resources/sustainability/ey-seventhingsceosandboardsshouldaskabouttriple-bottom-linereporting

Anderson-Wilk, M. (2008). Science and stewardship in a monolithic conservation movement: Facilitating positive change. *Journal of Soil and Water Conservation*, *63*(5), 142–146.

Bajracharya, S.M. (2009). Emphasizing sustainable health and wellness in a health education curriculum. *American Journal of Health Education*, *40*(1), 56–64.

Barron, D. (1999). The structuring of organizational populations. *American Sociological Review*, *64*(3), 421–445.

Beckman, M., & Pies, I. (2008, Autumn). Sustainability by corporate citizenship: The moral dimensions of sustainability. *The Journal of Corporate Citizenship*, *31*, 45–57.

Bennett, J.W. (2017). *The ecological transition: Cultural anthropology and human adaptation.* London: Routledge.
Boyce, G., Narayanan, V., Greer, S., & Blair, B. (2019). Taking the pulse of accounting education reform: Liberal education, sociological perspectives, and exploring ways forward. *Accounting Education*, *28*(3), 274–303.
Bozzoli, M.E. (2000). A role for anthropology in sustainable development in Costa Rica. *Human Organization*, *59*(3), 275–279.
Brown, J., Soderbaum, P., & Derenlowska, M. (2017). *Positional analysis for sustainable development: Reconsidering policy, economics and accounting*. London: Routledge.
Brundtland Report, Chair, The World Commission on Environment and Development. (1987). *Our common future*. New York City, NY.: Oxford University Press.
Carroll, G.R. (1984). Organizational ecology. *Annual Review of Sociology*, *10*, 71–93.
Clark, J.G. (1995). Economic development vs. sustainable societies: Reflections on the players in a crucial contest. *Annual Review of Ecology and Systematics*, *26*, 225–48.
Collison, D., Ferguson, J., & Stevenson, L. (2014). Sustainability accounting and education. In D. Gibassier & J. Unman (Eds.), *Sustainability accounting and accountability* (pp. 19–48). London: Taylor & Francis Group.
Cowdin, D. (2008). Environmental ethics. *Theological Studies*, *69*(1), 164–184.
Crate, S.A. (2011). Climate and culture: Anthropology in the era of contemporary climate change. *The Annual Review of Anthropology*, *40*, 175–194.
Curry, P. (2007). *Ecological ethics: An introduction*. Malden, MA.: Polity Press.
Custance, J., & Hillier, H. (1998). Statistical issues in developing indicators of sustainable development. *Journal of the Royal Statistical Society. Series A (Statistics in Society)*, *161*(3), 281–290.
Ernest & Young (EY). (2021). How an integrated sustainability strategy can help you stand out | EY - Global. Retrieved December 16, 2021, from https://www.ey.com/en_gl/assurance/how-an-integrated-sustainability-strategy-can-help-you-stand-out
Evanoff, R. (2005). Reconciling self, society, and nature in environmental ethics. *Capitalism, Nature and Society*, *16*(3), 107–114.
Gernon, H., & Wallace, R.S.O. (1995). International accounting research: A review of its ecology, contending theories, and methodologies. *Journal of Accounting Literature*, *14*, 54–106.
Gibassier, D., & Unman, J. (2014). *Sustainability accounting and accountability*. London: Taylor & Francis Group.
Gray, R. (2006). Social, environmental and sustainability reporting and organisational value creation? *Accounting, Auditing & Accountability Journal*, *19*(6), 793–819.
Gray, R. (2013). Sustainability + Accounting Education: The Elephant in the Classroom. *Accounting Education*, *22*(4), 308–332.
Gray, R. (2019). Sustainability accounting and education: Conflicts and possibilities: An interdisciplinary approach. In K. Amaeshi, C. Ogbechie, & Muthuri (Eds.), *Incorporating sustainability in management education: An interdisciplinary Approach* (pp. 1–20). London: Palgrave MacMillan.
Hannan, M.T. (1998). Rethinking age dependence in organizational mortality: Logical Formalizations. *American Journal of Sociology*, *104*(1), 126–164.
Hopwood, A., Unerman, J., & Fries, J. (Eds.) (2010). *Accounting for Sustainability*. London: Earthscan.
Hopwood, A.G. (2009). Accounting and the environment. *Accounting, Organizations and Society*, *34*(3–4), 433–439.
Isaksson, R.B., Garvare, R., & Johnson, M. (2015). The crippled bottom line – measuring and managing sustainability. *International Journal of Productivity and Performance Management*, *V 64*(3), 334–355.
Kopnina, H. (2012). Education for sustainable development (ESD): The turn away from 'environment' in environmental education? *Environmental Education Research*, *18*(5), 699–717.
Kopnina, H. (2013). Schooling the World: Exploring the critical course on sustainable development through an anthropological lens. *International Journal of Educational Research*, *62*(2), 220–228.

Kopnina, H. (2016). Revisiting the Loral complex: Deep ecology and biophilia in cross-cultural perspective. *Journal of Environmental Sociology*, *1*(4), 315–324.
Kottack, C.P. (1999). The new ecological anthropology. *American Anthropologist*, *101*(1), 23–35.
KPMG. (2010). *Reporting: Sustainability Briefing Paper*. In partnership with Accountability Journal.
Lail, B., Macgregor, J., Marcum, J., & Stuebs, M. (2017). Virtuous professionalism in accountants to avoid fraud and to restore financial reporting. *Journal of Business Ethics*, *140*, 687–704.
Latour, B., Stengers, I., Tsing, A., & Bubandt, N. (2018). Anthropologist are talking – about capitalism, ecology, and apocalypse. *Ethnos – Journal of Anthropology*, *83*(3), 587–606.
Loeb, S.E. (2015, January). Active learning: An advantageous yet challenging approach to accounting ethics instruction. *Journal of Business Ethics*, *127*, 221–230.
Palmer, C. (2007). The future of graduate education in environmental philosophy/ethics. *Ethics and the Environment*, *12*(2), 136–139.
Parker, L.D. (2005). Social and environmental accountability research: A view from the commentary box. *Accounting, Auditing & Accountability Journal*, *18*(6), 842–860.
Parmar, B., Freeman, R.E., Harrison, J.S., Purnell, A.C., & De Colle, S. (2010). Stakeholder theory: The state of the art. *The Academy of Management Annals*, *3*(1), 403–445.
Ponemon, L.A., & Glaze, A. (1990). Accounting education and ethical development: The influence of liberal learning on students and alumni accounting practice. *Issues in Accounting Education*, *5*(2), 195–208.
Robbin, P. (2011), *Political Ecology: A Critical Introduction*. New York; Wiley.
Rosen, M.A. (2020). Do Universities Contribute to Sustainable Development? *Modestum: European Journal of Sustainable Development Research*, *l4*(2), 1–8.
Rozzi, R. (1999). The reciprocal links between evolutionary-ecological sciences and environment. *Bioscience*, *49*(11), 911–921.
Saravanamuthu, K. (2015). Instilling a sustainability ethos in accounting education through the Transformative Learning pedagogy: A case-study. *Critical Perspectives on Accounting*, *32*(1), 1–36.
Savitz, W., & Weber, K. (2006). *The Triple Bottom Line*. San Francisco, CA: Jossey-Bass.
Sisaye, S. (2011). The functional-institutional and consequential-conflictual sociological approaches to accounting ethics education: Integration from sustainability and ecological resources management literature. *Managerial Auditing Journal*, *26*(3), 263–294.
Sterling, S. (2013). An analysis of the development of sustainability education internationally: Evolution, interpretation and transformative potential. In J. Blewitt, & C. Cullingford (Eds.), *The Sustainability Curriculum: The Challenge for Higher Education* (pp. 43–62). London: Earthscan.
Stone, M. (2003). Is sustainability for development anthropologists? *Human Organization*, *62*(2), 93–99.
Stringer, M.D. (2016). *Discourses on Religious Diversity: Explorations in an Urban Ecology.* London: Routledge.
Suddaby, R., Bitektine, A., & Haack, P. (2017). Legitimacy. *Academy of Management Annals*, *11*(1), 451–478.
Thiele, L.P. (1999). Evolutionary narratives and ecological ethics. *Political Theory*, *27*(1), 6–38.
Thompson, J., & McCoy, T.L. (2016). An analysis of ethics articles published between 2000-2015 in the journal of Accountancy and the Accounting review. *Journal of Accounting Ethics and Public Policy*, *17*(2), 333–347.
United Nations Sustainable Development Goals (UNSDG). (2021). *How the UN SDGs affect businesses (sustain. life)*. Retrieved December 17, 2021, from https://www.sustain.life/blog/un-sdg-business?utm_source=bing&utm_medium=cpc&utm_campaign=search&utm_term=sustainable%20development&utm_campaign=BingSearch&utm_source=bing&utm_medium=ppc&hsa_acc=6395178135&hsa_cam=12316466637&hsa_grp=1332608854372978&hsa_ad=&hsa_src=o&hsa_tgt=kwd-83288530847238:loc-190&hsa_kw=sustainable%20development&hsa_mt=p&hsa_net=adwords&hsa_ver=3&msclkid=f9d1faaa0b5717a371c69ad12950e5bc&utm_content=SDG
West, A. (2018, January). After virtue and accounting ethics. *Journal of Business Ethics*, *148*, 21–36.

Williamson, O.E. (1987). The economics of organization: The transaction cost approach. *American Journal of Sociology*, *87*(3), 548–577.

Wilow, A.J., & Wylie, S. (2014). Politics, ecology, and the new anthropology of energy: Exploring the emerging frontiers of hydraulic fracking. *Journal of Political Ecology*, *21*(1), 222–236.