Review

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Commentary on Braun's "The Ecological Rationality of Historical Costs and Conservatism"

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On the Evolutionary Advantage of Cost Accounting and Conservatism

- 1 Braun, E. (2016). The Ecological Rationality of Historical Costs and Conservatism. doi: 10.1515/ael-2015-0013.
- 2 Basu, S. & Waymire, G. (2017). Historical Cost and Conservatism Are Joint Adaptations That Help Identify Opportunity Cost. doi: 10.1515/ael-2016-0070.
- 3 Saito, S. & Fukui, Y. (2016). Whither the Concept of Income? doi: 10.1515/ael-2016-0013.
- 4 Tang, V. (2017). The Role of Accounting and the Debate between Historical Cost and Fair Value. doi: 10.1515/ael-2016-0066.
- 5 Baker, C. (2016). Commentary on Braun's "The Ecological Rationality of Historical Costs and Conservatism" doi: 10.1515/ael-2016-0061.
- 6 Braun, E. (2017). Concluding Remarks on the Symposium on the Evolutionary Advantage of Cost Accounting and Conservatism. doi: 10.1515/ael-2017-0049.

Abstract: Eduard Braun's paper entitled "The Ecological Rationality of Historical Costs and Conservatism" has many elements which recommend it. Professor Braun has done an excellent job of summarizing several key topics in accounting theory, in particular those related to the issue of the revenue-expense versus the asset-liability approach to income determination and the historical cost versus fair value debate. In his paper, Braun argues that the revenue-expense approach to accounting cannot be traced to a distinct event. He also maintains that the revenue-expense approach is ecologically rational; that is, it results from "social evolution", not human design. He goes on to argue that this ecological rationality is the reason why the efforts to impose the asset-liability approach favored by accounting standard-setters has encountered difficulties. He further argues that a solid basis for explaining the ecological rationality of the revenue-expense approach can be found in behavioral economics especially in Prospect Theory. He concludes that the revenue-expense approach is

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ecological rational and that it provides a basis for the organization of a market economy. The author supports his arguments with citations to well-respected accounting research which provides arguments against abandoning the revenue-expense approach (Waymire & Basu, 2007, Accounting is an evolved economic institution. *Foundations and Trends in Accounting*, 2(1–2), 1–173; Dickhaut, Basu, McCabe, & Waymire, 2009, Neuroaccounting II: Consilience between accounting principles and the primate brain. Retrieved January 30, 2009 from <http://ssrn.com/abstract=1336517> or <http://dx.doi.org/10.2139/ssrn.1336517>; Dickhaut, 2009, The brain as the original accounting institution. *The Accounting Review*, 84(6), 1703–1712). This commentary will focus on two themes in Braun's paper. First, the question of ecological rationality and whether this concept implies evolutionary progress. Second, the historical evolution of the revenue-expense approach, and why this approach can be traced to several distinct events.

Keywords: accounting theory, accounting history, rationality, ecological rationality

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1 Introduction

Eduard Braun's paper entitled "The Ecological Rationality of Historical Costs and Conservatism" has many elements which recommend it. Dr. Braun has done an excellent job of summarizing several key topics in accounting theory, in particular those related to the issue of the revenue-expense versus the asset-liability approach to income determination and the historical cost versus fair value debate.

In his paper, Braun argues that the revenue-expense approach to accounting cannot be traced to a distinct event. He also maintains that the revenue-expense approach is *ecologically rational*; that is, it results from "social evolution", not human design. He goes on to argue that this ecological rationality is the reason why the efforts to impose the asset-liability approach favored by accounting standard-setters has encountered difficulties. He further argues that a solid basis for explaining the ecological rationality of the revenue-expense approach can be

found in behavioral economics especially in Prospect Theory. He concludes that the revenue-expense approach is ecological rational and that it provides a basis for the organization of a market economy. The author supports his arguments with citations to well-respected accounting research which provides arguments against abandoning the revenue-expense approach (Dickhaut, 2009; Dickhaut, Basu, McCabe, & Waymire, 2009; Waymire & Basu, 2007).

This commentary will focus on two themes in Braun's paper. First, the question of ecological rationality and whether this concept implies evolutionary progress. Second, the historical evolution of the revenue-expense approach, and why this approach can be traced to several distinct events.

2 The question of ecological rationality and neo-classical economics

In a general sense, the term "rationality" can be said to exist when a person takes an action in accordance with a set of facts or logical reasons. Thus, rationality implies conformity of beliefs with reasons to believe, and of actions with reasons for action. Ecological rationality is a particular type of rationality, which claims that the rationality of a decision depends on the circumstances in which it takes place. Ecological rationality contrasts with rational choice theory, which maintains that rationality consists in making decisions in accordance with certain rules, irrespective of context. Therefore, what is considered rational under rational choice theory might not be considered rational under the ecological rationality, and vice versa. In effect, ecological rationality challenges rational choice theory as a normative account of rationality (Smith, 2003).

Braun maintains that the revenue-expense approach to accounting theory is *ecologically rational*. In making this argument he relies on the additional argument that current accounting standards are based on neo-classical economics, which is pre-eminently a form of rational choice theory. It should be pointed out, however, that the argument that current accounting standards are based on neo-classical economics (i. e. rational choice theory) is incorrect. Neoclassical economics is merely an attempt to bring rational thought to the problems of economics. If behavioral economics refutes certain assumptions of neo-classical economics, so be it. That is the way of science. That does not mean that the rational system of neo-classical economics should be discarded. It just means that the conclusions of the neo-classical school may be incorrect when the underlying assumptions of the model are violated. Behavioral economics seeks to examine the spaces where the assumptions of neo-classical economics are

violated. If behavioral economics studies ecological rationality, then neo-classical economics studies rational choice theory and both are valid and complementary ways to approach the study of economics.

Furthermore, while the asset-liability approach has been claimed to be the basis for current accounting standards setting and that the asset-liability approach is based on neo-classical economics, the asset-liability approach produces nothing like Hicksian income, which is often claimed to be based on neo-classical economic theory. In current accounting standards setting, most assets and liabilities are not measured at fair values, and therefore it is not possible to calculate Hicksian income. Therefore, it is incorrect to say that accounting standards-setters have moved to fair values. It is mainly in the area of financial instruments that there is use of fair values. While it is probable that the standards setters would like to adopt the asset-liability approach and also to move to fair value measurements, there is considerable resistance from the SEC, business enterprises, auditors and others. It is therefore unlikely that full fair value measurements in financial statements will be adopted any time soon.

2.1 The question of progress in evolutionary thinking

Braun argues that a social practice can be said to be ecologically rational if it is the result of social evolution, not human design. This implies that ecological rationality involves *evolutionary progress* in which evolution is said to be progressive through time and directed towards some ultimate goal. The idea of evolutionary progress was a common nineteenth century belief in which biological organisms and even societies were thought to improve themselves over time based on progressive changes (Ayala, 1988).

Originally the term “evolution” was used to refer to an orderly sequence of events with the outcome contained at the start. Interestingly, Charles Darwin did not use the term “evolution” in the *Origin of Species* until its sixth edition in 1872. By that time, Herbert Spencer (the most prominent British philosopher of the nineteenth century) had already conflated biological and social evolution and claimed that both were progressive. It is clear, however, that Darwin also believed that evolution was progressive. For example, in chapter 10 of the *Origin of the Species*, Darwin stated: “The inhabitants of each successive period in the world’s history have beaten their predecessors in the race for life, and are, insofar, higher in the scale of nature; and this may account for that vague yet ill-defined sentiment, felt by many paleontologists, that organization on the whole has progressed” (Darwin, 1859). Effectively then, as a sub discipline of evolutionary biology, social evolution is claimed to proceed in much the same

way as biological evolution, in other words, through competition and survival of the fittest. In essence, this approach to social evolution has formed the theoretical basis for the recent accounting literature dealing with neuroscience.

Braun also argues that there is a parallel between the revenue-expense approach and the way that humans have evolved through time. He maintains that revenue-expense approach is closer to behavioral economics (i. e. ecological rationality) than to neoclassical economics (i. e. rational choice theory), and he raises the question as to why the revenue-expense approach does not conform to the assumptions of neoclassical theory but rather to the behavior described by behavioral economics. In addressing this conundrum, Braun argues that many researchers regard accounting as a central institution of the market economy, and that the modelling of the economic laws of the market is the main purpose of neoclassical economics, not of behavioral economics. In contrast, the major aim of behavioral economists (i. e. those espousing ecological rationality) has been to mount a critique of the unrealistic assumptions of their neoclassical colleagues (Smith, 2005, p. 144).

Braun suggests that the answer to the conundrum can be divided in two parts. First, it is argued that the workings of the market are not captured by basing the modelling of the market on the unrealistic assumptions of neoclassical theory. Therefore, accounting as part of the market process is not well understood by neoclassical theorists. The second part of the argument deals with the question as to why the revenue-expense approach developed over time. The response to this question is that the revenue-expense approach developed as a result of competition with the asset-liability approach and that the revenue-expense approach promotes the survival of the companies that use it (Braun, 2016).

In proposing these answers to the conundrum, Braun relies on the work of the Nobel Prize laureate Vernon Smith. Braun states that Smith distinguishes two forms of rationality. The first form is similar to rational choice theory, which Smith calls *constructivist rationality*. This type of rationality applies when a result is purposefully brought about by the action of an agent or an acting body. Behind constructivist rationality is the idea that “all worthwhile institutions were and should be created by conscious deductive processes of human reason” (Smith, 2008, p. 26). The second form of rationality is *ecological rationality*. Smith (2008) argues that, the rationality of an outcome is not the consequence of a rational plan, but the unintended outcome of decentralized actions and interactions among unsuspecting individuals. Ecological rationality, then, is not due to human design but rather to the environment in which the decisions are made.

The idea of ecological rationality is found in Adam Smith's (1776) concept of the *Invisible Hand*. “It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to

their own interest. Every individual is led by an invisible hand to promote an end which was no part of his intention. *By pursuing his own interest he frequently promotes that of society more effectually than when he really intends to promote it.*" In effect, the rationality of the Invisible Hand is not designed or planned but rather it is ecologically rational.

2.2 The problem with ecological rationality and evolutionary progress

The concept of ecological rationality is highly believable as a description of the reality underlying economic behavior. However, if the concept of ecological rationality is combined with the idea of evolutionary progress, there is a major problem. The nineteenth century ideas of evolutionary progress led almost directly to two world wars and multiple other lethal conflicts between socialism and capitalism during the twentieth century. The result was almost a century of worldwide warfare leading to the deaths of hundreds of millions of people. So while it is reasonable to explain the development of the revenue-expense approach as a form of ecological rationality, it is dangerous to assume that ecological rationality equates with social progress.

3 The revenue-expense approach versus the asset-liability approach

Braun correctly points out that the debate between the revenue-expense approach and the asset-liability approach was already well established in the nineteenth century. In the late nineteenth and early twentieth centuries, German academics played a prominent role in the development of accounting theory (Evans, 2005; Mattessich & Kupper, 2003). Evans (2005) indicates that accounting theory in Germany emerged primarily through legal interpretations of the German Code of Commerce (Allgemeines Deutsches Handelsgesetzbuch-ADHGB). The creation of a uniform German accounting law dates to 1861 when the ADHGB required all companies to keep accounts and to prepare an annual balance sheet. However, this law did not specify recognition and measurement criteria for financial statements and consequently disputes arose regarding the meaning of a particular section of the ADHGB which specified that assets and liabilities were to be measured at the "value" they had at the time the inventory was drawn up (Richard, 2005, p. 836). Some legal scholars

interpreted this phrase to mean that assets should be measured at market values which would allow the payment of dividends out of unrealized holding gains. In the event of bankruptcy, this might mean that creditors would be disadvantaged with respect to shareholders. To correct this problem, an 1870 law set recognition and measurement rules in order to protect creditors by limiting dividend payouts (Hommel & Schmitz, 2013, p. 333).

Debates concerning the protection of creditors and the determination of dividend payments, which had direct implications for the measurement of assets and liabilities, as well as net income, came to be crystalized in the so-called *static (asset/liability)* versus *dynamic (revenue/expense)* views of accounting theory which emerged in the early years of the twentieth century (Biondi & Zambon, 2013). According to Richard (2005, 2013) there were conflicts between capitalist entrepreneurs and providers of capital. The basic assumption underlying the *static (asset/liability)* view was that every human enterprise has a definite life. Therefore, the *static (asset/liability)* view specified that it is necessary to consider the potential failure of a company and then proceed as if the company would be put into liquidation. This concept of “fictional liquidation” required the valuation of assets at their liquidation values at the balance sheet date. The purpose was to determine the amount necessary to pay the liabilities in case of bankruptcy (Richard, 2003).

The transition from the *static (asset-liability)* approach to the *dynamic (revenue-expense)* approach to accounting theory in the late nineteenth century was influenced by pressures from shareholders who wanted regular dividend payments. This desire was not compatible with fluctuations in the market value of assets and liabilities. In contrast to the *static (asset-liability)* view, the *dynamic (revenue-expense)* view of accounting theory is based on recognizing assets and liabilities at historical cost with amortization of these assets through time (Hommel & Schmitz, 2013, p. 331). Earnings are determined by matching expenses against revenues.

4 Conclusion

Having addressed the historical origins of the debate in Germany, it is important to recognize that the primary reason for the widespread adoption of the revenue-expense approach was not due to these theoretical debates about accounting theory in Germany or elsewhere, nor was it due to the ecological rationality of the approach, but rather to the distinct event of the advocacy of A.C. Littleton in the United States and the insistence on the revenue-expense approach by the first Chief Accountant of the SEC, Robert

Healy, both in the 1930s. Emerging in the period between the two world wars the revenue-expense approach prevailed in many countries in Europe, North America and Japan for most of the twentieth century, until the efforts on the part of standards-setters to replace it with the asset-liability approach. Thus, while it is interesting to assess whether the revenue-expense approach is ecologically rational, it was most likely the distinct event of the advocacy of Littleton and the insistence of Healy which made it a reality (Zeff, 2007). At the same time, it can be noted that Littleton did claim that accounting practices had evolved through time to justify the historical cost approach and the business enterprise principle (i. e. going-concern).

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