

## ***Focusing on Paradox in Financial Accounting***

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Papers on emerging issues in accounting often focus on new research tools. This paper suggests that paradox in financial accounting is a crucial issue capable of being addressed by many techniques but largely ignored in the profession. It could be argued that the accounting profession as a whole has given little thought to underlying philosophical or scientific measurement issues related to recurring problems in financial accounting standard setting. Crisis situations sometimes force change away from one problematic accounting approach to another which often proves equally contradictory in the long run such as a shift from a balance sheet to an income statement back to balance sheet emphasis in financial reporting. Yet the profession as a whole has not made much headway in admitting that our double entry system is not capable of maintaining a perfect balance sheet and income statement at the same time. Consequently little effort has been made to address basic epistemological questions 'Why do these flaws and paradoxes exist?' or 'What is the inherent underlying cause or nature of these paradoxes?' Specifically, 'Why is it so difficult to prepare a set of sensible, useful financial statements that do not contain counter-intuitive and paradoxical results?' While some attention has been paid to the problems arising from lack of agreement about objectives and users misinterpretation, very little attention has been paid to the interaction between the users and the data or the possibility that balance sheet/income statement contradictions are a reflection of the underlying nature of the phenomena we are trying to measure.

With the IASB and FASB on a trajectory toward a full fair value model, some accounting literature and reports from the business press have begun to reflect on why the fair value model is no more likely to be completely satisfactory than its historical cost predecessor model. (Benston 2006; Benston 2008; Katz & Reason 2008; Kvitte 2008; Leibler 2003; Mavin 2009) Still, this proposal suggests we should go even further in the direction of exploring the why behind the paradoxes in both the historical cost/stewardship model and the fair value/market oriented accounting model. For this we will have to look beyond the mainstream accounting literature for clues. The remainder of this proposal first briefly reminds of us of known problems or paradoxes in accounting which have been identified in the academic literature even if they are ignored in practice. The proposal then suggests some clues in the fields of philosophy, physics, and game theory which might serve as launching points for the accounting profession to gain more insight into the nature of the paradoxes and contradictions which seem inherent in many phases of financial accounting practice. The proposal concludes with thoughts on the prospects for this line of inquiry to complement main stream and public interest research paradigms.

### ***Examples of Paradox in Financial Accounting***

One of the basic problems in financial accounting practice is that accountants have not devised a satisfactory method for dealing with price changes. There would be no difference in historical cost and fair value accounting were it not for changes in prices over time; yet because price shifts are common, it would seem that dealing with them effectively ought to be a professional priority. While accountants experimented with various forms of price adjustments to deal with the severe inflation following World War I, these models were promptly abandoned as soon as inflation moderated. (Middleditch 1918; Paton 1918 & 1920; Sweeney 1927 & 1928; Schmidt 1931; Daines 1929; Wasserman 1931) Zeff's (1976) compendium of papers on inflation accounting between 1918 and 1935 suggests a primary reason for discontinuing the models was uncertainty about the inherent nature of the recorded increases in value. It was unclear what the true nature of the 'gains' and 'losses' might be or to whom they should belong, e.g., 'could they be paid out in dividends or should they be retained in the corporate entity?'

Similarly, the price level adjustment experiment under FASB Statement No. 33 (1979) to deal with post Vietnam inflation was also scrapped by 1986 with users maintaining it was unclear how to use the supplementary information. Moore (2010) reviews the inherent conflict between the economic model of inflation in which nonmonetary assets are supposed to hold their value without economic gain or loss as contrasted to the accounting fair value model in which these are the very items for which gains and losses are recorded. Economists say it is the monetary assets that lose value under inflation, yet these are the assets most often left unadjusted in a fair value model. The historical cost model records no gains or

losses on either monetary or nonmonetary assets until they are realized, with the actual point of realization itself being a matter of some controversy in the case of asset trades. Even in a purely historical cost model, opting between FIFO and LIFO inventory methods is basically a choice between a balance sheet that makes sense from a current or near current cost perspective or an income statement that makes sense from an opportunity or replacement cost perspective.

Analytical studies by Thomas (1969) and Devine (1985) clearly demonstrated that the allocations which underlie the practice of apportioning costs between periods, departments, or other cost objects can never be done in such a way that they are truly precise, objective, and fully defensible. These conclusions have not precluded the profession from implementing highly detailed and complex allocations in the form of activity based costing; nor have they much impacted public perceptions that accounting can somehow be made 'true and fair'. Preparing financial accounting reports forces someone to make subjective judgments about the extent to which costs impact current versus future periods; producing financial statements for the current period inherently involves predictions about future behaviors. Further, for accounting reports to have any functionality at all they must be expected to impact users' future perceptions and behaviors thus creating a reflexive loop that creates the conditions for an inherent moral hazard in accounting.

The attempts by the FASB and IASB to move in tandem toward an asset/liability measure approach to financial reporting have been an interesting study in compromise whereby the FASB has readopted approaches that were previously abandoned because of counter-intuitive. The labeling of gains or losses on early extinguishment of debt is a case in point. The Financial Accounting Standards Board (FASB) initially recognized the counter-intuitive effect of gains from troubled liabilities in 1975 when its *Statement No. 4* called for labeling gains and losses on early extinguishment of debt as extraordinary even though the transaction is neither unusual nor infrequent, the usual criteria for being designated as extraordinary. Schroeder, Clark & Cathey (2005, p. 355) attribute this turnaround from prior guidance under Accounting Principles Board (APB) *Opinion No. 26* to such events as a \$37.5 Million gain reported as ordinary income on the 1973 United Brands financial statements attributable to a swap of debentures with differing interest rates. Issued as part of the IASB/FASB convergence project, in *Statement No. 145* (2002) the FASB indicated that gains and losses on early extinguishment of debt would revert to the *APB 26* approach of not labeling these as extraordinary.

In the case of troubled debt restructurings, FASB *Statement No. 15* (1977) originally held that no gain or loss is recognized when restructuring results in changes to interest rates unless the total to be collected is less than the carrying value. If a company originally contracted for a 15% return from a receivable, then dropped the rate to 2% as an accommodation to an entity in distress this would seem to be a loss, but this treated as merely a prospective income statement event with lower future interest. Failure to decrease the carrying value when the interest rate was increased to reflect deteriorating credit worthiness was criticized as allowing lending institutions to put off recognizing deteriorating receivable values. However, this reasoning did not hold on the liability side because of the counter intuitive effects of revising present values. Changing to the new discount rate when the interest rate on a liability was increasing due to deteriorating credit risk would cause a lower present value and a gain to be booked. This would in effect reward companies that were at risk of default. FASB *Statement No. 114* (1993) changed the rules on the asset side to require recording losses consistent with a determination of a lower present value of the receivable. On the other hand, instruments on the liability side of the restructuring continued to ignore the most 'gains' from debt restructuring. Though the treatment was not consistent between the asset and liability side, failure to establish a mirror image treatment between the debtor and the creditor avoided the counter intuitive prospect of rewarding companies that have deteriorating credit positions with an increase in income.

Similar counter-intuitive effects are likely to surface under *FAS159* (2007). The FASB *Statement No. 159* approach (now included in the Accounting Standards Codification) allowed the fair value option for many liabilities. Like the reversals on the extraordinary vs. ordinary income classifications for gains and losses on early extinguishment of debt, in time it may become apparent once again that this new statement has the potential to allow firms to manufacture paper profits from deteriorating credit risk. Though the IASB and FASB settled on a new fair value Asset/Liability approach with their Norwalk agreement of 2002, the market implosion of 2008 and beyond has brought new scrutiny of the fair value model. A recent Congressional mandate for the Securities and Exchange Commission (SEC) to re-examine its acceptance of fair market values seems to be based on concern about the potential for fair value restatements to accelerate market declines (SEC 2008). An international study of the worldwide

financial crisis as chaired by Goldschmid & Hoogervorst (2009) suggested that fair value accounting had not really played a primary role in the market implosion, but perhaps only because many banks had not yet converted to a full fair value approach. Thus, adjusting the books for the effects of inflation continues to be a very thorny issue in accounting theory and practice.

### *Clues about Paradox from Philosophy, Physics, and Game Theory*

Main stream accounting research based on capital markets and classical economics suggests that through the magic of competition the market will always converge on an efficient and objective measure of value or reality which is often simplistically assumed to be the 'right' price. This view is refuted by an entire body of philosophical work which focuses on the concept of non-duality. (Loy 1988) What are often assumed to be objective measures of an external phenomenon are highly colored by the psychological makeup, biases, or even the basic measurement tools of the measurer. Both philosophy and physics suggest that nothing can be objectively measured without the potential for an impact from the psychological state or the measurement tools of the measurer.

From the enlightenment movement and even before that among some Greek philosophers, Western approaches to science and philosophy have often exhibited an inherently optimistic bias, i.e., a hope that things can be made better and better. Eastern philosophical movements on the other hand tend to emphasize what Westerners might call a more skeptical view and Easterners might call a more realistic view, a view which suggests every improvement tends to bring with it some new side effect, sometimes referred to as a never ending cycle of samsara. Interdisciplinary studies between philosophers and scientists movement have uncovered many close parallels in the tentative conclusions about the nature of phenomena that have arisen from work in the field of physics and from the analytical methods of certain schools of Eastern philosophy. (Gyatso 2005; Hayward & Varela 1992; Mansfield 2008) Not unlike the economics based agency theorists, Eastern philosophers and physicists focus on phenomena existing as a nexus of relationships rather than as discrete selves. Each unit of analysis, the self in philosophy or the firm in accounting, is inherently enmeshed in its social, economic milieu. While accountants try to measure firm performance, Eastern philosophers would say that phenomena such as firms do not exist at the absolute level and therefore accounting measures do not merely reflect firm performance but the relationship to an overall economy and to the measurement tools in use.

Einstein (1934) focused on the physics of a time paradox in his theory of relativity. Other physicists have focused on the uncertainty principle or the impossibility of simultaneously deriving a perfect measurement of position and momentum. (Born 1927; DeBroglie 1953; Bohr 1958; Heisenberg, W. 1970; Beller 2001; Bernstein 2005) Accounting exhibits a time paradox as well. Marple's statement from 1964 sounds very fresh today:

Value is an elusive and changeable thing, as many investors discovered when they watched their paper profits disappear in the recent decline in stock prices. .. in addition to the fact that the use of current values on the balance sheet may result in reporting paper profits, the practice can be objected to because it represents recognition of potential future income. p. 73

When the market value of long term, nonmonetary assets increases this is commonly recorded as a gain even when it merely reflects a rise in prices in keeping with general inflation. Yet a gain on the balance sheet today really represents higher opportunity costs to replace the assets in the future, though this effect will only impact the income statement through gradual depreciation charges under traditional accounting practice. If illusory gains from revaluation are treated as belonging to the owner and subject to dividends, the capital of the firm will be depleted prior to replacement of the equipment. This is a serious issue often glossed over and ignored when price level gains are labeled as 'fair value' rather than price level changes as they are by the IASB fair value model. While nonlinear concepts of time were not easily accepted by early and mid twentieth century physicists, accountants also have had difficulty in accepting that the inability to reconcile the balance sheet and income statement approaches to financial reporting may be related to the concept that present and future are intimately tied together. When we think we are reporting 'current' income, we are really reporting perceptions of future income and it is not at all clear that these should necessarily belong to current stockholders. The accounting literature has

primarily focused on the legal claims to these so-called gains or losses but has not paid much attention to the philosophical or phenomenological nature of these reported events.

A primary approach taken by the IASB and most national based accounting standard setting bodies since the mid-twentieth century has been to develop detailed definitions of accounting elements and from those to reason out how to present economic measures on the financial statements. In contrast Buddhist philosophers suggest that the inherent nature of all phenomena is emptiness (shunyata), signlessness (animitta), and aimlessness (apranihita). (Hahn 1998; Rabjam 2007) Emptiness does not mean that phenomena do not exist, but rather they exist only in interdependence upon their social and economic milieu, therefore it is not possible to render a completely accurate measurement for any single object in isolation. Signlessness means that it is never completely possible to define anything perfectly. Aimlessness suggests that since entities are not singular but interdependent with society, individual entity goal attainment is meaningless without consideration of the interdependent connection to society and other factors in the environment. These concepts suggests it is not surprising that the FASB/IASB style conceptual frameworks cannot be completely satisfactory as a basis for accounting practice and suggests that European influences within the IASB to reframe the categories on the balance sheet to match those of the Statement of Cash Flows will also be problematic. Though the Trueblood Committee (AICPA 1972) noted that one potential objective of accounting might be to report on those activities of the enterprise that affect society and which are important to the role of the enterprise in its social environment, most accounting standard setting bodies have chosen a much narrower goal of focusing primarily on the aims or needs of investors and creditors while largely ignoring the concept of accountability to the greater society.

#### *Relationship to Mainstream Research*

In spite of lucid attempts by some public theorists to refute the underlying assumptions of capital markets based research, mainstream accounting research today is primarily based on concepts from classical economics. (Tinker 1985; Lehman 1992; Puxty & Tinker 1995; Mandler 1999; Mitra-Kahn 2008; Petri 2004) Whether we label research papers as capital markets, agency theory, or even behavioral, accounting has essentially one paradigm – firms exists for the benefit of investor/creditors and accounting provides information to help those investor/creditors to maximize their gains and minimize their losses within competitive markets. Some physics formulas have actually been used to enhance this self-centered focus on maximizing shareholder wealth (Oullette 1999; Derman 2004) Yet even economics is beginning to evolve in a direction that resonates with the interdependence conclusions from philosophy and physics. Game theory (Fernandez & Bierman 1998; Gintis 2000) recognizes that actors can attain a higher result through cooperation than through the cut-throat competition of classical purely competitive market economics. This suggests an area in which accounting researchers with a genuine public or social interest might combine forces with main stream economics based researchers using the modified assumptions of game theory.

Public interest or social researchers who wish to remain within a non-quantitative, verbal-analytic frame which has been more common in this field might still look to Eastern philosophies for ways to coach their arguments in frames more useful to the standard setting discourse. While all search for ultimate truth can be useful to the seeker, it is unfortunate that the current trend in public interest accounting research is to emphasize accounting as 'bullshit' (Macintosh 2006) rather than to seek constructive compromise or even civil discourse beyond a very small core audience. Just as the concept of emptiness in Eastern philosophy requires considerable background for lay audiences to understand that this is not entirely nihilistic and negative in meaning, public interest researchers might find clues in the dialog between Buddhist philosophers and physicists on interdisciplinary cooperation for the genuine good of society. Focusing on the paradoxes and the tendency for accounting to cycle back and forth between historical cost and fair value accounting in spite of what should be known weaknesses could also serve to enliven accounting history as a respected accounting paradigm. Porter (1995) has begun a tentative dialogue which suggests it is a weak professionalization movement that causes accountants to cling to a myth of standardizability even where it is clearly not feasible. Paulos' (1998) innumeracy hypothesis may be possible explanation for why the public doesn't even pay enough attention to the accounting numbers to realize their limitations. Still, a specific focus on paradox and limitations in accounting could be used as a backdrop for more behavioral, sociological, or psychological research on why the accounting profession chooses to ignore changing prices as a critical problem area in financial accounting measurement. The focus on understanding the paradoxes in accounting might also logically

lead to new experiments with statements that recognize the interdependency between enterprises and global social, environmental, and economic trends. Though some PHD faculty are beginning to explore the connections between accounting and physics (Demski et al. 2006; Palmrose 2008), a risk with any program of interdisciplinary research is that it requires a broad-based training for which there is little institutional infrastructure or support. In one version of the fable of the Emperor's new clothes (Andersen 2005) in the closing scene after the young lad has pointed out the sartorial deficiencies, the Emperor simply continues on with the parade saying, "Well, what else could I do?" There is a lot of nakedness within the double entry financial reporting paradigm that the profession has become very adept at simply ignoring. This begs the question "Is scientific revolution (Kuhn 1962) a fable as well"?

## References

- Accounting Principles Board. 1972. Statement No. 26, *Early Extinguishment of Debt*.
- American Institute of Certified Public Accountants. 1972. *Establishing Financial Accountants' Standards: Report of the Study on Establishment of Accounting Principles*, commonly referred to as the Trueblood committee.
- Andersen, H. ; Wullschlager, J. (Ed.); Nunnally, T. (Transl.). 2005. *Fairy Tales*. New York: Viking.
- Beller, M. 2001. *Quantum Dialogue: The Making of a Revolution*. University of Chicago Press.
- Benston, G. J. 2006. Fair-value accounting: A cautionary tale from Enron. *Journal of Accounting and Public Policy* 25 (July/August): 465–84.
- Bernstein, J. 2005. Max Born and the Quantum Theory. *American Journal of Physics* 73 (November): 999-1008.
- Bohr, N. 1958. *Atomic Physics and Human Knowledge*. John Wiley & Sons.
- Born, M. 1927. Quantum Mechanics 1925-27. Sound Bites. <http://www.aip.org/history/heisenberg/voice1.htm> as of August 28, 2008.
- Daines, H. C. 1929. The changing objectives of accounting. *The Accounting Review*, June, pp. 94-110.
- DeBroglie, L. 1953. *The Revolution in Physics*. New York: Noonday Press.
- Demski, J.; Fitzgerald, S.; Ijiri, Yuji; Ijiri, Jumi & Lin, H. 2006. Quantum Information and Accounting Information: Their Salient Features and conceptual Applications. *Journal of Accounting and Public Policy* 25(4): 435-464.
- Derman, E. 2004. *A Geek's Walk on Wall Street*. Hoboken, NJ: John Wiley & Sons, Inc.
- Einstein, A. 1934. *Essays in Science*. New York: Philosophical Library.
- Fernandez, M. & March, J. 1998. *Game Theory with Economic Applications*. Addison-Wesley.
- Financial Accounting Standards Board. 1975. Statement No. 4, *Reporting Gains and Losses from Extinguishment of Debt an amendment of APB Opinion No. 30*.
- Financial Accounting Standards Board. 1977. Statement No. 15, *Accounting by Debtors and Creditors for Troubled Debt Restructurings*.
- Financial Accounting Standards Board. 1979. Statement No. 33, *Financial Reporting and Changing Prices*.
- Financial Accounting Standards Board. 1979. Statement No. 34, *Capitalization of Interest Cost*.
- Financial Accounting Standards Board. 1984. Statement No. 82, *Financial Reporting and Changing Prices: Elimination of Certain Disclosures*.
- Financial Accounting Standards Board. 1986. Statement No. 89, *Financial Reporting and Changing Prices*.
- Financial Accounting Standards Board. 1993. Statement No. 114, *Accounting by Creditors for Impairment of a Loan*.
- Financial Accounting Standards Board. 2002. Statement No. 145, *Rescission of FASB Statements No. 4, 44, and 64, Amendment of FASB Statement No. 13, and Technical Corrections*.
- Financial Accounting Standards Board. 2006. Statement No. 157, *Fair Value Measurement*.
- Financial Accounting Standards Board. 2007. Statement No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities – Including an Amendment of FASB Statement No. 115*.
- Gintis, H. 2000. *Game Theory Evolving: A Problem-Centered Introduction to Modeling Strategic Behavior*, Princeton University Press.
- Goldschmid, H. & Hoogervorst, H., Co-chairs. July 28, 2009. Report of the Financial Crisis Advisory Group. Available from [http://www.fasb.org/cs/ContentServer?c=Document\\_C&pagename=FASB%2FDocument\\_C%2FDocumentPage&cid=1176156365880](http://www.fasb.org/cs/ContentServer?c=Document_C&pagename=FASB%2FDocument_C%2FDocumentPage&cid=1176156365880)
- Gyatso, T. 2005. *The Universe in an Atom: The Convergence of Science and Spirituality*. New York: Morgan Books.
- Hahn, T. 1998. Chapter Nineteen: The Three Doors of Liberation. *The Heart of the Buddha's Teaching*. 146-155.
- Hayward, J. & Varela, F. 1992. *Gentle Bridges: Conversations with the Dalai Lama on the Science of Mind*. Boston: Shambala.
- Heisenberg, W. 1970. *Natural Law and the Structure of Matter*. London: Rebel Press.
- Katz, D. M., and T. Reason. 2008. How fair value rewards deadbeats. *CFO.com*, July 9. [http://www.cfo.com/article.cfm/11706587/c\\_2984368](http://www.cfo.com/article.cfm/11706587/c_2984368).

- Kuhn, T.S. 1962. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.
- Kvifte, S. 2008. Revisiting the concepts: Time to challenge the Asset-Liability view. *Australian Accounting Review* 18 (March): 81–92.
- Lehman, C. 1992. *Accounting's Role in Social Conflict*. New York: Markus Wiener Publishing, Inc.
- Leibler, M. 2003. True and Fair – An Imaginary View. *Australian Accounting Review* 13 (November): 61-66.
- Loy, D. 1988. *Nonduality: A Study in Comparative Philosophy*. Yale University Press.
- Macintosh, N.B. 2006. Accounting – Truth, lies or “bullshit”? A philosophical investigation. *Accounting and the Public Interest* 6: 22-36.
- Mandler, M. 1999. *Dilemmas in Economic Theory: Persisting Foundational Problems of Microeconomics*. Oxford: Oxford University Press.
- Mansfield, V. 2008. *Tibetan Buddhism & Modern Physics*. West Conshohocken, Pennsylvania: Templeton Foundation.
- Marple, R. 1964. *Toward a Basic Accounting Philosophy*. New York: National Association of Accountants.
- Mavin, D. 2009. Criticism of U.S. accounting changes mounts, *Financial Post*, April 20, downloaded from <http://www.financialpost.com/news-sectors/story.html?id=1514646> as of September 4, 2009.
- Middleditch, L., Jr. 1918. Should accounts reflect the changing value of the dollar? *The Journal of Accountancy*, February, pp. 114-120.
- Mitra-Kahn, B. 2008. Debunking the Myths of Computable General Equilibrium Models, SCEPA Working Paper 10-2008.
- Moore, L. 2009. Economic “Reality” and the myth of the bottom line. *Accounting Horizons*, Vol. 23(3).
- Palmrose, Z. 2008. Science, Politics, the Media, and Accounting: Perspectives from the Potomac. Plenary speech at 2008 American Accounting Association Meeting, August 5.
- Paton, W. A. 1918. The significance and treatment of appreciation in the accounts, Michigan Academy of Science, *Twentieth Annual Report*, Edited by G. H. Coons.
- Paton, W. A. 1920. Depreciation, appreciation and productive capacity, *Journal of Accountancy*, 30(1), July 1920.
- Petri, F. 2004. *General Equilibrium, capital and Macroeconomics: A Key to Recent Controversies in Equilibrium Theory*. Cheltenham, UK: Edward Elgar.
- Puxty, T. & Tinker, T. 1995. Policing Accounting: The Sociology of Knowledge as Praxis in *Policing Accounting Knowledge: The Market for Excuses Affair*. Princeton, NJ: Markus Weiner Publishers, 243-270.
- Rabjam, S. 2007. *The Great Medicine that Conquers Clinging to the Notion of Reality*. Boston & London: Shambala.
- Schroeder, R., Clark, C. & Cathey, J. 2005. *Financial Accounting Theory and Analysis*, 8<sup>th</sup> ed., John Wiley & Sons.
- Securities and Exchange Commission. 1976. Accounting Series Release No. 190, *Notice of Adoption of Amendments to Regulation S-X Requiring Disclosure of Certain Replacement Cost Data*.
- Securities and Exchange Commission. 2008. SEC commences work on congressionally mandated study on accounting standards, Release # 242, <http://sec.gov/news/press/2008/2008-242.htm>
- Sweeney, H. W. 1927. Effects of inflation on German accounting. *Journal of Accountancy*, 43(3), March 1927.
- Sweeney, H. W. 1928. German inflation accounting, *Journal of Accountancy*, 45(2), February 1928.
- Schmidt, F. 1930. The importance of replacement value. *The Accounting Review*, September, pp. 235-42.
- Schmidt, F. 1931. Is appreciation profit? *The Accounting Review*, December, pp. 289-93.
- University of Michigan Documents Center. Historic Consumer Price Index Data 1800-1998, <http://www.lib.umich.edu/govdocs/historiccpi.html>
- Tinker, T. 1985. *Paper Prophets: A Social Critique of Accounting*. New York: Praeger.
- Wasserman, M. J. 1931. Accounting practice in France during the period of monetary inflation (1919-1927), *The Accounting Review*, pp. 1-32.
- Zeff, S. A. 1976. *Asset Appreciation, Business Income and Price-Level Accounting: 1918-1935*. New York: Arno Press.