

2018

The Observer Effect and U.S. Accounting Rules

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Recommended Citation

King, Thomas A. (2018) "The Observer Effect and U.S. Accounting Rules," *Engaged Management ReView*: Vol. 2 : Iss. 2 , Article 1.

Available at: <https://doi.org/10.28953/2375-8643.1040>

<https://commons.case.edu/emr/vol2/iss2/1>

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Cover Page Footnote

The author gratefully acknowledges suggestions from the editor, Gary Previts, Lars Mathiassen, and three anonymous reviewers.

EDITORIAL NOTE

Engaged scholars often adopt process perspectives to get an understanding of how and why phenomena of interest develop as they do. Typically, such studies zoom in on a period of a few years because of practical issues related to data collection and analysis. From that perspective, this paper distinguishes itself by relying on data covering a hundred years of development. Engaged scholars seek to address problems of practical relevance and to provide insights that can be helpful in addressing these problems. In doing so, they often consider a controversial issue because practical problems involve multiple stakeholders and rarely have simple solutions. In this regard, this paper distinguishes itself by focusing on a highly controversial issue that is also politically contested, shaping business and society at large. With a focus on the evolution of accounting rules in the US over the past hundred years, King inductively analyzes archival data about regulation. Analysis of data from the perspective of rule makers and rule followers suggests that these parties jointly influence rule development and behaviors resulting from evolving rules. As a result, King reveals interesting patterns of interaction between rule makers and rule followers that explain why regulation of practices, such as in accounting, is an ongoing and complicated process with little chance of convergence towards a simple and useful set of rules. As such, the article offers interesting insights for accountants as well as for professionals within other highly regulated industries. At the same time, King has opened the door for other engaged scholarship studies that rely on traces of archival data spanning multiple decades.

The Observer Effect and U.S. Accounting Rules

Thomas A. King

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ABSTRACT

This inductive study evaluates how accounting rules promulgated by U.S. standard setters have evolved over a century. Archival data viewed through the lens of the observer effect—where the act of observation influences the subject—reveals long-term patterns of behavior. The interaction of rule makers and rule followers suggests three generalizations: Rule sets grow, codification accelerates rule set growth, and interactions between regulators and those who are regulated confound predictions about possible consequences of new rules. In other words, this system has never reached equilibrium, despite 100 years of effort by accounting regulators to constrain behavior of those who prepare financial statements. Because unchecked rule growth increases the risks of costly compliance efforts and unintended consequences, regulators should be cautious about codifying rule sets, and scholars should look for methods to determine when existing rule sets are sufficient to satisfy societal needs.

The author gratefully acknowledges suggestions from Gary Previts, Lars Mathiassen, and three anonymous reviewers.

SYNOPSIS

Purpose. Financial reporting is part of society's efforts to allocate scarce resources. Accounting systems measure transactions so that managers can share indicators of economic performance with investors. Effective accounting processes allow better-performing firms to secure funding under more attractive terms. In this communication between firms and investors, executives are like writers: Writers choosing to use English to communicate with readers have considerable latitude in how they tell their stories, but the storytelling efforts generally follow certain rules of spelling, grammar, and syntax. Similarly, executives using accounting to communicate with investors must use agreed-on rules for recognizing, valuing, and classifying accounts. Without this structure, financial statements become less useful and risk triggering harmful investor decisions (King, 2017).

During the past century, accounting rules have emerged in the United States in attempts to control how firms report transactions. Because self-interested managers might bend or break these rules when communicating with outsiders (Schipper, 1989), accounting standard setters respond with new rules to remedy perceived deficiencies and close loopholes.

Consequences of this interaction have been documented in a handful of well-maintained websites, enumerated in the Appendix. Analysis and interpretation of these archival records provides important insights into how a rule set has evolved over many decades and offers provisional lessons for the broader field of management on the effects of rulemaking.

Problem of Practice. Accounting rules stem from regulators' desire to promote fairness in capital markets. Investors might be misled if firms report like transactions in varied ways. The author has spent a career trying to learn these rules to prepare financial statements that comply with U.S. securities laws and to teach this skill to

accounting students. Interestingly, both tasks have become *more* difficult over the course of my career. The immediate problem of practice is to understand why accounting rules have become harder to apply and learn, even though U.S. regulators have had a century of experience in which to refine this rule set. The broader management challenge is to determine what might be learned from a century of rule promulgation and compliance in one domain of management practice.

Results. An archival study of accounting rules promulgated since 1917 suggests that regulators' efforts to standardize financial reporting practices have brought an ever-increasing number of rules to be followed by preparers of financial statements. Some statement preparers interpret emerging rules in ways that make their own firms' reported results attractive to investors. Regulators respond by issuing more rules to corral errant behavior. A circular cycle emerges as each group reacts to the other's actions. Use of the observer effect suggests that such circular interaction cannot lead to a stable state.

Conclusions. Three provisional generalizations emerge from this study: Rule sets grow over time; codification accelerates the rate of growth of a rule set; and the interaction of rule makers and rule followers brings the risk of unintended consequences with new rules. Collectively, these three generalizations suggest that an equilibrium is not possible for some rule sets.

Practical Relevance. Those who work in regulated industries, where the interests of the regulator and regulated can diverge, must be prepared to cope with ever-expanding rule sets. To mitigate this problem, managers and regulators should collaborate to find ways to limit rule set growth. Regulators should exercise caution when codifying rule sets, and scholars could be helpful by establishing methods to determine when a rule set is adequate to meet conflicting stakeholder needs.

METHOD

Research Question

This study frames the history of U.S. financial accounting standards as an interaction between those who promulgate rules and those who follow them. The research question is this: "What can we learn about rule sets from the study of U.S. accounting standard setting during the past century?"

Method and Design

Conclusions rest on an inductive study of U.S. accounting rules promulgated by four organizations: the Federal Reserve Board (Fed), the American Institute of Certified Public Accountants (AICPA) and its predecessor organizations, the U.S. Securities and Exchange Commission (SEC), and the Financial Accounting Standards Board (FASB). Analysis of historical precedents might be used to form generalizations about decision-making and management practices (Neustadt & May, 1986).

Data Collection, Sample, and Analysis

Data come from archival records of seven organizations associated with accounting rules. (The Appendix lists the websites used.) Although data are limited to the documents that archivists have chosen to retain and publish, the set of accounting rules is likely complete. Recent U.S. accounting standards (i.e., those published by FASB since 1973) offer discussions of the logic and motivations for their promulgation. Motivations for financial statement preparers is unobservable, so data on how rule followers interpret rules are less robust. Inferences about the behavior of statement preparers rest on academic research, comment letters provided by statement preparers during deliberations about proposed rules, and reasoning given by regulators in the documentation associated with certain rules. The data sets offer a natural experiment, which provides support for some generalization.

PRACTICAL PROBLEM

Financial accounting rules in the United States are difficult to learn and enforce. Licensing requirements for certified public accountants (CPAs) now include 150 semester-hours of university classroom instruction, typically requiring five academic years of study. Teaching would-be CPAs how to measure leases, pensions, and taxes is no simple task. Despite spending considerable time in school and then taking supplementary test preparation courses outside of a university setting, only about half of all candidates pass each of the four requisite CPA examinations in a given sitting. The scope of Enron-era scandals, where firms avoided posting billions of dollars of losses to financial statements, illustrates the difficulty of enforcing rules. What's remarkable is that U.S. society faces these problems despite a century of effort devoted to articulating a clear set of rules for how businesses should measure their transactions and report their financial position.

LITERATURE REVIEW

This research is based on a review of literature associated with the observer effect and the nature of financial reporting. No one has yet integrated these two literature streams to reveal patterns of rule-generating behavior over a long time period.

In a pioneering effort at industrial research, engineers and social scientists conducted six studies from 1924 to 1933 at Western Electric's Hawthorne Works plant outside of Chicago to evaluate the effects of varied lighting, compensation, and supervisory factors on worker productivity (Sonnenfeld, 1985). The most significant conclusion was that changes in

output arose not from manipulating physical working conditions but from the influence of outsiders' observing the behavior of subjects. This phenomenon came to be known as the Hawthorne effect in academic (Adair, 1984) and practitioner (Economist, 2008) circles.

Scholars continue to debate the strength and significance of Hawthorne data (Levitt & List, 2011); meanwhile, the term "observer effect" has come to be used as a label to describe how the act of observation influences the thing observed (e.g., when a tire gauge simultaneously measures air pressure and also changes its level). Observer effects on human subjects have been noted in studies ranging from health care (Ostchega et al., 2003) to voting (Casas, Díaz, & Trindade, 2017) to interpersonal relations (Robins, Spranca, & Mendelsohn, 1996). No known study has applied the observer effect to the field of accounting regulation.¹

Financial reporting allows better-performing firms to distinguish themselves from poor performers as they try to attract capital on better terms (Healy & Wahlen, 1999). Accounting is a language that affords statement preparers considerable latitude in how they communicate economic performance and prospects with investors (King, 2017). Accounting regulations seek to constrain preparer behavior to ensure that this communication is free from ambiguity and bias, so that it can be trusted by statement users (Nelson, 2003).² Improper accounting impairs asset allocation and stewardship decisions (Healy & Wahlen, 1999).

Research dating back to the 1890s provides evidence that statement preparers interpret accounting rules to enhance their reported results and to influence perceptions of company performance (Buck-

master, 2001). More recently, scholars find evidence that managers manipulate earnings to boost job security (DeFond & Park, 1997) and to increase share price valuations (Barth, Elliott, & Finn, 1999). A former FASB standard setter notes that statement preparers push back at new accounting standards that result in increased earnings volatility (SEC, 2003). Regulatory concern over the scope and significance of earnings smoothing goes back at least 20 years (Levitt, 1998). Scholars note the interdependence of accounting measures and human behavior (Solomons, 1978) but have not studied circular interaction over a long time horizon.

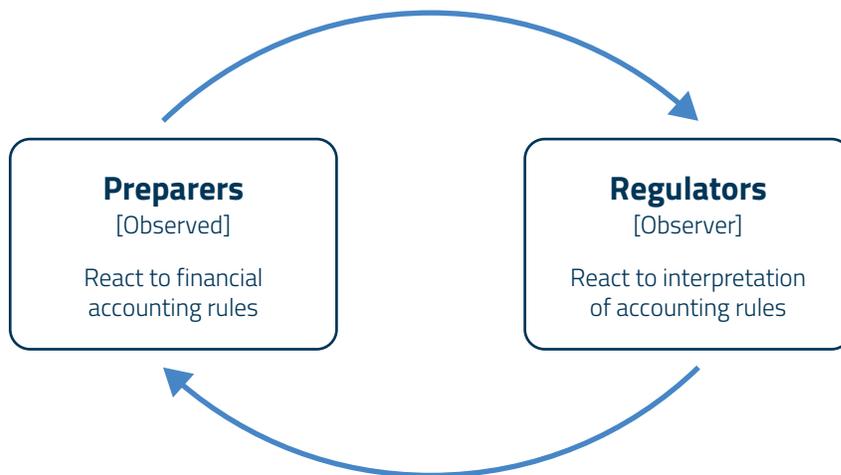
Figure 1 suggests one way to frame this integration. Consider two sets of stakeholders: The first comprises company executives who oversee the preparation of financial statements that are to be shared with investors. The second includes accounting regulators who seek to ensure that financial statements are comparable across firms (Beresford, 1999) and to highlight blemishes that could alert potential investors to future problems (Sprouse, 1987). In the United States, these regulators include accounting standard-setting bodies, appointed government officials who promote fair financial reporting, and litigators who challenge the financial reporting practices of errant firms.

Preparers have incentives to measure transactions in ways that make their firms more attractive. Burnishing efforts seek to boost share price valuations and promote job stability. Extreme efforts elicit the old Soviet joke that nothing is wrong, especially near the reactor. Regulators respond by promulgating rules designed to eliminate ambiguity and promote fair financial reporting. A growing rule set emerges from the interaction of these two groups. Researchers have noted how rules affect

¹ Accounting literature uses terms such as rules, objectives, standards, regulations, interpretations, guidance, and principles to label efforts designed to govern behavior of those who prepare accounting statements (SEC, 2003). For the sake of simplicity, the main body of this paper uses these words interchangeably. Coding conventions used to analyze U.S. financial accounting standards are discussed in the Appendix.

² For example, in 1938 the SEC issued Accounting Series Release (ASR) No. 4, which states that financial statements filed with the SEC and using accounting principles for which no substantial authoritative support exists (i.e., they do not conform with established rules) are presumed to be misleading. The SEC reaffirmed this statement in 1973, with the issuance of ASR No. 150.

Figure 1: Interdependence of Statement Preparation and Standard Setting



preparers' behavior for narrow accounting topics, such as leases (Imhoff & Thomas, 1988) and derivatives (SEC, 2003), but these studies have not evaluated how this feedback loop plays out over many cycles.

FINDINGS

This study gives rise to three findings, which are expressed as propositions to challenge practitioner-scholars to test whether they are generalizable to other domains.

Proposition 1: Rule Sets Grow

The observer effect creates a circular relationship between observed and observer. Two types of archival evidence show how this relationship has evolved between regulators and preparers. First is the continued issuance of rules associated with the same topic over extended time periods. Evolving accounting rules on pensions, leases, goodwill, and taxes over decades show that standard setters have not been satisfied with earlier versions of standards for these topics. Second, statement preparers write comment letters to regulators to influence deliberations over pending rules. Subsequent pronouncements cite comments given in the letters as part of the basis for conclusions

reached. The observer and the observed monitor each other.

To illustrate this interaction, statement preparers repeatedly asked for clarification on how to account for derivatives (Statement of Financial Accounting Standards (SFAS) No. 133, issued in 1998). The standard's basic principle is simple: Derivative financial instruments (e.g., options, futures, and swaps) are to be recorded on balance sheets as assets and liabilities at fair values. The issue is determining what to do with the gains and losses as instrument values fluctuate in volatile capital markets. Deliberations preceding issuance of this standard, where preparers pushed back hard over concerns about reporting volatile earnings, led to a 213-page document. After publication, preparers asked for additional guidance, which gave rise to many more pages of supplementary rules. Motivations for this interaction likely come from preparers' desire to report results that reflect positively on their firm's financial strength and to avoid legal challenges from regulators or litigators.

Accounting rules arise in part from the frustration that companies report results in varied ways. Early U.S. railroad enterprises treated depreciation differently, confounding investor efforts to compare performance. In 1906, Congress passed

the Hepburn Act to permit government regulation of railroad accounting practices. The earliest identified collection of U.S. accounting standards was a 14-page article published in 1917 by a group of accountants in the *Federal Reserve Bulletin* to promote uniform ways of preparing and auditing balance sheet accounts (Federal Reserve Board, 1917). Member banks, trading commercial paper issued by merchants and manufacturers, relied on these statements to assess credit risk. The Fed suspected that inconsistent accounting would result in poor credit decisions and would impair the health of the U.S. banking system.

During the Great Depression, Congress created the SEC to restore investor confidence and endowed this administrative agency with the authority to establish accounting principles. The SEC showed an early willingness to let private sector experts take the lead in setting financial accounting standards.

A predecessor of the AICPA showed leadership and suggested a few additional principles to ensure that financial statements would be fair. In 1939, this organization created the Committee on Accounting Procedure to narrow accounting differences through the publication of Accounting Research Bulletins. Lessons learned led the AICPA in 1959 to sponsor a replacement organization, the Accounting Principles Board, to publish more formal *Opinions* based on a structured deliberation process. Continued SEC intrusion in APB deliberations sparked a loss of confidence in the APB's ability to narrow accounting differences (Zeff, 2018).

The accounting community responded by creating the independent FASB. This successor organization receives its own funding plus formal SEC recognition as the sole financial accounting standards setting body in the United States. The FASB published Statements of Financial Accounting Standards based on an exhaustive deliberation process. In 2009, the FASB codified its extant Bulletins, Opinions, Standards, and related technical documents and

FIGURE 2: Growing Size and Forcefulness of U.S. Financial Accounting Rules

	Committee on Accounting Procedure	Accounting Principles Board	FASB	
			Before Codification	After Codification
Primary deliverable	51 Bulletins	31 Opinions	168 Standards	147 Updates
Time period	1939-1959	1959-1973	1973-2009	2009-2017*
Years in time period	20	14	36	9
Approximate number of deliverables per year	3	2	5	16
Tone of deliverable	Suggestion	Recommendation	Directive	

*The FASB continues to issue Updates beyond 2017.

established a new framework in which revisions, labeled Accounting Standards Updates, modify relevant sections in the codified rule set.³

Figure 2 shows a tabular summary of this activity. What started as a short monograph in 1917 morphed into a body of work that now spans about 11,000 printed pages.⁴

Proposition 2: Codification Accelerates Rule Set Growth

Codification means arranging rules in a systematic framework. The Code of Hammurabi (a list of Babylonian laws from about 1750 BCE) and the annual *Official Baseball Rules* published by Major League Baseball are two of many examples. The FASB’s 2009 codification sought to bring all authoritative U.S. accounting rules into one document to streamline compliance, research, and communication activities.

Source documents came from prior work published by teams working under the direction of the AICPA (and a predecessor organization), the SEC, and FASB.

The numbering system places detailed rules into nested hierarchies of topics, subtopics, sections, and paragraphs. New rules create, modify, or eliminate paragraphs. To illustrate, the last *Accounting Standards Update* promulgated in 2017 states that steamship entities should no longer use a method for measuring deferred taxes for an industry-specific transaction because of the expiration of a different, statutory rule put forth by the Internal Revenue Service. This Update affects paragraphs falling under Topic 740 (Income Taxes) and Topic 995 (U.S. Steamship Entities).

Codification solves tactical problems but creates a strategic consequence. Note

the fourth row in Figure 2, which identifies the annual rate of rule creation under the four periods of accounting standard setting discussed in this paper. The pace of change amounted to a handful of rules per year before codification. After the 2009 codification, the rate tripled. Because the rate of change accelerated after codification with no other identifiable changes in the environment, a possible inference is that codification causes faster rule set growth. Put simply, codification appears to act as a catalyst by speeding up the cycle time of observer effect feedback loops.

Corroborating evidence comes from a natural experiment. Financial accounting and tax accounting are two dialects of the same language (King, 2006). Each seeks to measure transactions, but with different purposes and rules. Among other things, financial accounting helps to measure net income, a proxy for the amount of cash that a firm can expect to collect from business activity in an accounting period. Cash collections show the potential amount of sustainable dividends that might be paid to investors. Income tax accounting measures the amount of taxable income received in an accounting period and thus the scope of tax revenues the government can collect from business activity. Financial accounting and tax accounting rest on overlapping but distinct principles, so net income and taxable income in the United States might be seen as cousins.

Congress created the modern U.S. income tax system in 1913, four years before private sector accountants published the original *Federal Reserve Bulletin* article already discussed. By coincidence, the first set of income tax rules, as documented in the *Revenue Act of 1913*, was also about 14 pages.⁵ New tax laws emerge with each Congressional legislative session. To

³ In 1953, the Committee on Accounting Procedure published Accounting Research Bulletin No. 43 to combine rules from the 42 previous ARBs. I do not consider this publication a codification because subsequent accounting rules were not numbered in a manner so that they could be inserted into the ARB No. 43 classification system.

⁴ This estimate comes from adding together the numbers of pages in the five bound volumes that represent the FASB’s *Accounting Standards Codification* (Norwalk, CT: Financial Accounting Standards Board, October 31, 2016).

⁵ See Section II, pages 166–180, of the Revenue Act of 1913, <http://legisworks.org/sal/38/stats/STATUTE-38-Pg114.pdf> accessed on October 24, 2018.

help taxpayers sort through the growing collection of rules, Congress authorized three codification efforts (the *Internal Revenue Code* [IRC] of 1939, 1954, and 1986).

U.S. tax accounting and financial accounting rules have similar objectives and were initially documented at about the same time. Yet, initial codification came to tax laws 70 years ahead of the effort to codify financial accounting rules. Today, the scope of tax rules (statutes and regulations) is much larger than that for financial accounting. The IRC and related Regulations now span more than 75,000 pages.⁶ Codification makes inserting new rules to address tactical concerns easier.⁷

Supplementary support for the first two propositions comes from foreign experience. An alternative approach to the granular U.S. generally accepted accounting principles (GAAP) is use of the less detailed International Financial Reporting Standards (IFRS), promulgated by the International Accounting Standards Board since 2001, and the International Accounting Standards (IAS) promulgated by the International Accounting Standard Committee from 1973 (the year the FASB commenced operations) until 2001. Current IFRS, IAS, and related interpretation statements posted on the IFRS website total roughly 1,400 pages—about an eighth of the page count associated with U.S. financial accounting rules. The lower page count may be attributable to a shorter length of time that international standards have been promulgated (Proposition 1) and an absence of codification of these standards (Proposition 2).

Proposition 3: The Observer Effect Confounds Predictions About Rule Consequences

Rule creation invokes the observer effect, where two groups with differing interests interact over a prolonged period. Dynamic interaction (e.g., chess matches, jury trials,

and political elections) makes predicting how rules will unfold difficult because the actions of preparers and regulators depend on the behavior of the other group. Accounting standard setting demonstrates complexity, where system behavior cannot be understood by examination of component rules (Cilliers, 1998). No long-term equilibrium likely exists.

Consider one incident to illustrate complexity underlying rule promulgation and compliance. In 1993, Congress added Section 162(m) to the Internal Revenue Code. This new rule sought to rein in executive pay by disallowing deductions for annual salaries greater than \$1 million paid to listed firms' top executives. Beginning in 1994, any compensation over the million-dollar limit had to be performance-based to qualify for a tax deduction. In response to this new rule, public companies and their compensation committees developed pay plans linked to stock options—financial instruments that give the holder the right, but not the obligation, to purchase shares at the option's exercise price. Financial accounting rules at the time did not require firms to charge option-based pay to income statements when the exercise price equaled the market price.

Three unintended consequences emerged. First, widespread use of options fueled an explosion in CEO pay, a result completely contrary to the desired outcome of the code provision. Second, awards invited subsequent option backdating and repricing schemes that allowed management teams to extract wealth at shareholder expense. Third, large option awards represented a moral hazard because they motivated self-interested executives to take bigger risks. Asymmetric option payoffs bring executives riches for successful bets and investors losses for failed ventures. Option awards contributed to the Enron-era accounting scandals, which in

turn led to a confusing series of financial accounting standards focusing on how and when to expense options (King, 2006). The point is that this sequence of events was not foreseeable to the legislator who drafted a few words to create IRC Section 162(m).

A second example of unpredictable outcomes comes from accounting for situations where payments to tax authorities exceed income tax expenses recorded on financial statements using different measurement rules. The valuation question is whether the difference should be recorded on balance sheets as a deferred tax asset. After decades of debate, no simple answer has emerged.

Standard setters promulgated four pronouncements using the title "Accounting for Income Taxes": Bulletin No. 43 (1944) discouraged recognition of deferred tax assets; Opinion No. 11 (1967) required recording of such accounts; SFAS No. 96 (1987) prohibited recognizing such accounts in common situations; and SFAS No. 109 (1992) required recognition plus the use of a valuation allowance to reflect the uncertainty of realizing the future tax benefit.

In simple terms, interaction between preparers and standard setters resulted in three reversals of the original standard. A crude analogy is a finding in a trial that is reversed at the appellate level, reversed again at the Supreme Court level, and then reversed a third time through legislative change. Interestingly, the last rule in this sequence requires use of a valuation allowance, which might provide preparers with another tool to smooth income (Schrard & Franco Wong, 2003). A lay person might wonder whether accountants have any idea of what they are doing, given the sustained vacillation. Another question, unexplored here, is whether re-

⁶ <http://www.washingtonexaminer.com/look-at-how-many-pages-are-in-the-federal-tax-code/article/2563032> accessed on October 18, 2018. This estimate does not reflect the massive change in tax rules arising from the *Tax Cuts and Jobs Act of 2017*.

⁷ Identifying mediating factors which that lead from codification to acceleration in rule set growth is beyond the scope of this paper and a topic for a future study.

peated reversals of opinion bring brand damage to a professional community.

LESSONS FOR PRACTICE

Findings from this study suggest that managers governed by rules should expect rule sets to grow. When these rules become codified, managers should expect the rate of rule accretion to accelerate. Finally, the interaction between rule setters and rule followers makes predictions of rule consequences uncertain. In short, regulation can bring ever-growing managerial uncertainty. An organization's risk management program should include regulation within the taxonomy of risks to be evaluated and managed.

Collectively, these findings suggest that both managers and regulators should exercise restraint before seeking either to add rules to address short-term problems or to codify rules to streamline compliance. Unintended enforcement issues could bring costly or harmful long-term consequences. In short, more rules might not be the best answer to the immediate problem at hand. The point of this paper is to warn management practitioners and scholars that codification is a dangerous master.

If rules are required, then both parties should collaborate to find solutions that minimize the use of strict, *quantitative* boundaries that can be gamed. SFAS No. 13, on leases has bright-line tests for when a lease obligation must be added as a liability to a firm's balance sheet. The standard gave rise to an extended series of technical amendments as leasing companies devised new lease structures that allowed their clients to preserve off-balance sheet financing. That foreign firms using more *qualitative* international accounting standards tended to avoid Enron-era accounting scandals might not be a coincidence.

CONTRIBUTION TO THEORY

This study shows how the observer effect can be applied to the specific domain of accounting standard setting and to the general area of regulation. Of note to scholars is the long-term, systemic study of how stakeholders promulgate and interpret rules. Ecologist Garrett Hardin notes that we can never merely do one thing (Hardin, 1985). Ripple effects of our actions extend beyond anything we imagine.

American accounting regulators' efforts to constrain preparer behavior has brought an ever-increasing number of rules. Some self-interested preparers modify statement preparation in reaction to new standards. This interaction brings a continually unfolding (and unresolved) saga in determining how financial statements should be prepared. The story of IRC Section 162(m), which sought to limit executive pay, offers a cautionary tale of how a rule change in one domain can have unforeseen consequences in another.

As such, regulation should not be studied as an industry-specific phenomenon. Findings in this paper might be generalizable to other regulated domains, including health care (e.g., rules associated with ICD codes to obtain payment for services rendered); education (e.g., rules to measure achievement of learning goals in classrooms); professional sports (e.g., rules to attract new viewers); energy (e.g., rules to measure carbon emissions), and technology (e.g., rules to constrain unauthorized sharing of private information). Future studies of regulation can benefit by incorporating the observer effect when evaluating long-term interactions of rule makers and rule followers.

The relationship between regulation and interpretation might indeed be circular, with no end in sight. The ongoing cat-and-mouse game over lease accounting is an example. Left unexamined, this system will continue to result in the promulgation of rules in perpetuity, adding constantly to societal compliance and enforcement costs.

Scholars can contribute by creating methods for assessing and revealing when existing rule sets might be sufficient to meet societal needs, and then by publishing their results. For example, one study examines stock price bid-ask spreads (a proxy for investor discomfort) and finds that financial statements prepared under precise U.S. rules are no more informative than those prepared under less-detailed International Accounting Standards (Leuz, 2003).

This paper also contributes to method by showing how use of a longer term, century-long perspectives might be useful in thinking about contemporary problems that management faces. In this author's experience, reviewers for scholarly publications often require that literature reviews highlight the most recent data. This paper demonstrates that a longer horizon can reveal insights that might not be apparent when attention is focused on immediate experiences.

APPENDIX ON METHOD

To form provisional generalizations from primary documents, this inductive study relies on hermeneutics, which is both a philosophy and a specific approach to analyzing qualitative data (Myers, 2013). This approach is useful when the meaning of the texts being considered is confusing or contradictory.

Hermeneutic analysis involves interpretation of documents as both texts and parts of a broader whole, searching for interdependence between specific passages and a broad body of work (Boland, Newman, & Pentland, 2010). The interpreter moves repeatedly from detail to the larger picture to search for meaning that might not have been identified either by the documents' authors or by previous readers. Provisional generalizations inform subsequent analyses of specific passages. Repeated cycles continue until novel interpretations emerge.

In this study, the source documents were written by accounting regulators and standard setters over the course of a century. These documents—including articles, pronouncements, standards, rules, interpretations, SEC rules, the U.S. Internal Revenue Code, and international accounting standards—were published by the following organizations:

- The Federal Reserve Board (fraser.stlouisfed.org);
- Committee on Accounting Procedure and the Accounting Principles Board (accountancy.olemiss.edu/accounting-libraries/);
- Financial Accounting Standards Board (asc.fasb.org);
- Securities and Exchange Commission (sec.gov; see also sechistorical.org);
- U.S. Internal Revenue Code (law.cornell.edu/uscode/text/26); and
- IFRS Foundation (ifrs.org/issued-standards/list-of-standards/).

The anonymous employees working for government or private sector organizations were seeking to standardize accounting practices. The documents, penned over decades by regulators using sterile voices, confounded this researcher's ability to find social meaning in documented accounting rules.

Boland et al. (2010) articulate a half-dozen approaches for comparing specific passages (the textual realm) and the larger environment (the social realm). The former activity involves exegesis—that is, a close reading of text details—and the latter involves search for meaning within a shared community. This paper uses historical criticism, the fifth of the six types of hermeneutical analysis suggested. Historical criticism seeks to evaluate documents in the cultural and physical context in which they were created. Such analysis requires readers to try to situate themselves in the setting that gave rise to the documents.

Two historic trends were considered in this project:

1. The rise of the role of the U.S. federal government in regulating commerce through the twentieth century. Creation of the SEC during the Great Depression is a notable example.
2. The increasing complexity of business transactions. The use of complex derivative and leasing contracts in the second half of the twentieth century are notable examples.

Through the period analyzed in this paper, the U.S. government sought to impose greater levels of oversight over an increasingly complex business landscape.

To compile the data used in Figure 2, showing the growing size and forcefulness of U.S. financial accounting rules, I constructed a coding convention to identify the qualitative data (textual realm) and quantitative data (social realm) for financial accounting standards. The first cycle of coding used four terms—bulletins, opinions, standards, and updates—to identify acts of regulatory intervention by financial accounting standard setters. These four terms were combined to create a secondary code of *rules* to identify formal efforts by regulators to constrain the behavior of preparers of financial statements.

Textual analysis of documents classified by the primary codes showed qualitative differences in tone. Study of the syntax and grammar associated with early bulletins suggested soft suggestions for the ways that statement preparers could account for transactions. Similar analysis of later bulletins suggested stronger recommendations, while study of more recent standards showed a tone associated with hard directives. My interpretation of the changes is that, over time, rules became more prescriptive—perhaps a predictable consequence of an expanding government seeking to impose order over an increasingly complex business landscape.

Use of the secondary code permitted a quantitative measure indicating the vol-

ume of new pronouncements. Although bulletins, opinions, standards, and updates are distinct types of documents, they all represent interventions into how accountants should prepare financial statements to be used by investors. Thus, in the secondary coding, a rule was defined as a discrete unit of measure of a regulatory intervention. Counting the number of rules over time periods, as shown in Figure 2, offers a derivative measure suggesting the rate at which rules were promulgated.

I did not use coding to study the documents issued by the Federal Reserve Board, Internal Revenue Service, International Accounting Standards Board, or International Accounting Standards Committee. To gauge the scope of rule promulgation, I used a crude measure of output: the number of printed pages required to display each of these rule sets. Because no two publishers used the same font, page size, margins, or spacing to print text, the page counts represent a coarse measure of output. When making comparisons between financial accounting rules, I simply used orders of magnitude to be directionally correct Time periods for these data sets were simply the total number of years that each rule set has existed.

Keeping this paper a manageable length required extreme discretion over selection of examples. Other accountants reading the same materials might develop different interpretations (Blumer, 1969). However, the specifics are less important than the conversation that results. What does matter is whether scholars and practitioners evaluate the three propositions put forth in this study. Even if these propositions don't stand the test of time, debate over their validity can inform discussions about the nature of regulation.

REFERENCES

- Adair, J. 1984. The Hawthorne effect: A reconsideration of the methodological artifact. *Journal of Applied Psychology*, 69(2): 334–345.
- Barth, M., Elliott, J., & Finn, M. 1999. Market rewards associated with patterns of increasing earnings. *Journal of Accounting Research*, 37(2): 387–413.
- Beresford, D. 1999. It's time to simplify accounting standards. *Journal of Accountancy*, 187(3): 65–68.
- Blumer, H. 1969. *Symbolic interactionism: Perspective and method*. Berkeley, CA: University of California Press.
- Boland, R., Newman, M., & Pentland, B. 2010. Hermeneutical exegesis in information systems design and use. *Information and Organization*, 20(1): 1–20.
- Buckmaster, D. 2001. *Development of the income smoothing literature 1893-1998: A focus on the United States*. Oxford, UK: Elsevier Science, Ltd.
- Casas, A., Díaz, G., & Trindade, A. 2017. Who monitors the monitor? Effect of party observers on electoral outcomes. *Journal of Public Economics*, 145(January): 136–149.
- Cilliers, P. 1998. *Complexity and postmodernism: Understanding complex systems*. London and New York: Routledge.
- DeFond, M., & Park, C. 1997. Smoothing income in anticipation of future earnings. *Journal of Accounting and Economics*, 23(2): 115–139.
- Economist. 2008. The Hawthorne effect. *The Economist*, November 3 (<http://www.economist.com/node/12510632>, accessed 10 January 2018).
- Hardin, G. 1985. *Filters against folly*. New York, NY: Penguin Books.
- Healy, P. M., & Wahlen, J. M. 1999. A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*, 13(4): 365–383.
- Imhoff, E., & Thomas, J. 1988. Economic consequences of accounting standards: The lease disclosure rule change. *Journal of Accounting and Economics*, 10(4): 277–310.
- King, T. 2006. *More than a numbers game: A brief history of accounting*. Hoboken, NJ: John Wiley & Sons.
- King, T. 2017. The problem with non-GAAP earnings. *Strategic Finance*, 98(10): 32–39.
- Leuz, C. 2003. IAS versus U.S. GAAP: Information asymmetry-based evidence from Germany's New Market. *Journal of Accounting Literature*, 41(3): 445–472.
- Levitt, A. 1998. *The numbers game*. New York University Center for Law and Business, <http://www.sec.gov/news/speech/speecharchive/1998/spch220.txt> accessed September 17, 2018.
- Levitt, S., & List, J. 2011. Was there really a Hawthorne effect at the Hawthorne plant? An analysis of the original illumination experiments. *American Economic Journal: Applied Economics*, 3(1): 224–238.
- Myers, M. 2013. *Qualitative Research in Business & Management* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Nelson, M. 2003. Behavioral evidence on the effects of principles- and rules-based standards. *Accounting Horizons*, 17(1): 91–104.
- Neustadt, R., & May, E. 1986. *Thinking in time: The uses of history for decision makers*. New York, NY: The Free Press.
- Ostchega, Y., Prineas, R., Paulose-Ram, R., Grim, C., Willard, G., et al. 2003. National health and nutrition examination survey 1999–2000: Effect of observer training and protocol standardization on reducing blood pressure measurement error. *Journal of Clinical Epidemiology*, 56(8): 768–774.
- Robins, R., Spranca, M., & Mendelsohn, G. 1996. The actor–observer effect revisited: Effects of individual differences and repeated social interactions on actor and observer attributions. *Journal of Personality and Social Psychology*, 71(2): 375–389.
- Schipper, K. 1989. Commentary on earnings management. *Accounting Horizons*, 3(4): 91–102.
- Schrand, C., & Franco Wong, M. 2003. Earnings management using the valuation allowance for deferred tax assets under SFAS No. 109. *Contemporary Accounting Research*, 20(3): 579–611.
- SEC. 2003. *U.S. Securities and Exchange Commission study pursuant to Section 108(d) of the Sarbanes-Oxley Act of 2002*. Washington, DC: <https://www.sec.gov/news/studies/principlesbasedstand.htm> accessed September 17, 2018.
- Solomons, D. 1978. The politicization of accounting. *The Journal of Accountancy*, 146(5): 65–72.
- Sonnenfeld, J. 1985. Shedding light on the Hawthorne studies. *Journal of Occupational Behavior*, 6(2): 111–130.
- Sprouse, R. 1987. Commentary on financial reporting. *Accounting Horizons*, 1(1): 87–90.
- Federal Reserve Board. Uniform Accounts. 1917. *Federal Reserve Bulletin*, 3(4): 270–284.
- Zeff, S. 2018. The omnipresent influence of the SEC in the work of the Accounting Principles Board. Working paper, Rice University, Houston, TX.

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