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Institutional reality, financial reporting and the rules of the game

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Abstract

In this paper, I review the major arguments in John Searle's 1995 book, *The Construction of Social Reality*, and use them as the basis for exploring the relationship between economic reality and financial accounting numbers. In this book, Searle provides the tools to analyze factual type representations in terms of *objective* and *subjective* with respect to both their *ontological* status and their *epistemological* status. Using these tools, I demonstrate that many financial accounting representations may be properly characterized as epistemologically objective facts, even though they have an ontologically subjective mode of existence. Other financial accounting representations, however, only come into existence in accordance with a set of rules, financial accounting rules, that have no objective basis in either physical or institutional reality. The financial accounting rules for aggregating the monetary amount of total assets, for calculating net assets, net income and earnings per share are more akin to the rules for a game such as football. Once the rules have been established, certain representations based on those rules may be said to be epistemologically objective with respect to those rules, even though there is no objective basis for the rules themselves. This does not, however, render financial accounting representations useless. In fact, I argue that representations of net income and owners equity are useful because, like economic price indices and other such indicators, they are fuzzy indicators of wealth and changes in wealth. As such, they are not foolproof representations. Depending upon the rules, such indicators may be constructed in ways that are more or less reliable, or more or less misleading with respect to the objectives of users. Indeed, from this perspective, the job of standard-setting bodies, such as the FASB, can be characterized in terms of continually amending the rules in an effort to keep "the game" within the bounds of acceptable perceptions of reality.

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A close reading of John Searle's 1995 book, *The Construction of Social Reality*, indicates that it has much to offer anyone concerned with what Mattessich (1991, p. 4) has characterized as accounting's "reality problem"; a problem that is manifested in the longstanding debate about social constructivism versus realism in accounting research. This debate appears no closer to resolution now than it did over a dozen years ago in the

prominent exchange between Tinker (1991) and Solomons (1991a, 1991b). But I argue, in this paper, that Searle's book offers useful tools for re-evaluating the ontological and epistemological status of financial accounting representations, and for developing a perspective that refines and goes beyond the viewpoints that have dominated the debate. I begin, however, with a cursory overview of the prominent positions that have been staked out by the various parties to the debate.

As Mattessich (1991) points out, representations of such things as net income and owners' equity

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are crucial to the practice of financial accounting, but it has been widely accepted by academic accountants that these terms have no empirical referents in the “real world”. Indeed, this is precisely the conclusion of the American Accounting Association’s “Report of the Committee on Accounting Theory Construction and Verification” (hereafter referred to as “the Report”), which is the premier methodological document supporting the capital markets research paradigm.¹ In “the Report”, the Committee argues that the extant theory of accounting (which they identify as “the theory of matching expenses with revenues”) uses analytically defined formulas to determine depreciation expense, cost of goods sold, etc., which, in turn, become the building blocks for the analytical determination of net income, earnings per share, and owners’ equity. Since expired costs such as depreciation expense, cost of goods sold, and amortization of goodwill are unobservable outcomes of syntactical manipulations, the Committee notes that extant theory cannot be confirmed, and that furthermore, “It is difficult to know what one would mean by ‘confirmation’ in connection with extant theory” (p. 59). Given this situation, the Committee envisions three options. The first would be to withdraw any claim that accounting is or should be an empirical science. The second would be to advocate an alternative accounting theory that would be based on empirically observable outputs.² And the third option would be to expand the extant theory to include prediction and decision models.

The third option is, in fact, the one advocated by the Committee, and it provides the methodological basis for the capital markets research paradigm. Within the capital markets paradigm, the prediction and decision models used to expand the “extant theory” are the models developed by financial economics in the form of portfolio theory.

¹ “The Report” was originally published in *The Accounting Review* in 1971, but Brown reprinted it in his edited collection, *The Modern Theory of Financial Reporting* (1987) because, in his words, “The approach taken is consistent with the methodology that underlies most empirical studies in economics” (Brown, 1987, pp. v–vi).

² This second option has, in fact, long been argued for by Robert Sterling, one of the Committee members.

The Committee offered one “illustrious case” demonstrating the applicability of this approach to accounting theory, and that case involved interperiod tax allocation within the decision context of an investment fund manager. This case is supposed to illustrate that even though the specific theory of financial accounting is not verifiable, the entire theory plane (consisting of the accounting theory, the decision model and the prediction model) is verifiable. The reasoning is that the prediction and decision processes use the outputs of the accounting theory model, the resulting decisions cause changes in securities prices, and securities prices are empirical data available in the “observation plane”.

The methodological views of “the Report” continue to support an expanding body of research which, as Mattessich notes, “is concerned with ever-increasingly complex statistical techniques, mathematical models, and their surface structures, but only marginally with foundation issues” (1991, p. 4). The foundation issues that Mattessich is referring to are philosophical issues of ontology and epistemology. As he suggests, most accountants are reluctant to ponder such issues, but the last two decades have produced some notable exceptions.

The linguistic turn that had begun to sweep through philosophy and the social sciences in the 1970s was brought into the accounting literature in the 1980s and 1990s by an international group of scholars who were well-versed in the ideas associated with hermeneutics, the critical theory of the Frankfurt School, and French post-structuralism. All of these philosophical perspectives challenged the “common sense” realism of accounting practitioners and the logical empiricism of mainstream academic accountants. With respect to critical financial accounting theory, the poststructuralist influence is most notable. In her series of articles attacking the scientific realism of mainstream accounting theory and practice, Hines (1988, 1989, 1991) draws on Foucauldian social theory as well as related literature in anthropology and sociology, to make her case that economic reality does not exist independently of the accounting practices that communicate that reality, and that the conceptual framework projects

of regulatory agencies such as the FASB play a significant role in the construction and maintenance of that reality. In his debate with David Solomons (1991a, 1991b), Tony Tinker (1991) draws heavily upon Saussure's structuralist linguistics and Derrida's poststructuralist views to support his arguments about the "myth of objective reality", the futility of the search for representational faithfulness, and the impossibility of neutrality in financial accounting. McSweeney (1994) applies Derrida's techniques of deconstruction to three influential financial accounting texts in an effort to demonstrate that "Accounting representations do not naturally occur nor, as it were, present themselves. Representations are constructed out of a passive potentiality, an infinite density, of the non-representational world" (p. 57). And most recently, Macintosh et al. (2000) have applied poststructuralist ideas, as articulated in the writings of Baudrillard, to argue that "accounting today no longer refers to any objective reality but instead circulates in a 'hyperreality' of self-referential models" (p. 13).

There is obviously a huge chasm between the realism of mainstream practitioners and researchers on the one hand and the social constructivism of critical accounting researchers on the other. This chasm is fundamental to the crisis which currently exists in accounting research. The mainstream literature, including the FASB's official publications, tends to focus on "measurement problems", suggesting that accountants are dealing with independently existing economic and financial phenomena. Researchers in the critical-interpretive camp, on the other hand, tend toward the view that, in Mattessich's words, "accountant do not represent reality but create it" (1995, p. 275). The latter view leads to the notion that accountants should "abandon any kind of science" (Mattessich, 1995, p. 275), as indeed, many critical accounting researchers have advised. The realism of mainstream financial accounting researchers, on the other hand, leads them to advocate a presumably value-free, "scientific" approach to accounting research (Mattessich, 1995, p. 259). Mattessich rejects both perspectives and offers his conditional normative accounting methodology (CoNAM) as a bridge between not

only mainstream and critical perspectives, but also between scientific-empirical and normative accounting research.

Fundamental to CoNAM is an ontological position which recognizes both physical reality and social reality as components of reality in general (Mattessich, 1995, pp. 274–275). Reality, according to Mattessich, is like an onion (1995, pp. 274–275); it consists of a hierarchy of many layers, each encompassing the previous layers. In his onion model, biological reality is built from physical and chemical reality, but has emergent properties that are different from the physical and chemical. In like manner, mental reality is characterized by emergent properties that extend beyond the purely biological properties. And finally, social reality is built up from the physical, biological, and mental levels, but has characteristics that are unique to the social level. Mattessich's ontological position accordingly recognizes social reality (in the form of ownership claims, creditor claims and so forth) as well as physical reality (land, buildings, equipment, etc.). It also recognizes the *conceptual representations* of accounting as parts of reality in addition to those aspects of reality that are the objects of cognition and representation (1995, p. 275).

Mattessich's recognition of social reality facilitates the incorporation of value judgments into accounting theory. Thus, as opposed to positive accounting theories (i.e., non-normative theories), CoNAM is a methodological perspective that can be used to generate accounting theories that are purpose oriented. This methodology recognizes, according to Mattessich (1995), that accounting is an "applied science" as opposed to a "pure science". Under this methodology, a conditional-normative accounting theory (CoNAT) can be generated by the following general steps: (1) norms (alternative objectives) are selected that are consistent with our understanding of economic reality; and (2) means-end relations are formulated which will point to the types of [pragmatic conceptual] accounting representations that are needed to achieve the chosen objectives. The theories developed according to this methodology will be informed by the non-conceptual aspects of reality as follows: (1) our understanding of economic

reality will be shaped by conceptual representations that have been formed by empirical scientific inquiry; (2) the norms (objectives) chosen will be “found in the social reality of the needs and desires of individuals as well as of entire groups of persons” (Mattessich, 1995, p. 277); and (3) the means–end relationships formulated will be based on scientific inquiry informed by economics and the behavioral sciences. CoNAM thus, according to Mattessich, provides linkages between the findings of positive scientific inquiry, the value judgments of users of accounting information, and the representations of financial accounting. CoNAM is thus intended to serve as a general framework that will establish accounting as a full-fledged *applied science* on a par with engineering and medicine.

While I agree with Mattessich that the mainstream “positive” researchers have too narrowly construed reality as physical reality and the critical researchers have focused too narrowly on the social construction of reality, I find his arguments for CoNAM less than persuasive. I agree with Archer’s (1998) insightful criticisms. As Archer points out, there are at least three major flaws in the conception of CoNAM. First, Mattessich does not deal with the fact that the various objectives of accounting are intertwined with potentially conflicting ideological and political views (Archer, p. 302). Second, as Archer notes, “Mattessich seems to consider what he calls pure ‘mother’ disciplines, such as economics and the behavioural sciences, as ‘positive’ or value-free” (p. 309). Since the “scientific” means-end relations of CoNAM depend upon the “law-like generalizations” of the “mother” disciplines, a recognition of the value-ladenness of the latter would undermine Mattessich’s analogies with engineering and medicine. And third, Mattessich’s concession that accounting does create reality is much too limited and superficial. “At times, it seems that what Mattessich means by ‘accountants creating reality’ is merely that they create artifacts (themselves real objects) to represent reality” (Archer, p. 307). While some critical researchers may have gone too far with their claims about the construction of reality, they have clearly established that *many of the* relationships between accounting and economic reality are

reflexive, and that the representations of accounting often have profound social consequences. Archer is quite right when he notes that, “[t]he problematic notion of ‘social reality’ and its implications for accounting require more elucidation than is afforded by Mattessich with his ‘onion model’” (p. 306).

But consider Searle’s (1995) theory of social reality.³ Like Mattessich, Searle argues that reality consists of both physical and social reality, and he argues that the notion of emergent properties is necessary to explain the characteristics that differentiate the mental from the purely physical and biological. But he goes far beyond Mattessich in his analysis of the ontological and epistemological aspects of social reality, giving special attention to that subset of social reality that can properly be characterized as institutional reality. For example, according to Searle, certain elements of social reality, such as marriages, legislatures, money and corporations, are *ontologically subjective* in that their existence depends upon the mental states of human beings. In some sense, then, they are the products of social construction. At the same time, however, institutional facts—such as the fact that the SEC was established in accordance with the Securities Acts of 1933 and 1934—may be *epistemologically objective* in the sense that their truth or falsity does not depend upon anybody’s attitudes or feelings about them.

In this paper, I argue that Searle’s theory of institutional reality can be used to generate a new understanding of the ontological and epistemological characteristics of financial accounting representations such as net income, owners’ equity and earnings per share. I also argue that Searle’s theory of institutional reality sheds new light on the nature and role of financial accounting rules. My main conclusion is that the rules of financial accounting have much in common with the rules of a game such as football. Within the context of a

³ Searle’s theory of institutional reality has been introduced into the accounting literature by Shapiro (1997; 1998), but only in the context of developing a model for “rational and objective debate of financial accounting rules. Shapiro does not provide a systematic exploration of Searle’s theory with respect to the ontological and epistemological characteristics of financial accounting numbers themselves.

given set of rules, certain financial accounting representations may be considered to be epistemologically objective even though there is no epistemologically objective basis for the rules themselves.

In the final analysis, this project can be seen as a step toward a new view of accounting representations; a view that is not bound by the constraints of natural science methodology, as is Mattessich's CoNAM, but one that squarely accepts the fact that accounting is a social and institutional practice (Hopwood & Miller, 1994). The paper proceeds as follows. I turn first to an overview of Searle's theory of institutional reality. This is followed by a section that applies Searle's theory to the construction of financial accounting rules. And the last substantive section, prior to my concluding comments, explores the notion of net income as a "fuzzy indicator".

Searle's theory of institutional reality

Three sets of distinctions are fundamental prerequisites to Searle's theory of institutional reality. These distinctions involve: *epistemic objectivity* versus *epistemic subjectivity*; *ontological objectivity* versus *ontological subjectivity*; and *intrinsic features* of the world versus *observer-relative features*. "Epistemically speaking 'objective' and 'subjective' are primarily predicates of judgments" (Searle, 1995, p. 8). The truth or falsity of objective judgments does not depend on anybody's attitudes or feelings about them. Consider the statement, "Zeroz Company stock closed at \$150 per share on December 31, 1995". The truth or falsity of this statement does not depend on anybody's attitudes or feelings. Thus, it is an epistemologically objective statement. But consider the statement, "Zeroz Company stock is overvalued". This is an epistemologically subjective statement since its truth or falsity obviously does depend upon one's attitudes and feelings.

The terms "objective" and "subjective" function quite differently with respect to issues of ontology. "In the ontological sense, 'objective' and 'subjective' are predicates of entities" (p. 8). Ontologically objective entities, such as atoms, electrons and

black holes, have a mode of existence that is "independent of any perceiver or any mental state" (p. 8). Entities such as corporations, contracts and money, on the other hand, are ontologically subjective entities, since their mode of existence does depend on the mental state of the perceiver.⁴

Searle's distinction between intrinsic and observer-relative features of the world is closely related to the distinction between ontological objectivity and ontological subjectivity. According to Searle, "Intrinsic features of reality are those that exist independently of all mental states" (p. 12). Observer-relative features, on the other hand, "exist only relative to the attitudes of observers" (p. 11). Consider a rock. The features that we refer to

⁴ At this point, it would be understandable if the sociology-oriented reader wondered whether Searle has simply appropriated and restated Durkheim's theory of social facts in which social phenomena are treated as things. Apparent similarities are obvious in Durkheim's distinction between subjective reality and objective reality in the following quote:

When I carry out my obligations as brother, husband, or citizen, when I comply with contracts, I perform duties which are defined, externally to myself and my acts, in law and in custom. Even if they conform to my own sentiments and I feel their reality subjectively, this reality is still objective, for I did not create them, I merely received them through my education. . . Here, then, are ways of acting, thinking, and feeling that present the remarkable property of existing outside the individual consciousness (Durkheim, 1972, pp. 63–64).

It should be noted, however, that Searle and Durkheim are approaching objectivity from different perspectives. Whereas Searle's ontological objectivity refers to "predicates of entities" and his epistemological objectivity refers to "predicates of judgments", for Durkheim "objectivity depends upon the existence of a constant and identical point of reference to which the representation can be referred" (Durkheim, 1972, pp. 65–66). Contrary to Searle, Durkheim does not attempt to sort out the philosophical dimensions of objectivity. In fact, according to Gane (1994), "he explicitly avoids deducing it [his theory of social facts] from any attempt to 'philosophize' about the nature of social phenomena. . . Durkheim inverts the relation of sociology to philosophy in order to develop a sociology that is critical of philosophical definitions" (p. 76). Given that the present paper is explicitly concerned with sorting out the ontological and epistemological status of accounting representations, Searle's theory of institutional reality promises to be more useful than Durkheim's theory of social facts.

when we characterize this item as a rock are intrinsic features, since they exist independently of our mental states. But suppose that the very same rock is characterized as a paperweight. Whether or not it is a paperweight depends upon our interests, attitudes and purposes. Likewise for most of the objects that we use and rely upon in our everyday routines and tasks; things such as knives and forks, hammers and screwdrivers, pencils and paper, houses, cars, etc. As Searle notes, none of these things exist intrinsically; i.e., independently of our interests, attitudes and purposes. Yet each of these items can be described in terms of their intrinsic features; i.e., in terms of chemical composition, mass, weight, etc. Observer-relative features of the world involve ontological subjectivity. In that sense, they are created by us. But as noted earlier, “this ontological subjectivity does not prevent claims about observer-relative features from being epistemically objective” (p. 13).

The apparatus of social reality

Searle maintains that three elements are necessary to account for the apparatus of social reality: assignment of function; collective intentionality and constitutive rules. Not all aspects of social reality require all three elements, but one or more of the three are necessary to account for any aspect of social reality. Three men pushing a car to get it started requires collective intentionality (among the three men), but does not involve constitutive rules. A group of men playing football requires collective intentionality and constitutive rules. What counts as a touchdown, for instance, is determined by rules that were collectively agreed upon. Contrary to regulative rules which regulate a previously existing activity, games such as football or chess do not exist prior to a set of rules. Such rules are constitutive because they constitute the meaning of certain activities or events. Playing chess, for instance, “is constituted in part by acting in accord with the rules” (p. 27). Constitutive rules are essential to many instances in which some object is assigned a new status in accordance with the following formula: “X counts as Y in context C”. Thus, with respect to paper money in

the United States, “Bills issued by the Bureau of Engraving and Printing (X) count as money (Y) in the United States (C)” (p. 28). Of course, dollar bills also involve assignment of function and collective intentionality.

Indeed, money serves as a good example for a very important subset of social reality in general, a subset that Searle characterizes as “institutional reality”. Institutional reality and institutional facts require the collective recognition of what Searle calls *status functions*. Whereas a block of wood can function as a stool due to the intrinsic features of the block of wood, the intrinsic features of a piece of paper are not sufficient, in and of themselves, to allow a piece of paper to serve as money. The piece of paper can function as money only as a result of the assignment of a special status that is collectively recognized. And what is true of the piece of paper and money is true, according to Searle, of all institutional facts:

...the truly radical break with other forms of life comes when humans, through collective intentionality, impose functions on phenomena where the function cannot be achieved solely in virtue of physics and chemistry but requires continued human cooperation in the specific forms of recognition, acceptance, and acknowledgment of a new *status* to which a *function* is assigned. This is the beginning point of all institutional forms of human culture, and it must always have the structure X counts as Y in C. . .” (Searle, p. 40).

With respect to the formula (X counts as Y in C), Searle points out that people typically need not be aware of the process of assigning status functions or of collective acceptance. Most of the institutional facts that surround us are facts that we simply grew up with. For instance, we all grew up in a culture in which paper money was already widely used and collectively accepted. Likewise for stock certificates. Most of us probably were never consciously aware of the process by which a status function had been collectively assigned to the pieces of paper that function as stock certificates or corporate charters.

Language is the basis for institutional reality

In Searle's formula for status functions, "X counts as Y in C", X symbolizes something that is not inherent in its brute physical features. In this sense, Searle claims that all status functions require a "symbolizing move" (p. 71). A claim that is very clear with respect to language. The physical sounds that make up spoken language and the marks that make up written language can function as such because we have collectively accepted symbolic statuses for them. Such sounds and marks refer to something beyond themselves and they do so "in a way that is publicly understandable" (p. 61). But language is not just another example of status functions. Language is the most important form of status function for two reasons. Language provides a means for the public representation of other status functions, thus facilitating the ongoing collective recognition of a unique status. More importantly, however, language has a unique ability to generate new status functions, new institutional facts.

Consider the nature of performative speech acts such as: "The meeting is adjourned"; "Court is in session"; "War is hereby declared"; and "I pronounce you husband and wife". When uttered in certain circumstances these utterances literally constitute the institutional facts they declare. Indeed, such institutional facts are the basis for huge portions of our social reality. Promises, contracts, laws, marriages and money all require performative speech acts. And that is why Searle argues that language is the basic social institution: "... language is the basic social institution in the sense that all others presuppose language, but language does not presuppose the others: you can have language without money and marriage, but not the converse" (p. 60).

Institutional reality as a structure of power relations

One of the most important characteristics of status functions is the fact that they can be iterated; that is, with respect to Searle's formula, the Y term of one status function may become the X term of another status function. CPA's and the

FASB offer an interesting example. In the United States an individual (X) counts as a CPA (Y) when s/he has passed a certain examination and fulfilled various other requirements (C). The Y term in this status function may be the X term in another status function. Thus, a CPA (X) counts as a member of the FASB (Y) in a certain context (C) which might include being nominated by the AICPA and receiving approval by the Financial Accounting Foundation. Furthermore, a member of the FASB (X) counts as the chair of the Financial Accounting Standards Board (Y) when s/he has been elected under the rules of the FASB (C). In each of the last two situations a new status function is imposed on entities that already had status functions imposed on them. Such iterated systems of status functions are common within the domain of institutional reality. And the possibilities for the expansion of such systems is unlimited, especially in light of the fact that the Y term can be imposed on a wide range of phenomena, including people, places, things and events.

Some status functions may be politically benign, especially those that involve the assignment of honor, i.e. status for its own sake. More typically, however, "the creation of a status-function is a matter of conferring some new *power*..." (Searle, 1995, p. 95) Thus, most status functions can be characterized as "deontic status functions" because they "impose rights, responsibilities, obligations, duties, privileges, entitlements, penalties, authorizations, permissions, and other such deontic phenomena" (Searle, 1995, p. 100). Think, for instance, of the system of status functions that undergird the current framework of corporate accountability in the USA. The Securities and Exchange Commission (SEC) is at the heart of this system. The rights, powers and obligations of the SEC were bestowed by the Securities Acts of 1933 and 1934. These legislative acts assign the status of law to words agreed upon by the legislators of the time, legislators who have those powers as a result of being properly elected. According to the securities laws, all corporations whose securities are publicly traded in the USA must file annual reports, which include audited financial statements, with the SEC; reports that are made available to

the public. The auditors' report must state whether the financial statements have been prepared in accordance with "generally accepted accounting principles" (GAAP). From the beginning, the SEC has (directly or indirectly) granted the accounting profession a very active role in this process; most notably by requiring that corporate financial statements be audited by independent CPAs, and by accepting the FASB's Financial Accounting Standards as GAAP. This entire elaborate system of corporate accountability obviously involves many different levels of deontic status functions, from the powers of legislators to the duties of the SEC; from the authorizations assigned to the accounting profession to the penalties which the SEC imposes on non-compliant corporations.

The deontic status functions that constitute the system of corporate accountability are anything but politically benign. There is widespread agreement that this system is at the heart of many contemporary political disagreements. Some advocates of an unregulated economy, such as Watts, Zimmerman and other "positive accounting theorists", argue that the FASB and the SEC serve the self-interests of politicians while creating economic inefficiencies and harming the interests of investors, employees, consumers and the general public. Many environmentalists, on the other hand, claim that the system of corporate accountability is too lax with respect to environmental accountability, and that it focuses too narrowly on the interests of investors and creditors. As indicated by the Solomons/Tinker debate, within such a politically charged context an understanding of the ontological and epistemological character of economic reality and financial accounting representations takes on an added importance. Solomons' call for political neutrality, for instance, is compromised if accountants do, in fact, participate in reality construction; and Tinker's call for partisanship is compromised if economic reality is indeed independent of accountants representations. In an effort to shed more light on such issues, I turn to an exploration of the implications of Searle's theory with respect to financial reporting rules and financial accounting representations.

The construction of financial reporting rules

As indicated by Solomons' arguments, mainstream accountants tend to assume that the role of financial accounting is to measure relevant attributes of economic reality, however problematic the measurement process may be, and to objectively report the results. Many critical accounting researchers, on the other hand, have accepted the notion that, as Hines (1988) puts it, "in communicating reality, we construct reality" (p. 251). They tend to accept Morgan's view of accounting "as reality construction" (1988). But what exactly does this mean? As Hacking (1999) points out, assertions about social construction have been used in many different ways, leaving a wake of confusing, and sometimes contradictory, implications. Consider Hines' (1988) claims, for example. In one place, while speaking specifically of *social reality*, she points out that accounting practices "play a part in creating, shaping and changing" that reality. In other places, however, she extends her idea of constructionism to include the physical as well as the social. "Did 'black holes' and 'subatomic particles' exist before physicists created the idea of them? Of course they did not!" (p. 252). And when she states that, "Reality does not exist independently of accounts of it" (p. 258), she seems to fit Hacking's characterization of a "universal constructionist" (1999, p. 24):

...someone who claims that every object whatsoever—the earth, your feet, quarks, the aroma of coffee, grief, polar bears in the Arctic—is in some nontrivial sense socially constructed. Not just our experience of them, our classifications of them, our interests in them, but these things themselves.

Hacking (1999, p. 30) indicates that Searle's terminology can be quite useful for sorting out many of the issues involving exactly what is socially constructed and how. I accordingly turn to Searle for initial guidance in exploring the relationships between accounting rules, accounting representations and economic reality.

As noted above, from Searle's perspective, institutional reality has been constructed by our

development of an interlocking set of status functions. The collective recognition and acceptance of status functions is essential for the existence of the elements that make up institutional reality, elements such as governments, legal systems, money, and corporations. These things exist by virtue of constitutive rules. They therefore have much in common with the ontological status of games such as baseball, football and chess which exist by virtue of a set of rules.

As Searle points out, there is no such thing as a “home run” or a “touchdown” prior to our construction of the rules of the game. Games, in this sense, are truly a product of social construction. But is economic reality socially constructed in this sense? The answer, strictly speaking, must be “no”. Hunting and scavenging for food are basic forms of economic activity, but these are engaged in by animals that share no institutional rules or structures. Humans also can engage in primitive economic activity in ways that do not rely upon institutional rules. Picking wild berries, for instance, is a form of economic activity (economic reality) that does not require any institutional rules for its existence. This is not to deny that human forms of economic activity have been influenced by institutional rules and structures, and indeed that modern forms of economic activity require institutional structures, but economic reality does not come into existence with a set of rules in the way that “football reality” or “chess reality” come into existence by virtue of a set of rules. Thus, strictly speaking, “football reality” is necessarily a product of social construction, but economic reality is not necessarily socially constructed. Economic activity, in its most basic forms, pre-existed the development of the institutional arrangements that are so fundamental to much of contemporary economic activity. And economic activity in its most basic forms obviously pre-existed the institutions of accounting. Accounting has certainly influenced the evolution of contemporary economic activity, but strictly speaking we do not create economic reality when we construct reports of economic reality.

In the sense of regulative versus constitutive rules, the institutions of accounting are much more akin to the former. Whereas driving (of cars,

motorcycles, horse-drawn wagons, or whatever) is possible, and pre-dates any rules-of-the-road, regulative rules-of-the-road may improve the safety and efficiency of driving. Rules-of-the-road are thus aptly characterized as regulative rules, whereas the rules of chess are characterized as constitutive rules. In like manner, economic activity existed prior to the institutions of accounting, but the latter facilitated more effective coordination and control of economic activity.

The rules of financial accounting, however, are not directly regulative as are the rules of driving. The rules of accounting are rules for constructing *representations* of economic reality. In this sense, the rules of financial accounting have much in common with the rules of painting as promulgated by the Renaissance writer Leon Battista Alberti. As pointed out by Crosby (1997, pp. 183–186), the perspectivist approach to painting (also referred to as *costruzione legittima*) combined the ancient Greek theory of optics with Ptolemy’s approach to cartography (i.e. the use of a gridwork of coordinates, now familiar to us as lines of longitude and latitude) to produce what came to be known as “realistic” pictures of the visual world. As Crosby succinctly points out, these techniques “...enabled the painter to quantify not reality, but something more subtle: the *perception* of reality” (p. 184).

My contention is that the creation of double-entry accounting (DEA) performed a similar function with respect to commercial or economic reality. The DEA model provided a conceptual grid which accountants have been using ever since as a lense through which they observe and record economic activity. Whereas the perspectivist approach allowed artists to “quantify” their drawings and paintings, rendering them more “realistic” and precise, the DEA allowed accountants to quantify their representations of economic reality in terms of a homogeneous monetary unit. The resulting representations of economic reality have been praised for their contribution to our ability to organize the facts of economic activity and thereby to facilitate decision-making and control. But there are some important differences between the types of realities represented in these two cases. From a Searlean perspective, an artist is creating representations of an ontologically

objective physical reality; people, places and things that have an objective physical mode of existence. The accountant, on the other hand, is creating representations of institutional facts that have an ontologically *subjective* mode of existence. Land, buildings, equipment, livestock, etc. have an objective physical mode of existence, but ownership claims, debts, corporations, and money have a subjective mode of existence. Unlike artists, accountants are not attempting to create representations of physical objects as such, but representations of ownership claims, obligations, and monetary valuations.

In and of itself, the fact that accountants are dealing with ontologically subjective facts need not unduly compromise the integrity of accounting representations, provided that they are epistemically objective. But therein lies the rub. The DEA model exists and has been perpetuated by virtue of its assignment of monetary valuations to the various claims of ownership and obligation. It is the assignment of monetary values that allows the accountant: (1) to construct an aggregative measure to represent a group of assets consisting of different types of things; (2) to construct a similar aggregative representation for obligations; (3) and to compare changes in the monetary amount of assets and liabilities over time to construct monetary representations of revenues, expenses, net income and dividends. Without the assignment of monetary valuations accounting could not play the role that it does in the modern economy. Nor for that matter, could the modern institutional structure have evolved.

Unfortunately, however, for those who seek an objective basis for accounting representations, monetary valuations are, in Searle's terminology, epistemically subjective. This is clearly the case with respect to the use of appraisal values for non-monetary assets.⁵ Appraisals are based on judgments that are just as epistemically subjective as the judgment that Picasso was a good painter (or a

bad painter). The same claim can be made with respect to assets that are valued at "the present *value* of expected future *benefits*". Ultimately, the use of present values for valuation purposes involves subjective judgment about not only what things will be beneficial, but also about the degree of benefit.

But what about historical cost? Setting aside the widely acknowledged allocation problem in which the division of historical cost into "expired cost" and "unexpired cost" would surely be accepted as epistemically subjective, many accountants would claim that historical cost, in and of itself, is an epistemically objective fact. And it is, in some limited sense; in the sense that a company either paid \times dollars for a building or it didn't. With respect to whether or not the price paid was too much, or whether it was a "bargain", historical cost cannot escape being characterized as epistemically subjective. And to the extent that the monetary measure of net assets carries an implication of net *worth*, the underlying implication has to do with the appropriate valuation of the various assets and obligations. Furthermore, even though contemporary accountants disclaim any implication that they are attempting to measure *net worth*, any meaningful economic notion of income relates to changes in net worth. Income refers, ultimately, to epistemically subjective judgments about potential benefits, about worth, about value.

Finally, consider Sterling's proposal that all balance sheet items be valued at "current market values". Sterling tends to accept the notion that market prices constitute objective data that are appropriate for a scientific approach to accounting measurements. Under his approach, all assets and liabilities would be stated on the balance sheet at current market value (or estimates thereof). The resulting measure of net assets would then represent the residual monetary value that the owners would realize if they liquidated the firm. This would presumably be an unabashed measure of net worth. But note that accounting theorists have pointed out the fact that this "liquidation value" of the firm would be different from the operating value of the firm; that in fact Sterling's valuations ignore the intangible values associated with such

⁵ Note that appraisal values are used as the basis for allocating the purchase price to specific assets when one price is paid for two or more assets. Furthermore, under US GAAP, the purchase method of accounting for the acquisition of one company by another virtually requires that the acquired assets be recorded at appraised value.

things as organization, expertise, and reputation. The claim that liquidation values are more appropriate than operating values is itself an epistemically subjective judgment.

Thus, from a Searlean point of view, it seems that the DEA is concerned with constructing representations of things that are both ontologically *and* epistemically subjective. I hasten to note, however, that the epistemological subjectivity of accounting valuations does not preclude different levels of agreement regarding some valuations. We might expect, for instance, a higher level of agreement for the valuation of marketable securities than for accounts receivable (net of uncollectibles); a higher level for receivables than for capital leases; a higher level for capital leases than for goodwill; and so forth. Indeed, Ijiri (1967) has even formulated a model for measuring the degree of consensus concerning accounting representations. He refers to the degree of consensus as the “degree of objectivity”. In doing so, however, he is deviating from the usual (and from Searle’s) understanding of objective. “In general the term objective is understood to mean existing outside of the mind, having a separate or independent existence. In other words, objectivity refers to external reality independent of the persons who perceive it” (Ijiri, 1967, p. 134). But noting that this strict construal of objectivity poses major methodological difficulties for accounting theorists, Ijiri asserts that “it is far more realistic to define objectivity simply as the consensus among a given group of observers or measurers” (pp. 134–135). My contention, however, is that Ijiri’s attempt to redefine objectivity is a move to side-step a major methodological issue in accounting theory. From a Searlean perspective, the judgment that Picasso was a good painter is a subjective judgment even if everybody agreed—one hundred percent consensus does not convert an epistemically subjective judgment into an epistemically objective judgment. Quite simply, as applied to accounting valuations the “degree of consensus” would, in Searlean terms, be characterized as the degree of consensus concerning epistemologically subjective valuations.

To non-accountants, the subjectivity inherent in accounting valuations might appear to negate the apparent precision of financial accounting measures,

such as owners’ equity, net income, earnings per share, etc. Accountants, however, know that any precision with respect to these “measures” is entirely due to the rules by which they are calculated. And this brings me to the second important difference between perspectivist painting and the DEA. The rules of the former are derived from the realm of ontologically and epistemically objective facts. They are derived from the physical realm of optics, geometry and geography. The rules of double-entry accounting, on the other hand, have much more in common with the constitutive rules of games such as football and chess.

This can be clearly demonstrated with respect to accounting’s well-known aggregation problem. The aggregation problem refers to the fact that the monetary amount assigned to total assets is obtained by adding together a variety of items which are individually “measured” in terms of various attributes such as current general purchasing power (for Cash), current market value (for Marketable Securities), historical cost (for Land), “unexpired” historical cost (for Buildings and Equipment), present value of expected future benefits (for Capital Leases), etc. The dollar total derived from adding such a list has no *objective* referent in either brute physical reality or in institutional reality. The same is true with respect to the monetary amount assigned to a list of liabilities, or to the monetary amount assigned to the owners’ equity as the difference between total assets and total liabilities. Furthermore, since net income represents a change in net assets, the dollar amount assigned to net income has no *objective* referent in either brute physical reality or in institutional reality. I am not claiming that accounting numbers for total assets, net assets and net income are totally devoid of any referent in reality; only that the referent is *subjective* (in both the ontological and epistemological senses) as opposed to objective.

But the main point remains. There is no way to operationalize the double-entry accounting model (except perhaps for a strict cash-basis system) without a set of rules which, in turn, have no *objective* basis in physical or institutional reality. In this sense, accounting “measures” such as net income and earnings per share have much in

common with the ontological status of points scored in a football game. That is, they exist only by virtue of the “rules of the game”. Take away the rules of football and things such as “first downs”, “touchdowns” and “extra points” disappear. Take away the rules of double-entry accounting and things such as the *monetary amount* of total assets, owners’ equity, net income, or earnings per share disappear. Take away the rules of double-entry accounting and the institutional rules (status functions) which give rise to such things as ownership, debt, and firms, and the very concepts of asset, liability, owners’ equity and net income disappear. Thus, in a very significant sense, the rules for double-entry accounting together with certain institutional rules comprise a set of constitutive rules.

But unlike Searle’s clear-cut examples of purely constitutive versus purely regulative rules, the rules of financial accounting do not exist in a compartmentalized realm that is separate and distinct from practices involving regulatory rules. In the real world of financial accounting practices, these are intertwined in much the same way they are in law and everyday life as described by Sarat and Kearns (1993). They argue that new laws often emerge from regulated practices; that those new laws may actively create new meanings and new statuses; and that the new meanings and statuses, in turn, may alter the regulation of activities in everyday life. Thus, in their words, “Law is continuously shaped and reshaped by the ways it is used, even as law’s constitutive power constrains patterns of usage” (p. 55).

The constitutive rules for double-entry accounting likewise have a long evolutionary history during which new rules, with new meanings and statuses, emerged from regulated practices; new rules which, in turn altered the regulation of financial and economic practices. Even from its beginnings in ancient Mesopotamia, accounting has been used to regulate the processes of production, trade, taxation, and distribution (Mattsich, 1998). As these practices changed with the advent of banking, partnerships, joint ventures, etc., new accounting rules emerged; most notably, new rules for the determination of profits and for the distribution of profits. With the industrial

revolution, the growth of large scale production, and the accompanying importance of corporations, new financial accounting rules were formulated; rules for determining such things as surplus, legal capital, and earnings per share emerged.

In the contemporary economic world, accounting numbers are used to “measure” minimum legal capital and minimum legal capital laws regulate, or at least constrain, distributions to shareholders. Relations with corporate bond holders are contractually regulated by bond indentures which specify accounting numbers and ratios to constrain certain management and/or board of directors decisions. The funding of employee retirement funds is regulated by laws which employ accounting numbers and ratios. Contractual liability for environmental hazards also are increasingly linked with accounting numbers and financial reporting. In each of these areas, there has been a history of interaction whereby new regulatory practices have triggered the construction of new accounting rules, new statuses and new meanings, and vice versa. Thus, every time rule making bodies such as the FASB construct new rules for what counts as an asset, liability, expense, or revenue, there are likely to be implications for certain regulatory practices (legal and contractual) which may, in turn, be altered in response to the new rules. Over time the altered practices may generate pressure for new accounting rules. And on and on.

The Enron debacle provides an interesting case in point. The existing financial accounting rules, especially the rules for accounting for stock options and the rules for what counts as the reporting entity, were obviously strong motivating factors for the way Enron constructed certain borrowing and executive compensation arrangements. As a result of Enron’s collapse and the ensuing public scandal, the FASB and the SEC have indicated that they will be exploring changes in the rules governing the use of “special purpose entities” and their consolidation in financial reports. And certain members of the US Congress are proposing a law that would require the value of stock options to be expensed. But even if the rules are amended, the new rules will very likely

motivate the development of new contracting practices, new ways to keep debt off the balance sheet, and new ways to compensate executives without impacting the bottom line.

Once again, however, none of these considerations alters the previous conclusion about the ontological and epistemological character of accounting representations and financial accounting rules. Epistemically objective facts may be considered in the process of formulating new rules for what counts as an asset, liability, expense, or revenue, and new rules may be motivated in response to institutionalized regulatory practices, but this does not alter the fact that, from a Searlean point of view, the monetary amounts assigned to total assets, total liabilities and net income have no objective basis in either brute physical reality or institutional reality.

I hasten to add that these arguments do not rule out all claims to epistemic objectivity. There is no objective basis for the rules of football, but given the collective acceptance and recognition of such rules, it is an epistemically objective fact that the Patriots won the superbowl in the year 2002. Likewise, given the collective acceptance of the FASB's rules (in the United States) it is an epistemically objective fact that, *within the context of those rules*, Amazon.com incurred a Net Loss for the fiscal year ended December 31, 1998. The outcome is epistemologically objective, given the "rules of the game", even though there is no *objective* basis for the rules themselves; even though there is no *objective* criteria for evaluating whether the rules (of the FASB or of American football) are good or bad, right or wrong, more useful or less useful. I am not denying that one can construct arguments for or against specific rules; only that such arguments must ultimately appeal to *subjective* interests.

Net income as a fuzzy indicator

So, if the monetary representations of total assets, net assets, and net income have no *objective* referent in either brute physical reality or in institutional reality, in what sense can they be considered useful? The answer, I suggest, is to be

found in the fact that they still refer to an aspect of institutional reality, albeit a *subjective* aspect. As noted earlier, such numbers refer to subjective judgments about potential benefits, about worth, about value. If they did not, then an increase in net income would not be considered a good thing, nor would a decrease be considered a bad thing. Indeed, it is arguable that representations of owners' equity, net income and earnings per share are considered useful primarily because they are taken as judgments about worth and value, about the net worth of the firm, about the increase in net worth due to profitable operations, and about the increase in net worth that is associated with one share of ownership. In fact, my main argument in this section is that even though these aggregate accounting numbers cannot literally be characterized as measurements, they can be appropriately characterized as indicators or indices.

The term "index" is used in a very specific sense in semiotics. "When we say something is an 'index' we mean that it is somehow causally linked to something else, or associated with it in space or time" (Deacon, 1997, p. 71). Thus, thermometers are indexical with respect to temperature, speedometers are indexical with respect to speed, and weathervanes are indexical with respect to wind direction. But these are all examples of physical phenomena. An example that is much more relevant to accounting would be the price indices constructed by economists. As with the monetary amount of total assets, there is no specific referent for the general price level, but price indices are constructed to be useful as indicators of the general price level and the purchasing power of the monetary unit. Thus, it is quite appropriate that the FASB should use the Consumer Price Index for All Urban Consumers (CPI-U), as an example in its discussion of faithful representation.

The CPI-U is a 'market basket' index, based on the average price a typical consumer would pay for a selection of consumer goods. Specific price changes experienced by specific consumers will differ from the index to the extent their consumption patterns are different from the selection of goods in the index market basket if the price changes on the

goods they purchase are not perfectly correlated to the changes in the index. General price indexes, such as the CPI-U, cannot acknowledge individual differences, but they may provide a reasonable measure of the loss in the general purchasing power of the monetary unit (FASB, 1988, p. 54).

Actually, the CPI would be more appropriately characterized as a reasonable *indicator* of purchasing power for a typical consumer. As such, it may not measure the actual purchasing power for any specific consumer, and it may be a more reasonable indicator of purchasing power for some consumers than it is for others. In making an analogy with digital versus analog tuning (say, of a radio), the CPI would have much more in common with analog tuning than with digital tuning. As with analog tuning, the CPI is much fuzzier (as in less precise) than is digital tuning. And my claim is that accounting numbers such as net assets and net income are even less precise, as indicators of wealth, worth, or value, than the CPI is as an indicator of purchasing power.

In support of this claim, I offer the fact that the monetary amount of total assets is determined by applying a set of rules for adding together a group of very different things, such as historical cost, allocated historical cost, present value of future benefits, etc. This is quite similar to the way a price index is computed by adding together different prices for different things in accordance with a set of guidelines or rules. But an indicator such as net income is surely much fuzzier than a price index because of the sheer number of options available to those constructing the accounting numbers—options such as LIFO versus FIFO, straight-line depreciation versus declining balance depreciation, the cost method of accounting for an acquisition versus the pooling of interests method, and on and on. Furthermore, while the calculation of a price index is based on relatively objective data (specific prices for specific things), the accounting calculations involve numerous estimates, many with a wide range of acceptable possibilities, such as estimated life for a building or for goodwill. Thus, if the CPI is a fuzzy indicator, then net income must be judged a very fuzzy indicator.

This does not necessarily nullify the usefulness of such indicators. As the FASB noted, despite their limitations, price indices may yet “provide a reasonable measure of the loss in the general purchasing power of the monetary unit” (FASB, 1988, p. 54). But it must be pointed out that accounting measures such as net assets and net income suffer from another limitation that does not as blatantly relate to price indices. Price indices are typically prepared by a governmental or semi-governmental body and are used by a wide range of individuals and groups, but the preparers do not generally attempt to manipulate a price index to fool or to manipulate the potential users. Accounting numbers, on the other hand are prepared by a large number of different organizations who are frequently charged with attempting to mislead the users of financial statements. In this sense, it may be useful to compare numbers such as net income with another type of index—the “skin conductance response”⁶ as used in lie detector tests. Individuals often attempt to fool lie detector tests, and such tests are controversial because the outcome depends upon the skill of the questioner administering the test. They are also controversial because of evidence that indicates that such tests can be fooled (Damasio, 1999, p. 50).

Granted the basis for controversy with respect to lie detector tests, it is understandable that accounting numbers and the rules for their construction seem to be even more controversial. Accounting numbers are clearly easier to manipulate than the results of a lie detector test. Furthermore, there is an ongoing game-type relationship between the rule-making authorities (such as the FASB) and the preparers of financial statements. It seems that at least some preparers are always attempting to

⁶ As explained by the noted neurologist Antonio Damasio, “As our body begins to change after a given percept or thought, and as a related somatic state begins to be enacted (for instance, that of a given emotion), the autonomic nervous system subtly increases the secretion of fluid in the skin’s sweat glands” (1994, p. 207). Lie detector tests use electrodes attached to an individual’s skin to make a graph in the changes in the skin’s conductivity as a result of such changes in body fluid. “These tests aim at determining if subjects are lying, by tricking them into denying knowledge of a particular object or person which makes them unwittingly produce a skin conductance response” (pp. 207–208).

find “loopholes” in the rules that allow them to prepare statements that meet the letter of the rule while violating the spirit of the rule. It is also a well-known fact that many businesses structure transactions differently in response to certain financial accounting rules. But still, financial accounting numbers are widely followed and apparently widely used in making investing, lending and other major decisions. Their usefulness, however, cannot be taken for granted by the rule-making authorities. Bodies such as the FASB are well aware that they must continually monitor changes in the economic environment and changes in the way transactions are being structured, so that they can revise the rules in an effort to maintain the credibility of financial accounting numbers. Indeed, some of the major new rules constructed by the rule-making bodies can be seen as attempts to lessen the gap between financial accounting representations and wide-spread perceptions of economic reality. Off-balance sheet financing, for example, has generated a long history of give and take between the financial accounting rule-makers and the managers who structure transactions and prepare financial statements. The reflexive relationship between the rules and the preparation of financial statements is also readily observable with respect to the issue of post-employment benefits, stock options, and convertible securities.

Indeed, the options available for reporting transactions, together with the possibilities for creatively structuring transactions, underlies what Macintosh, et al. (2000) have characterized as the “earnings management ‘game’” (p. 31). They cite former SEC chair Arthur Levitt as follows:

This is the pattern earnings management creates: companies try to meet or beat Wall Street earnings projections in order to grow market capitalization and increase the value of stock options. Their ability to do this depends on achieving the earnings expectations of analysts. And analysts seek constant guidance from companies to frame those expectations. Auditors, who want to retain their clients, are under pressure not to stand

in the way (Levitt, quoted in Macintosh et al., 2000, p. 31).

In light of the earnings management game, Levitt, during the 1990s, became increasingly vocal about the FASB’s responsibility for maintaining the credibility of accounting as a “reality check” (quoted by Macintosh et al., 2000, p. 33). From this perspective, we could aptly characterize the FASB’s job as follows: to continually amend the rules in an effort to keep the game within the bounds of acceptable perceptions of reality.

Conclusions

Searle’s (1995) book demonstrates clearly that many facts about institutional reality are epistemologically objective. But Searle also makes it clear that institutional reality itself cannot be reduced to the law-like generalizations that characterize our knowledge of the natural sciences. This fact constitutes the fatal flaw for all attempts to formulate a scientific theory of financial accounting, whether in the form of scientific accounting measurements (Sterling), the so-called “modern financial reporting theory” (capital markets research as described by Brown, 1987), or Mattessich’s “conditional normative theory of accounting”. All of these perspectives rely on the notion that economic reality can be reduced to law-like generalizations; a notion that is undermined by the fact that market economic reality is a product of accumulated social constructions.

The critical-interpretive movement in accounting research, on the other hand, recognizes the socially-constructed character of market economic reality and of accounting representations. It also recognizes that the character of market economic reality is subject to change as a result of cultural evolution in general or of political struggles in particular. But for various reasons critical-interpretive researchers have not developed a coherent and descriptively accurate theory of financial accounting. A fundamental reason for this is that critical-interpretive researchers have been unwilling or unable to provide a convincing explanation of how such things as net income and owners’

equity represent reality, except to point out that they are socially constructed. As Mattessich (1991) indicates, an acceptable theory of financial accounting must clarify how financial accounting numbers such as these represent reality.⁷

As this paper has demonstrated, Searle's philosophical analysis of institutional reality does provide building blocks for developing a theory of financial accounting. Using those building blocks, I have demonstrated that many financial accounting representations (regarding ownership claims and monetary obligations, for example) may be properly characterized as epistemologically objective facts, even though such facts have an ontologically subjective mode of existence. Such facts are based upon already existing institutional arrangements involving such things as money, corporations, property rights, etc. Other financial accounting representations, however, only come into existence in accordance with a set of rules, financial accounting rules, that have no *objective* basis in either physical or institutional reality. The financial accounting rules for aggregating the monetary amount of total assets, for calculating net assets, net income and earnings per share are not akin to the rules for a game such as football. Once the rules have been established, certain accounting representations based on those rules may be said to be epistemologically objective with respect to those rules, even though there is no objective basis for the rules themselves.

From this perspective, I have argued that net income can be seen as a fuzzy indicator of *subjective* reality. Net income provides an indication of the increase in value, or wealth, even though there is no objective criteria for measuring that value. In this sense, net income has much in common with indices such as the Consumer Price Index. But it also has much in common with the index known as the skin conductance response used in lie detector tests. Just as the subject of such a test may be able to fool the person administering the test, the preparers of corporate financial statements may be

able to fool the users of those statements about financial position and results of operation.

The view of accounting representations developed in this paper thus offers a unique approach to our understanding of financial accounting. While it rejects the extreme claims of social constructivists—i.e., claims that we create economic reality by reporting economic reality—it does not foreclose the possibilities for exploring issues of concern to critical accounting researchers, issues having to do with exclusion, power and control. At the same time, although it does not support the application of natural science research methodology to accounting issues, it does not foreclose the possibilities for developing normative theories for improving accounting practices. Indeed, it would seem to open new avenues for rendering the social and political aspects of financial accounting practices visible *and* developing constructive alternatives.

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⁷ Mattessich's "onion model of reality", as presented in Mattessich (1991), is not adequate because it fails to distinguish between the epistemologically subjective and the epistemologically objective aspects of social reality.

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