

MYTH, PARADIGMS AND ACADEMIC ACCOUNTING RESEARCH: A COMMENT ON “READING AND UNDERSTANDING ACADEMIC RESEARCH IN ACCOUNTING” (GORDON AND PORTER, 2009)

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ABSTRACT

Gordon and Porter (2009) provide a guide to reading and evaluating the academic accounting literature aimed at Master’s students and “future practitioners.” While the article has value as a guide to the historical publishing norms of a certain type of research, this comment argues that it provides a paradigm-specific view of what constitutes accounting research and an overly stylized view of the research process that contributes to the “myth of the scientific method.” If we want students and practitioners to appreciate academic accounting research, we need to expose them to the variety, limitations and excitement of research. This comment hopefully opens a debate on how we should introduce accounting students to academic research.

INTRODUCTION

Gordon and Porter (2009) in this Journal provide a guide to reading and evaluating academic accounting research for practitioners and students. They are explicit in noting that their guide is not intended for “PhD students or others who wish to perform academic research” and so one expects a users’ perspective rather than a preparers’ perspective on research. Still, the view of accounting research that we as academics present to users – specifically students and future practitioners – should allow them to understand the diversity of accounting research and to appreciate the intellectual struggle and creativity that goes into producing new knowledge. To do any less than this is to mislead users about the process and outcomes of academic research. The

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“schism” between research and practice that has been noted repeatedly over the last fifty years and which serves as the motivation for Gordon and Porter (2009) is unlikely to be healed by reinforcing the “myth of the scientific method” (McComas, 1996). This point has been made repeatedly in various reports on developing “scientific literacy” among the public (e.g. House of Lords, 2000; American Association for the Advancement of Science, 1993). In order for the public to appreciate scientific knowledge and be informed users of that knowledge, they must understand the reality of scientific practice and the limitations of scientific knowledge.

This comment extends Gordon and Porter’s (2009) view of academic accounting research to argue that we should expose students to the rich reality of academic accounting research. Students and practitioners may develop a better view of academic research if we openly acknowledge the diversity of our research practices and the intellectual struggle and creativity that goes into generating new knowledge. This comment makes a first step in this direction by raising some common myths about the scientific method that should be countered and exploring the diversity of research methods and objectives that underlie a huge volume of academic accounting research. The paper also raises some concerns about the consequences for our students and future practitioners if we fail to provide them with a broad and realistic view of academic accounting research.

The Myth of the Scientific Method

Gordon and Porter (2009: 29) build their approach to evaluating academic research around the concept of “the scientific method.” They provide a succinct summary of what this means to them:

Advances in science are most often the result of a process called the scientific method ... The process begins when a researcher observes a set of events and develops a theory, or explanation, of what might be causing those events. The researcher then tests the theory to see how well it explains observed events. To do this, he or she uses the theory to develop a hypothesis, or prediction, about what will happen in a particular situation. Next, he or she designs a set of tests to determine if the hypothesis is correct. Test results consistent with the prediction confirm the hypothesis and, thus, the theory. When the results are inconsistent with the hypothesis, the theory is ‘disconfirmed.’ The researcher must then decide whether the theory needs some fine-tuning or if it should be replaced by a different theory.

Understanding the scientific method is a key aspect of scientific literacy, but there is more to it than that. Durant (1993) suggests that there are three levels of scientific literacy: knowing some science (e.g. facts), knowing how science is supposed to work (e.g. the scientific method), and knowing how science really works. The account of academic research offered by Gordon and Porter (2009) does not engage with this last level of scientific literacy. There are three points in the quoted paragraph that should be expanded to provide a more complete view of academic research: the effect of social context on research, the existence of alternative philosophies of science or paradigms, and the observed nature of actual research practices.

First, the process of research is depicted in Gordon and Porter (2009) as a solitary activity rather than a social process that occurs within communities. But theories do not arise *tabula rasa* from the experience of solitary researchers, and all individual theoretical speculations are not subject

to empirical testing. Research on the actual practice of science has repeatedly demonstrated that research occurs within a social context. As a social process, research methods and the development of theories are significantly affected by community norms and patterns of interaction among community members (e.g. granting agencies, reviewers and editors, authors, co-authors etc.). The well established concepts of "paradigms" (Kuhn, 1962), "epistemic communities" (Haas, 1992) and "communities of practice" (Wenger, 1998) highlight the importance of the social context in which research occurs.

Within scientific communities, the theories that are considered worth testing tend to be those that lie within the bounds of existing problems and assumptions. Davis (1971) suggests that "interesting" scientific ideas, i.e. those ideas that are likely to be cited and tested by others, are those that reinforce some assumptions of a scientific community while challenging others; ideas that violate all of the assumptions of a scientific community are considered "absurd." An isolated researcher testing their idiosyncratic ideas about the way the world works is unlikely to publish or otherwise contribute to scientific debates. As Kuhn (1962) observes, most science is puzzle solving within the bounds of an existing set of accepted assumptions, theories and methods. Gordon and Porter (2009) do recognize the importance of prior research in developing a research program, but the broader question of why research has been framed in a certain way or why certain questions have not been addressed in the literature remains moot. Understanding what gets researched requires an understanding of the complex social context in which research occurs.

Second, a key problem in the philosophy of science has been to understand the relationship between empirical observations and "knowledge," i.e. what may be taken as known based on what our senses tell us or how we induce generalizations from specific observations. The classic example of the problem of induction is the apocryphal story of scientists in the northern hemisphere whom always observed white swans and hence developed the theory, based on induction from these data, that all swans are white. Of course, once Australia was "discovered" and the existence of black swans became known, this theory was shown to be wrong. The morale being that our "knowledge" (understood as theoretical generalizations beyond our past experience) can always change with one additional data point. Since Popper's (1934/1959) "solution" to the problem of induction, most philosophers of science would acknowledge that we are never able to "confirm" knowledge or demonstrate that it is "correct." Rather, our "knowledge" may be better portrayed as a community consensus (best guess) about how the world works. These "conjectures" may be refuted at any time by new knowledge or alternative theories. The observation that previous scientific "facts," such as the nature of planetary movements or the existence of sub-atomic particles, are subsequently revised demonstrates that our methods are unable to establish the "correctness" of our views in any absolute sense. Popper's alternative² is to construct theory so that it may be "falsified," i.e. proven wrong. If a hypothesis is not "falsified" the theory can be regarded as corroborated but never verified or proven "correct."

Finally, the portrayal of the scientific method in Gordon and Porter (2009) confounds the "context of discovery" and the "context of justification" (Reichenbach, 1938); i.e. the way that we rhetorically defend a claim to knowledge in an article may be quite different than the way that the

² I limit myself here to an alternative philosophy applicable to empiricist science; below I will consider other epistemologies that have been implemented in accounting research.

research was actually conducted in practice (Medawar, 1963). Gordon and Porter (2009: 36) claim that they have described “the process used by academic researchers to create their papers” but much evidence contradicts this view of academic research ranging from Kuhn’s (1962) observations on the lack of theory rejection in the face of contradictory evidence, to Callon’s (1986) and Latour’s (1987) ethnographies of scientific practice that detail how research laboratories operate.

While there is no doubt that researchers are concerned about issues of internal and external validity, the design of tests, and sample selection as suggested by Gordon and Porter (2009), sometimes the availability of data drives the research, and research may involve trade-offs that are not amenable to logical analysis (McGrath, 1981). The development of theories and the interpretation of results may be as much a matter of serendipity as method (Van Andel, 1994). In reality, the research process is not a linear activity. The research process is characterized by chaos and clutter, blind alleys and detours, politics and power (Bijker et al, 1987). The reality of research is much more interesting and challenging than the scientific method would suggest.

These points are not unique to accounting research. A medical journal, for example, ran a series of articles that invited researchers to describe how their research “really happened.” The editor’s introduction (Tobin, 1999) contrasts the stylistic requirements of journal articles with the reality of the research that is reported in those articles:

Through selective hindsight and carefully edited reconstruction, the scientific paper presents itself as an immaculate conception, without iniquity or ignoble thought, and free of prodigal acts. Every investigator, however, recognizes that the process of research involves a long list of wrong ideas, misfires, mistakes, and blind alleys. We would all like to pretend that our paper is the final product of logical hypothetico-deductive thinking. But intuition, good fortune, and serendipity play a larger part than is apparent in the finished article. Also missing in the published product is the human dimension to discovery: the passion, excitement, conflict and competition. (p. 1801)

By way of example from the accounting literature, consider the development of activity-based costing (ABC), arguably one of the most successful translations of academic research into practice. ABC is typically traced to an article by Cooper and Kaplan (1988) and their subsequent work. Kaplan moved to Harvard in 1984 and was exposed to field study methods (the traditional Harvard case study approach) and a literature in operations management on the changing nature of production processes (Jones and Dugdale, 2002). His appreciation of the problems in management accounting arose from contact with manufacturing companies and direct observation of some of the ways they were trying to deal with costing issues in technologically sophisticated environments coupled with his historical work with Tom Johnson on changes in management accounting practice (Johnson and Kaplan, 1987). Cooper and Kaplan (1988) began the process of generalizing their observations of specific companies to a more theoretical level by demonstrating how traditional cost accounting methods distorted product costs under changing production systems and how focusing on activities could provide better cost information.

The popularization of ABC as a management technique was subsequently due to the role of CAM-I, a consortium of industrial companies primarily in defense industries interested in cost measurement for contracting purposes. Interestingly as this literature grew, the claims for ABC

became more conservative (e.g. from claiming to find the “true” cost, to providing a “better” cost for specific purposes). So in this case, a new management accounting technique developed based on research that arose out of the set of skills and interests represented at Harvard at that time (colleagues and context mattered), the research was inductive (it was not directed by a priori theory but rather by a practical problem) and was refined over time based on interaction between practitioners and academics (Kaplan, 1998). This stream of research illustrates an alternative to the model of the scientific method that had a significant effect on practice and provides insights into how research unfolds in practice.

Gordon and Porter’s (2009) account of academic accounting research and the scientific method they use as a baseline is a “myth” (McComas, 1996). Myths may be used to provide explanations of phenomenon that are not fully understood or to fill in the gap between evidence and faith. A myth therefore stands in for a detailed investigation of the way that things happen. The scientific method is a myth in the sense that it is used to give academic research credibility and encourage users of academic research results to believe that there is greater certainty in our knowledge than is actually warranted; it does not describe what researchers do. But does it make a good consumer of academic accounting research to believe in myths? Should we allow the users of academic accounting research to believe that our studies provide unequivocally “correct” knowledge? We need to acknowledge the uncertainty inherent in our bodies of knowledge and the real challenges of academic research. This may be a better way to engage students and the public in the research process and to encourage practitioners to be informed users of our research.

Paradigms and the academic accounting literature: Beyond technologies of accounting.

The scientific method described by Gordon and Porter (2009) is a relatively recent addition to the philosophy of science. The first complete statement of it is typically attributed to Pearson (1892). Most of the early breakthroughs in science, however, for example in astronomy, genetics and chemistry, happened without knowledge of the “scientific method” and followed methods that differ considerably from that model (Feyerabend, 1975). Even today the “scientific method” is, at best, a logical (normative) model of science. But even as a model of practice rather than a description of practice, this approach has limited applicability to the tasks of social science. Consequently, Gordon and Porter’s (2009) guide to reading accounting research does not apply to a wide range of academic accounting literature. In part this is because of the authors’ view of the research’s implicit purpose. The focus is on those studies designed to create predictive knowledge, i.e. generalizable, verifiable causal relationships between measured variables. But much of the academic literature does not have this objective, and, it should be noted, practitioners may also not be that interested in the level of abstraction and the simplification of phenomenon that are required to generate knowledge with these characteristics³.

There have been many attempts to differentiate styles or paradigms of academic research according to the underlying philosophical assumptions of the work (Chua, 1986, provides an early example in accounting). The approach discussed by Gordon and Porter (2009) is positivist research

³ Gordon and Porter (2009: 26) acknowledge that practitioners express “amusement at the time ‘wasted’ on what they feel to be irrelevant papers” but do not consider that the problem may be with the questions being asked in much academic accounting research or the limits of the results reported. Instead Gordon and Porter focus, as many have before, on training practitioners to appreciate the research that practitioners disparage (c.f. Richardson, 2004).

(or hypothetico-deductive research as it was called historically). This style of research is concerned with generating generalizable empirical results based on theoretically informed hypotheses. The primary goal is to predict and/or control future events. This form of knowledge is thus technological in nature. Its purpose is to allow humans to predict, control, and manipulate events and objects to suit their purposes. Three other approaches to the creation of knowledge, reflecting differing philosophical assumptions and different objectives for the research process, are common in the broad accounting literature: interpretivist, critical and post-modern. It is important to note that these approaches to the creation of knowledge cannot be evaluated within the framework provided by Gordon and Porter (2009).

Interpretivism is a generic term referring to a range of approaches including ethnography, discourse analysis, hermeneutics, cultural studies and other approaches (see Tesch, 1990, for a structured overview of related approaches). Interpretivist work is concerned with developing our understanding of how people make sense of their world and how their shared meanings affect the way that they interact with each other. A basic distinction between interpretivist work and positivism is the concern with the meaning of action rather than action itself. Some philosophers have argued that this is a basic difference between the natural and social sciences (Fay and Moon, 1977). Interpretivist work in accounting has tried to understand the “everyday reality” of accountants (Tomkin and Groves, 1982) and the way that accounting techniques are used and developed in practice (Ahrens and Chapman, 2007). Importantly, interpretivist work is more concerned with developing our understanding of specific situations than with developing generalizations that apply across situations (this is referred to as idiographic as opposed to nomothetic research). This focus on the complexities of specific situations means that practitioners are often able to appreciate the insights of this style of research more easily than the results from “abstract empiricism” (Mills, 1957), i.e. correlations among arbitrarily created variables.

Critical theory work is concerned with what might be rather than with developing causal knowledge about a fixed world. The key issue for critical researchers is how we can make the world a better place and free people from domination (Cooper and Hopper, 1987). One form of domination would be a philosophy of science that limits our knowledge to things that already exist or limits our approach to creating knowledge (Feyerabend, 1971). Some critical work begins from theoretical models of ideal situations (e.g. the use of Habermas', 1984, “ideal speech situation” as a guide to financial reporting, Lodh and Gaffikin, 1997). Other critical work focuses on exploring the way that accounting has/can be used to exploit and dominate vulnerable populations, e.g. using accounting to operationalize colonial power (Neu, 2000). A large body of work seeks to understand the role of accounting in current social problems ranging from environmental issues to money laundering (Mathews, 1997). The explicit inclusion of ethical values in the research process and the search for alternatives to current empirical realities means that this type of research cannot be evaluated against Gordon and Porter's (2009) version of knowledge creation.

Finally, post-modernism begins with the premise that knowledge is not absolute and that much of human interaction is organized around language. These studies seek to understand the relationship between language, power and social structures. In the accounting literature, a post-modern perspective has been used to suggest that financial reporting could be used to develop the multiple meanings inherent in financial statements rather than trying to reduce meaning to a single “truth” (Macintosh and Baker, 2002). It has also been used to highlight the potential “hyper reality” of financial statements when historic cost is replaced by market values, i.e. when financial

statements are supposed to be used to establish market values but market values are used to create financial statements then financial statements lose their anchor in any independent reality (Macintosh et al., 2000). A post-modern perspective seeks to undermine any attempt to bring closure to the meaning of events or texts. Its fundamental goal is directly contrary to the “modernist” search for a singular truth reflected in Gordon and Porter (2009).

DISCUSSION

Gordon and Porter (2009) provide a structured way of reading and evaluating a certain segment of the academic literature. Their discussion has value as a statement of current norms of reporting certain types of academic research. Their description of academic research, however, needs to be expanded. We need to make clear to students and practitioners the distinction between the ways academic research is done as opposed to how it is reported. We also need to present an epistemology that acknowledges that the knowledge produced by academics is subject to change and represents a set of justified beliefs and not truth. Their article may contribute to the myth of the scientific method (see McComas, 1996 for a summary of the key issues that have been raised with the status of the scientific method). It is also important to recognize that the Gordon and Porter (2009) model for evaluating academic research is specific to a particular type of published research. There are many types of research reported in the academic literature to which this guide could not be applied because it does not anticipate alternative goals of research to their focus on prediction and control, and because, in some cases, the philosophical assumptions of the research are in direct opposition to the norms implicit in their guide.

We must give our students more nuanced understandings of our field and the possibilities of accounting research if we truly wish to gain community acceptance of the value of academic research. There are at least four issues that could arise if we fail to provide our students with a more complete view of accounting research: over-reliance on academic research by practitioners, failure to attract creative problem-solvers to academic accounting, a reluctance by researchers to report variations in research methods, and a failure to encourage research topics and methods aligned with the needs and interests of a broad array of stakeholders in the research process.

First, the presentation of the scientific method as if it described actual research practice and the nature of our research results may create false expectations about the longevity and generalizability of academic results. If practitioners act on results that are subsequently refuted, the credibility of the research process may be undermined. Like pharmaceutical cures, i.e. “miracle drugs,” academic research must come with a list of side-effects and disclaimers to ensure that the user is properly warned about the limitations of the research enterprise and its results. Somewhat paradoxically, a user who understands the limits of academic research may be more likely to appreciate when and how it can contribute to their own situation.

Second, the view of science as a mechanical application of a rote method, a recipe for “correct” knowledge, can result in an adverse selection problem for the future of the academy. We need creative and thoughtful problem-solvers in the academy; why would such people be attracted to the life described by the scientific method? Accounting stereotypes were accused of biasing the intake of students into accounting programs and creating a crisis for the profession that the best and the brightest students were self-selecting out of accounting (Bougen, 1994). We may face the same problem as accounting academics. If accounting research is nothing more than demonstrating “how the accounting profession affects the capital markets” (Gordon and Porter, 2009: 26) through the

application of a rote scientific method, then why would the best creative minds be attracted to this career?

Third, students who do become involved in the academic research process as research assistants and perhaps in their own research projects will be hard pressed to reconcile the method described by Gordon and Porter (2009) and the day-to-day activity of a research project. It is a human tendency when faced with a discrepancy between normative expectations and actual events to reconstruct events in accord with norms. This retrospective biasing of methods, and possibly results, undermines the development of the research process and our ability to monitor research activities. A norm of honest disclosure of research methods would serve our community of researchers, and ultimately users, better.

Finally, Gordon and Porter (2009) motivate their paper as a contribution to reconciling the gap between the research that academics produce and the needs of practitioners. Their approach is to train the user to accept the output of a slice of the academic literature, but another response by accounting academics has been to expand the range of academic research to include issues that a hypothetico-deductive method is ill-equipped to handle and to develop methods that are appropriate to the subject matter being explored. We do a great disservice to our students and practitioners by not introducing them to this broader array of literature and, at a minimum, being very clear that the guide being presented in Gordon and Porter (2009) is appropriate for only one segment of that literature.

The perspective taken by Gordon and Porter (2009) is regarded by many to reflect the “mainstream” in accounting research, and there are many factors that suggest that this will continue to be the case for the foreseeable future. Tuttle and Dillard (2007), for example, suggest that in the US there is no longer a competitive market for ideas, instead research has become “institutionalized”; i.e. it is produced according to institutional norms. There has been a narrowing of topics and approaches to research due to mimicry of successful models, the ascendancy of a particular group to positions of power within academe, and the socialization of students to a particular set of values. However, outside of the US, alternative paradigms and research topics continue to flourish in both financial accounting (Beattie, 2002) and management accounting (Bhimani, 2002). For a journal with “Global” in its title, it is important to reflect this broader view of accounting research. Even within the US, however, successive Presidents of the American Accounting Association have called on the editors of association journals to broaden the range of research topics and methods that are published (Rayburn, 2006). This process must start by introducing students – future practitioners and researchers – to the variety of accounting research that currently exists.

CONCLUSION

Gordon and Porter (2009) is a well-motivated guide to reading a segment of the academic accounting research literature. Unfortunately, the scope of applicability of this guide is not carefully specified, and this may mislead students into thinking that either this guide applies to all accounting literature or that the studies they describe are all there is to the academic accounting literature. In addition, the article contributes to the “myth of the scientific method” and, hence, fails to provide students with a sense of the challenge, diversity, and creativity involved in academic research. The long-run costs to the academic enterprise are too high to continue presenting research to our students from this perspective alone. This comment calls on academics to expose their students to the

diversity and excitement of accounting research and to begin a debate on how best to introduce students to the academic accounting literature.

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