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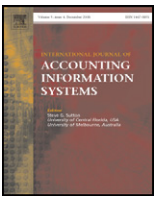

Good science, bad science: Preventing paradigm paralysis and method-bias malaise

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ABSTRACT

This essay attempts to describe the potentially positive or negative outcomes of a research methods issue. I draw upon three lessons for scientists found in the field of medical science. These three lessons are applied to the Accounting Information Systems (AIS) field. Finally, I suggest a few ways by which AIS researchers can collectively make the most of this issue to thrust the field forward.

1. Introduction

Any special issue on methods holds both promise and peril. On the one hand, it provides a promising opportunity to explore new ways of researching. Learning creative new methods can help researchers generate new ideas for using those methods. Innovative methods may enable new research questions or new theoretical frameworks to be studied—some that could not have been pursued using existing methods. Publishing a set of papers on new methods can be like sending a dentist to a convention at which many new practices and procedures and tools are being presented. I recall my own dentist raving about such a convention, which filled him with new ideas that he claimed positively transformed his practice and improved customer service. A methods issue holds similar potential.

On the other hand, a methods special issue may stunt or limit the field. If the new methods are merely method 'tweaks' and largely reflect what past researchers have done, or if the methods all come from one's own discipline, then the special issue communicates that the way things have always been done is the 'right way.' It would subtly suggest that we should all conform to existing methods or risk having our work

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rejected. In this way, the field and its norms may become more sharply defined in a manner that limits how well it is able to assimilate good ideas from other researchers and other fields.

Another peril is that one may think the new method is good enough to be a magic solution. A researcher with a new tool may apply it to more phenomena than wise and may not apply it correctly. Good science should not be driven so much by the tool as by the research question and theory. Tools should fit the research question, and must be used properly to obtain valid, meaningful results.

Whether this methods issue produces promise or peril for the Accounting Information Systems field will be left to the reader to decide. But this essay raises some of the issues of how a methods issue, or even a discipline's trends, can either lead to strength and vitality or weakness and malaise in a research domain. We introduce three lessons for a scientific discipline using examples from Gary Taubes' book Good Calories, Bad Calories, which critiques the science of diet and health. Taubes also draws on a number of philosophers of science to support his arguments. These lessons are then illustrated and applied to both the Information Systems and Accounting Information Systems fields.

2. Lessons for scientific disciplines

2.1. Lesson #1: Good science stays wary of the current paradigm

Thomas Kuhn (1970) observed that scientific effort tends to progress in waves or paradigms. Researchers tend to ride the wave (i.e., research paradigm) in vogue at the time. Taubes (2008) finds this in diet science.[1] He finds scientists in this field tend to follow the accepted low-fat, high carbohydrate diet theory so closely that they ignore or reinterpret contradictory evidence. Even funding tends to be awarded to those who follow the paradigm instead of those who dare to step outside. Taubes chronicles the paradigm stickiness of research waves in diet, heart, and diabetes issues.

A paradigm provides a way of viewing what belongs within an academic discipline. A paradigm is "largely a matter of implicit social consensus" that occurs over time (Banville and Landry, 1989: 50). A paradigm can define, by gradual consensus, "what should be studied, what questions should be asked," and what methods and problems belong to a scientific discipline (Banville and Landry, 1989: 49).

In a field as young as Accounting Information Systems (AIS), it could be argued that no set paradigms yet exist. However, one can discern patterns of topics and methods pursued even in a young field like AIS. For example, researchers defined early on what is and what is not AIS research (e.g., design science 'is'), and have more recently broadened it to be more inclusive (Sutton and Arnold, 2002).

One problem with paradigms is that they can blind you. The cartoon character Pogge said that a way of seeing (i.e., a paradigm) is also a way of not seeing (Van de Ven, 1989). By blinding, we mean paradigms can limit which topics are deemed acceptable and which research methods are used in a discipline. The well-known paradigm of experimental behaviorism drove psychology into a somewhat narrow focus for decades before the cognitive revolution began to blossom in the 1980s. Papers that lay outside the behaviorism paradigm were harder to publish because of an inward focus that excluded other research lenses. This can occur via a "not-invented-here" bias (Baskerville and Myers, 2002).

When management theorists debated the issue of their own paradigms, Harold Koontz advocated disentangling and narrowing what he saw as a "confused and destructive jungle warfare…" (Banville and Landry, 1989). In response, Herbert Simon said that confusion may be another name for progress, and that "science…does not lend itself very well to neat blueprints, detailed road maps, and central planning. Perhaps that's why it's fun" (Banville and Landry, 1989).

For a closer-to-home example, the Information Systems (IS) field went through a well-known debate in the early-to-mid 2000s on what research topics should be studied—or even accepted in its top journals, which arguably showcase what the IS field is all about. Benbasat and Zmud (2003) wrote an article published in a leading IS journal, MIS Quarterly, suggesting that in order to further the discipline's legitimacy, the field should be more narrowly defined to those tasks, structures, and contexts surrounding the IT (information technology) artifact (i.e., computing hardware/software). A large number of articles and book chapters debated this stance, a few in its favor and many against it (Agarwal and Lucas, 2005).

[1] Note that Taubes' book has also been critiqued by others (e.g., Bray, 2008).