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The great theory hunt: Does e-government really have a problem?

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ABSTRACT

A persistent leitmotif of the e-government literature in the last decade has been a degree of angst about the absence of theory in the field. Some scholars have argued that until such time as this deficiency is remedied, e-government will never be recognized as a proper discipline. In addition to being under-theorized, it is has also been contended that the e-government literature is overdependent on the descriptive case study or case history. This paper examines the validity of the claim that e-government is under-theorized and explores the counter-argument that, far from being short of theory, a great deal of good and valuable theory can be found in the e-government literature. The meaning of theory and problems with defining it are discussed and the implications of these problems for assessing the state of theory in e-government are explored in this light. The parallels between this discussion and problems associated with theory in the wider fields of public administration and information systems are briefly considered. From this it is conjectured that concerns regarding the absence of a coherent body of theoretical knowledge in the field of e-government may be overstated.

1. Introduction

In the 1980s and 1990s one of the major fields of information systems research was IS evaluation and value; several hundreds of papers, articles and books were published on this topic over this period. After Solow's famous (or more accurately notorious) statement that "*You can see the computer age everywhere, but in the productivity statistics*",[1] academics and professionals alike went into overdrive trying to establish the returns from investment in information and communications technology (ICT). The late Barbara Farbey colourfully described this phenomenon as "*The Great IT Benefits Hunt*" (Farbey, Targett, & Land, 1994).

In a similar manner, the field of public administration (PA) has been engaged over many years in what might be called a great theory hunt (Harmon, 2006; Lalor, 2000; Mainzer, 1994). Theory is central to academic research and to the academic world. Submission of a research paper without any theoretical content to a top social science journal is an almost certain recipe for a revise and resubmit response, if not for an outright rejection (Bannister, 2012). One reason for this is that theory provides rigour. A second reason is that good theory can help explain and assist understanding. The best theory can be used to predict how a given set of initial conditions is likely to evolve. Theory can provide a framework for discussion and can be used to identify patterns and even 'laws' in the complex area of human, social and organisational behaviour. Some would claim that it distinguishes scholarship from practice. It is claimed that in the absence of a good theoretical base, not just a paper, entire fields of study and research will be weakened and may even flounder.

Within the past decade, a similar hunt can be detected in the field of e-government. A number of scholars has criticised the poor quality, methodological weaknesses and lack of theoretical rigour in e-government research. It has been suggested that e-government will not be taken seriously as a discipline, even within PA, until it develops a solid body of its own theory. These claims are the focus of this paper and will be considered in-depth in Section 3. The research questions addressed in this paper are twofold: the first relates to whether this concern about the lack of theory in e-government research is well-founded, and the second to what extent problems with theory in e-government should be a matter of concern.

This paper is about theory. This point is stressed because criticisms of e-government research encompass other shortcomings in the body of research, notably problems with definitions as well as failure to engage with the complexities of PA and politics and methodological weaknesses (Yildz, 2007). Other researchers (Rodríguez Bolívar, Alcaide Muñoz, & López Hernández, 2010; Scholl, 2012; Yıldız, 2012) have addressed the rather different issue of themes or challenges in information systems (IS) research. While these are all important issues, they remain matters for another paper or perhaps a series of papers.

This paper is divided into five parts. Section 2 contains a discussion of the nature of theory in IS and more broadly in the social sciences. This is followed by an examination and a review of the critique of the absence of, or weaknesses in, theory in e-government as asserted by a number of authors since 2000. The actual state of theory development

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[1] "We'd better watch out", New York Review of Books, July 12th, 1987, p36.

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and deployment in e-government is explored in Section 4. The paper concludes with some reflections on the question of theory in multidisciplinary fields.

2. Defining theory

Academic scholarship is, amongst many other things, about both precision in use of language and research that is grounded in and/or informed by theory. Yet the meaning of the word 'theory' in academic writing is often unclear. Ask a group of academics to define theory and one is likely to get several subtly different answers. Theory is often classified into different types: descriptive, explanatory, predictive and so on and it can appear in different guises, for example as models, conceptual frameworks, taxonomies or mathematical equations. As a considerable amount of fuzziness surrounds the definition of theory, before any critique of the absence of theory in e-government can be presented, it is first necessary to establish a working understanding of what is meant by theory and theoretical rigour.

2.1. Problems of definition

The problem of defining theory can be readily illustrated by seeking a definition of what it is. Definitions of theory include, inter alia, that theory is assertions about behaviour, propositions about variables and constructs and the relationships between them and a set of related statements some of which are akin to general laws (Rudner, 1966; Sutherland, 1975).

Wacker (1998) claims that academics consider theory to comprised the following four parts:

(1) Definitions of terms or variables;
(2) A domain where the theory applies;
(3) A set of relationships of variables;
(4) Specific predictions (factual claims).

Wacker almost (though not quite) presents theory as a something than can be expressed mathematically. He also restricts theory to the predictive. This eliminates much of what many would consider to be theory.

Doty and Glick (1994, p233), consider that the minimal definition of a theory involves the following key criteria:

(1) Constructs must be identified;
(2) Relationships amongst these constructs must be specified;
(3) It must be possible to test these relationships.

This is less a definition of theory than a list of qualities that theory should possess.

The problem of defining theory is encapsulated, at least for IS, by Gregor (2006, p611) when she writes:

> "*…there is limited discussion in IS forums of what theory means in IS and in what form contributions to knowledge can made*."

Theory is also a word that attracts adjectives. Some of these adjectives carry implicit or explicit value judgements. Examples of such are 'strong', 'weak', 'useful', 'scientific', 'rigorous' and 'prescriptive'. Some adjectives are more neutral. Thus, 'theory' can be preceded by words such as 'descriptive', 'explanatory', 'predictive', 'testable' and so on. Other classifications found in the literature include normative, emergent, substantive, formal, mid-range, relational and grand theory. The idea of weak and strong theories has led in turn to the idea that types of theory can be positioned in a hierarchy (an example of one such can be found in Gregor (2006)).

As Abend (2008) notes, there are many senses of the word 'theory' and no real referent or true meaning; the many things that the word 'theory' is used to express differ considerably and the ontological, evaluative and teleological questions in their customary form are problematic.

2.2. Types of theory

Different scholars have categorised theory in a number of ways. A review of the literature shows that the concept of categorisation or types of theory is interpreted with a great deal of diversity. One theme can be found (for example) in Shields (1996) who talks about two major types of theory – descriptive categories and explanations which depict relationships between concepts. In a variant on this, Hall and Jenkins (2004) distinguish between prescriptive models and descriptive models. Frederickson, Smith, Larimer, and Licari (2012) state that theory either describes, explains and/or predicts. Brans (1992) talks about three types of PA theory: a welfare perspective, a functional revolution perspective and a political perspective. Pilalis (1986), citing Durkheim, identifies two types of theory: normative and non-normative. Quite often a type or categorisation of theory is confounded with a specific theory rather than a class of theory. Golembiewski (1999), for example, discusses three types of theory in PA: empirical theories, goal-based empirical theories and action theories. In other cases, theory is categorised by broad underlying philosophical or theoretical positions. An example of such is Box (2005) who states that there are five substantive categories of theory: the nature of knowledge; the relationship of *Dialogue/ATP*[2] theory to mainstream PA; normative PA theory; social and political theory; and marginalization and oppression.

None of these are particularly well suited for an analysis of e-government theory. Straddling as it does technology and PA, e-government theory could be drawn from either IS or PA. For this two such categories will be considered: one from the IS literature and one from the informatization literature.

In the field of IS, a widely cited article is Gregor (2006). She differentiates between five different types of theory, namely theory for:

(1) Analysing;
(2) Explaining;
(3) Predicting;
(4) Explaining and predicting (EP theory);
(5) Design and action.

In the field of informatization, van de Donk and Snellen (1998) discern (to use their word) four different forms of theoretical knowledge, which are:

(1) Concepts,
(2) Statements,
(3) Empirical generalizations and
(4) More or less mature theories.

Each of these classifies theory from a different perspective. Gregor's reflects the purpose of a theory and the claim that it makes. Gregor is also writing from an IS perspective and her analysis reflects discussions of theory in the IS literature. Van de Donk and Snellen's consider forms; their perspective is that of PA rather than IS. As a taxonomy, it is less tractable than Gregor's, in part because it is less precise in its meaning. For example, are all concepts theories and, if not, when is a concept a theory (and what theories are only concepts and nothing more)?

For the purposes of this paper, an extended Gregor's framework will be adopted. In selecting Gregor, it is acknowledged that other frameworks could be chosen and if this were done a somewhat different discussion might ensure. The advantage of Gregor's taxonomy is that it provides a framework that is clear and tractable and is grounded in IS

[2] Administrative theory and practice.