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THE SOCIAL AND ACADEMIC STANDING OF THE INFORMATION SYSTEMS DISCIPLINE: GENERAL THEORY CONSIDERED AS CULTURAL CAPITAL

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ABSTRACT

Bourdieu's concepts of social fields and social power provide a theoretical basis for arguing that the information systems (IS) field is engaged in an ongoing struggle with other disciplines for prestige and support. While IS has produced a considerable amount of high quality theory and research, it is by no means clear that this is understood by either the academy or the general public. It is argued that the discipline's profile could be raised by the development and promulgation of a general theory of IS, similar in scope to the general theories found in other disciplines such as sociology. The political and cultural value of developing such a theory is discussed, as are a range of issues it is recommended that it should address.

INTRODUCTION

It is proposed in this paper that the development of a prestigious general theory in the information systems (IS) field is possible, opportune, and would be of considerable benefit to the field. "Prestigious" is taken in this context to mean achieving a degree of renown, ideally with the public at large, but at least within the academy. While significant benefits could derive from the application of such a theory in research and practice, its primary value to the discipline would be as an

item of "cultural capital" (Bourdieu and Wacquant 1992) contributing to its public image. An influential theory is implicitly a statement that the field from which it originates is a source of marketable ideas, and worthy therefore of interest and respect (Abbott 2001).

The term "general theory" is taken here to refer to the type of overarching theory constituted by a set of umbrella concepts designed to explain a broad range of social phenomena (Layder 1993). While such a theory is not something that can be produced

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on demand, the further argument in this paper is based on the assumption that there is a logical gap in the theoretical spectrum that a general social theory of IS could fill. The types of issues such a theory could address are discussed in more detail later in the paper, but can be briefly outlined here.

In broad terms, the proposition is that IS structures for dealing with some basic types of business and social activity are becoming highly standardized and pervasive in social life, and are beginning to constrain possibilities for social change. A number of related trends are driving this development, including data sharing among organizations and government departments, inter-organizational systems based on generalized data and process definitions, the emergence of systems with some degree of social autonomy (automated teller machines provide a simple but representative example - Dos Santos and Peffers 1995), and the widespread adoption of high profile proprietary enterprise software packages from companies like SAP and Oracle (Davenport 1998). This trend and its social effects do not appear to have received comprehensive theoretical treatment in the IS field or elsewhere. In IS this is because theories of IS integration (Wyzalek 2000), strategic alignment (Saberwhal, Hirschheim, and Goles 2001), and competitive advantage (Kettinger, Grover, and Segars 1995) that deal with large-scale IS structures do not consider wider social effects, and elsewhere because theorists in other fields have been reluctant or unable to address the social capabilities and limitations peculiar to IS (for instance Bogard 1996).

Grounds for arguing the capital value of such a theory are provided by Bourdieu's concepts of social power and social fields (Bourdieu 1980; Bourdieu and Wacquant 1992; Swartz 1997). On this, the IS field - comprising an array of academics, professionals, and institutions - is conceptualised as engaged in more or less continuous struggles for relative power and status with other disciplines. The assets enabling participation in these struggles include both economic and cultural capital, where cultural capital is

the combination of ideas, knowledge and research that are seen as intrinsically linked to the field, and which form the basis for its academic and community standing (Bourdieu 1980; Kline 1995; Abbott 2001). Adopting this perspective, a general theory of IS can be taken to be an important item of cultural capital.

If it is accepted that an influential general theory is always likely to be of benefit to a discipline, it follows that it would be particularly helpful at a time when some theorists are arguing that IS is in a state approaching crisis (Benbasat and Zmud 2003; Markus 1999; Hirschheim and Klein 2003). In relating the development of theory to the issue of disciplinary success, the argument is that the visibility and prestige of other disciplines has been shown to depend at least partly on

CONTRIBUTION

This paper contributes to the debate on the current state of the IS discipline. The theoretical argument presented shows on logical grounds that the development of general IS theory would be beneficial for the discipline in its struggles for academic and public status.

The paper provides a perspective that contrasts with more internally focused arguments previously presented in this area of discussion. The argument shows that positive external perspectives of the IS field are critical to its relative academic and public standing, and that a prestigious general IS theory would provide publicly accessible evidence of the field's quality. The role of a general theory would in this regard be as an item of cultural capital designed to raise general awareness of IS.

A further contribution is a summary of social phenomena, attributable to the progressive standardization of IS structures, that represents an opportunity for the development of a general IS theory. While theory development is shown to be a risky undertaking from the perspective of an individual academic, the potential benefits for the field are significant. The paper is expected to be of particular interest to IS theorists concerned with predicting and influencing future directions for IS research, and of interest to IS researchers in general.

their capacity to engage the public's interest in their intellectual products (Abbott 2001). "The public" in this context can be construed in a number of ways, ranging from a general population concerned with a variety of social trends and issues, to academic authorities responsible for allocating funds and determining relative resourcing priorities (Aronowitz 2000; Slaughter and Leslie 1997). While IS has a tradition of excellence in research and in systems theory, it remains a low-profile discipline (Baskerville and Myers 2002), arguably a problem in a hyper-competitive era (Bogner and Barr 2000).

Notwithstanding the arguments in its favour, it is widely acknowledged that the development of general theory is a complex, difficult activity with no guarantee of ultimate rewards either in the form of publications or academic acknowledgement (Slaughter and Leslie 1997). This raises the question of whether theoretical activity of such a type can be justified, with the answer here being that the effort is clearly warranted from the disciplinary perspective, while remaining a very risky investment for the individual academic. The rest of the paper is laid out in three broad sections as follows;

- 1) the value of general theory as cultural capital is discussed
- 2) the development of a general IS theory, including the types of phenomena the theory might address, is canvassed as a practical possibility and
- 3) a conclusion is presented in conjunction with some recommendations for future research and development in this area.

THEORY AS CULTURAL CAPITAL

This section of the paper discusses the disciplinary value of general theory. A powerful theory is shown to have at least two very broad roles, the first as a framework suitable to ground a variety of empirical research programs focusing on different aspects of the theory, and second as a visible symbol of the discipline's intellectual credentials. Instantly recognizable examples from other disciplines would include the theory of relativity (Bodanis 2000), Marxism (Marx 1981), psychoanalysis (Freud 1938) and rational choice (Coleman 1990). Targeting an

equivalent level of notoriety would appear to require a level of hubris not to be found within IS (Baskerville and Myers 2002), but it is important to note both that robust general theories have a tendency to grow in stature over time (as for instance with Weber's theories of modernism (Turner 2000)) and also that a general theory need not be generally accepted as correct to have an impact. Recurrent surges of interest in Margaret Mead's anthropological theories attest to this last point (Freeman 1996; 2000).

Bourdieu's concepts of social power and social fields provide the basis for the analysis. The value of theory for the mobilisation and coordination of the intellectual resources within a field is highlighted, and is illustrated with examples from other disciplines.

Social Fields and Social Power

Bourdieu argues that social fields are embedded within a broader field of social power, and form the sites for ongoing struggles for influence and prestige (Bourdieu and Wacquant 1992). Fields can themselves comprise subfields and so on down to whatever level of analysis is selected (Swartz 1997). In the construction developed in this paper, IS is a subfield within the field of academic disciplines, itself embedded within the broader field of education. The endemic underlying struggle for power between individual disciplines is manifest in contemporary experience through competitions for public standing, for higher quality (and sometimes greater numbers of) students, and for funding (Slaughter and Leslie 1997).

The idea that academic disciplines are in competition with each other is certainly not new. But as tertiary education has come to be seen more as an economic rather than social issue, the issues of relative performance and standing within the academy have become even more important than previously (Slaughter and Leslie 1997). Applied in this context, Bourdieuan theory implies that struggles for relative prestige are endemic and inevitable, and that the current focus on economic factors will tend to intensify the battles being waged.

While the effects of visibility on the reputation of an academic field are neither as obvious nor as immediate as (for instance) for a politician (Pratkanis and Aronson 2001, 140), the relevance of image is clear. A review of the literature concerning research methods reveals, for instance, that there is a well-defined hierarchy of disciplines based originally on their relative scientific “purity” (Kline 1995). In this the natural sciences rank above the social sciences, and physics ranks first among the natural sciences. The power of this image has engendered a situation in which the term “physics envy” has been coined to describe the tendency for researchers in other disciplines to attempt to emulate physicists as closely as possible in their selection of research methods. The endless debates on whether qualitative methods should be deemed adequately rigorous are further testament to the power of this particular item of cultural capital. The need for qualitative researchers to justify their approaches at the most basic level continues to contrast with the lack of such a requirement for quantitative researchers (Sutton 1997).

Changes in governmental and social perspectives on education have also had an effect in this regard. Image becomes a critical issue when performance is judged on the power of a discipline to attract new students, to acquire funding from external sources, and to achieve research targets. All of these issues are affected by the strength and clarity of the discipline’s public profile, which must be sufficiently recognizable to ensure that it is familiar to students, parents, investors, and research participants alike.

Bourdieu’s analysis, considered in conjunction with the circumstantial evidence from other fields, suggests that the development of general theory could be very valuable in this regard, improving image while adding to the discipline’s cultural capital. The phrase “Einstein’s theory of relativity” is perhaps the paradigmatic example of a reference that acts as a kind of verbal shorthand for physics’ claim to be a discipline of the utmost importance every time it is used. People with no understanding whatsoever of its theoretical content can instantly recognize the equation “ $e=mc^2$ ”, and interpret it as a description of the forces behind nuclear power

(Bodanis 2001). As disciplines jockey for power, influence, and particularly money in the contemporary university, the theory of relativity is an invaluable symbolic asset, irrefutable evidence of physics’ relevance, importance and intellectual gravitas.

It may be that physics is a questionable example, given its intellectual status, though arguing so seems more a tribute to the effects of cultural capital than a reflection of something intrinsic to the discipline itself (Kline 1995). It can however be shown that the same effects can be seen in other fields, and that they occur irrespective of whether or not the general theory in question is assumed to be “true” in some absolute sense. In psychology, for instance, many scientists remain highly irritated by the fact that Freud’s theories remain unsupported by what they deem would be adequate scientific proof (Webster 1996), yet psychoanalytic theory survives and thrives. An even more contentious theory emanates from the fields of English and literature studies, where the arcane analyses of deconstructionist theorists have been sufficient at times to render other theorists almost incoherent (though hardly speechless) with rage (Lehman 1991, Sokal and Bricmont 1998) - yet “deconstruction” has in the meantime entered the general vocabulary as code for the unresolvable complexities of contemporary life (Kincaid and Phelan 1999).

The Value of General Theory for Information Systems

The IS discipline is associated with a strong body of literature (Baskerville and Myers 2002), has established a tradition of excellence in research (Lee and Baskerville 2003; Vessey, Ramesh, and Glass 2002), and has developed powerful theories that address the development and management of IT applications (Hirschheim, Klein, and Lyytinen 1996). It has also made substantial contributions to interdisciplinary areas of theoretical and research interest including decision support, knowledge management, IT governance, IT management, e-business, e-government and others (Baskerville and Myers 2002). The topics in this second group do however generally fall within academically contested areas, where other disciplines will inevitably stake their claims to ownership of some of the key issues, usually by developing

courses and units dealing with those topics (Abbott 2001).

At the same time, traditional IS concerns with systems definition and building are increasingly being subsumed by analysts and consultants better described as working in applied business and economics than in IS (Bloomfield and Vurdubakis 1994, Hammer 1998). “Green field” systems development, on which the discipline first built its foundations (Somogyi and Galliers 1987), is becoming progressively less significant as the business environment moves ever closer to full automation, and proprietary software and packaged technical solutions become more prevalent. One risk is that the building of systems will increasingly be regarded as a purely technical matter, and that the more interesting questions of systems meaning and social significance will be arrogated by other disciplines.

The most frequent reaction to the perceived problems has been to suggest that IS needs to focus on identifying and consolidating its core body (or bodies) of knowledge, in the interests of establishing and maintaining field coherence (Benbasat and Zmud 2003, Hirschheim and Klein 2003), and this seems a highly promising direction to take. Adopting Bourdieu’s perspective however, the view here is that it should be complemented by initiatives that acknowledge the importance of IS relationships with external parties. An increase in visible cultural capital, in the form of concepts and ideas that relate directly to outside interests, is one possibility. With respect to society in general, it seems indisputable that there will be considerable interest in the long term effects of the types of autonomous, or semi-autonomous, systems that are being progressively introduced by organizations (Gosain 2004). This in turn suggests the utility of an approach focused on analyzing IS effects at levels where these systems are beginning to shape and constrain future possibilities for social and organizational change. The Y2K phenomenon provided an arresting example of some of the ways in which IS issues can impact on society (Braithwaite 2000), and is an experience still sufficiently fresh in people’s minds to guarantee that there should be a lingering

awareness of IS on which theorists could build for some time to come.

General Theory in Sociology

Within its own boundaries, IS has generally been understood as predominantly an applied discipline, but one with an important social science component (Benbasat and Zmud 2003). The focus on applications has brought with it a number of benefits, not least a powerful empirical research tradition based on strict interpretations of quality and rigor (Lee 1999, Dubé and Paré 2003). Socially oriented studies have in contrast tended to rely much more on imported theory, at least at the framework level (Avgerou 2000), and it would be in reducing this dependence that the development of general theory could play a significant part.

Sociology provides a paradigmatic example of the value of general theory. While sociology itself has theorists prone to question its direction (Horowitz 1993), sociologists have a range of theoretical traditions within which they can frame new studies. These include Marxism (Marx 1981), structural functionalism (Alexander 1989), rational choice theory (Coleman 1990), structuration theory (Giddens 1984), systems theory (Luhmann 1995), symbolic interactionism (Johnson, Farberman, and Fine 1992) and social construction theory (Berger and Luckman 1967) among others. It has been argued that the lack of an advanced “starting point” is a practical problem for IS researchers who must manage to ground their study, develop and justify their theory, explain and justify their research methods, and contribute findings relevant to several constituencies all “in 5000 words or less” (O’Keefe 2003). The value of a general theory is that adopting researchers are very largely freed from having to explain or justify basic concepts in detail. Once, for example, they have identified themselves as symbolic interactionists, they can with relatively minimal justification draw on a rich vein of exemplary studies to support that specific orientation (Johnson, Farberman, and Fine 1992).

Value can also come from the longevity of a general theory. Marxism has remained a source of intellectual stimulation for more than a hundred and thirty years despite being the

subject of serious criticism for much of that time, despite empirical evidence that showed its basic predictions were not being fulfilled, and despite having been the masthead theory for a number of highly repressive regimes (Anderson 2001). An even greater tribute to the power of Marx's original insights is the capacity for reinvention the theory has revealed, as offshoot theories including neo-Marxism, structural Marxism and even post-Marxism (Ritzer 1992) continue to proliferate. The benefit this confers is to enable the construction of a research tradition that combines theory development with discussions on research methods at a level of analysis above that of the highly abstract and philosophical, and more directly related to the analytical processes appropriate to the specific area of research.

If general theory poses an equally general problem, it is its relationship with empiricism. General theory is not a straightforward matter of generalization based on clear empirical evidence, and therefore does not fit comfortably into the generalizability framework advanced by Lee and Baskerville (2003). A well received recent contribution to sociology was, for instance, the concept of the "network world" advanced by Castells in a massive three-volume work (Castells 1996; 1997; 1998), which was subjected to virulent criticism by two management theorists devoted to positive empirical research (Abell and Reyniers 2000). The authors open with the observation that "social theory has failed intellectually, yet by most academic and popular standards it continues to attract all the trappings of success" (Abell and Reyniers 2000, 739). They express a desire to prevent students from "spending their time puzzling over the imprecise and empty prose of social theorists" (Abell and Reyniers 2000, 750) and suggest their response should be to "reject social theory as an intellectually serious endeavor" (Abell and Reyniers 2000, 748). Commenting on Castells' work itself they claim that the use of data is "often inept and selective" (740), that "intellectual precision is often surrendered" (741), and that there is "a lack of logical analysis [and]... an alarming lack of familiarity with basic economic principles" (Abell and Reyniers 2000, 743). Extreme as it is, this rhetorical explosion is important

because it echoes the reservations many academics feel about strong theoretical claims at a high level of abstraction (Sutton 1997, Sokal and Bricmont 1998). Castells' response to the attack was contrastively polite, but his position was that his approach did not need a detailed defence; "my research strategy is...what is known as meta-analysis...I contend that I have integrated a vast amount of social science evidence in a relatively coherent body of interpretation" (Castells 2001, 544). Paraphrasing Castells' view, any general theory is ultimately a coherent set of insights deemed by the theorist to be consistent with the world as he or she understands it to be. It might be discarded on the grounds that it provides no insights of value, but to criticize it as if it should meet the same research criteria as an empirical study focused on a single well defined topic is fundamentally mistaken. Whether or not this type of theory development could be accepted in the IS context remains, at this time, an open question (Hirschheim and Klein 2003, Lee and Baskerville 2003).

NOTES TOWARD A SOCIAL THEORY OF INFORMATION SYSTEMS

Is it reasonable to suggest that IS can be the site for development of a major social theory? In arguing that the attempt is warranted, two factors are considered. The first of these has already been discussed, and is that influential theories provide valuable and long-lived cultural capital. The second, also mentioned earlier, is that there seems to be a gap that IS can target by providing an analysis and explanation of the social effects of the IS constructs that are now helping to define certain social and organizational relationships.

This section outlines one possible direction that theory development could take, in conjunction with a discussion of the theory of IT-enabled competitive advantage that achieved widespread recognition some years back. The section concludes with a summary of some of the issues a general theory might address. Given the breadth of the topics listed, the comments are intended to be indicative of possible directions only, and do not purport to represent findings from a formal analysis.

Information Systems Structures in Society

The problems with extant theory suggest some directions for the development of a robust portfolio-level theory of IS as it relates to organizational and societal structures. The finding that IS innovations change industry structures rather than entrench competitive advantages (Clemons and Row 1988, Kettinger, Grover, and Segars 1995) is one possible starting point. A good IS-based theory (IS-based in contradistinction to competitive advantage theory, which was grounded in a business rather than IS perspective) would deal with a range of social phenomena that so far lack a broad analytical explanation. Those phenomena include the increasing encroachment of generic IS structures on social behavior through the implementation of standardized data and process definitions in a range of systems. As standard IS structures become more widespread, so commercial and government organizations come to look more and more alike, at least in behavioral terms.

The agency-structure relationship has been a central concern in sociological theory for a long time. Are social structures “real” when it is clear that they are constructions that must be affirmed by human agents acting with some degree of individual autonomy? While answers have been proposed by theorists as diverse as Marx (1981), Giddens (1984), and Bourdieu (1980) among many others, none of them deal directly with the impacts of structures reified in formal information systems. Sociological theories generally take strong account of the extent to which abstract social structures are simultaneously affirmed and reconstituted by the actions of people within the society (Giddens 1984). Social structures reified as IS structures are in contrast explicit in their operations and deterministic in their effects. IS-enabled structures are, in other words, more rigidly defined, and more formally constraining, than structures that depend on rules interpreted and enacted by people for their continued existence (Giddens 1984).

Existing portfolio-level IS theory does not directly address the social implications of the spread of IS structures. This is a gap in theory that is perhaps predictable given the prevalence of the view in business circles that IS now has at best some strictly limited

strategic significance (Hirschheim and Klein 2003, Stewart 2003). The spread of this view has been fuelled by a loss of faith in theories of IT-enabled competitive advantage (Kettinger, Grover, and Segars 1995). The strategic IS planning literature was a vibrant one at a time when it seemed possible that IT could be reliably applied in the interests of gaining sustainable business advantages (Porter and Millar 1985), and when IS integration was seen as the vehicle enabling organizations to be optimally structured (Martin 1990). But the theories on which these ideas were based ultimately failed to convince, and the number of papers being produced on portfolio-level theory has fallen drastically. The problems encountered are however useful to indicate in which directions the development of a general IS theory might go.

In broad terms, competitive advantage theory appears to have foundered on at least two related issues. These are the problems of imitation and structural change, which together have been taken to refute the idea that IT applications can be considered to be reliable competitive instruments. What the available evidence shows is first that it is in most cases at least as good to be a fast IT imitator (i.e. to wait and copy a promising innovation, usually at a lower cost) as it is to be a first mover (Vitale 1986; Clemons and Row 1988), and second that IT innovations usually operate to effect structural industry change rather than entrench specific competitive edges (Copeland and McKenney 1988; Kettinger, Grover, and Segars 1995; Clemons and Row 1988; Stewart 2003). Both these findings have been available for some time, and have not been refuted.

Part of the value of a general theory would be to provide a broader perspective from which to analyze IS portfolio issues at the organizational level. The structural view of IS in society suggests, for instance, that generic IT applications are changing the nature of organizations’ relationships with their customers in very basic ways, and that these effects are proliferating across the business and social worlds. More and more, IS structures define and enforce the limits within which transactions can be routinely completed, leaving customers who have non-standard requirements to rely on call centres staffed by inexperienced support staff to find their way

through thickets of complex, partly “manual”, procedures. One possible interpretation of the current situation is that the long-term implications of these changes are as yet poorly understood, and that the successful organizations of the future will be those that best adapt to the evolution in relationships. One of the key issues will be whether downsized organizations will be able to control their operational environments sufficiently to ensure that the volume of exceptional transactions (i.e. those not directly supported by entrenched systems) does not become problematic in the longer term.

Social Impacts of Information Systems

The following is a brief outline of some of the issues that a general IS theory might address. Some of these, such as questions of social control (Beniger 1986; Herzfeld 1992), have previously been topics of interest in sociology and anthropology, but the view here is that the IS perspective could and should be quite different from that of sociologists. While it should still be possible to draw meaningful inter-disciplinary parallels, IS theorists appear to be far better placed and better able to draw out the social implications of IS than academics from other areas.

An illustrative list of topics of interest is as follows;

Systems Change and Change Management.

Standardized IS constructs embedded in enterprise system software packages are essentially moving outside the control of the organizations implementing them. To the extent that governments and businesses share such constructs, it is probable that the length of change cycles will increase because of the need for a broader consensus on directions. The structures themselves would, in this scenario, become increasingly rigid and restrictive.

Standard Structures and the “Bottom Line”

As IS structures become increasingly standardized, they cannot themselves be the source of competitive effects. As they deal with basic transactions, the only real competition must be in how efficiently organizations can use and support them. At the bottom line, the effects are only comparable in

terms of staff savings. A seemingly inevitable outcome is that staff cuts will therefore be arbitrarily made, and that the systems will be implemented irrespective of how well supported they are in terms of the organizations’ basic structures. One implication is that staff reductions will leave organizations poorly prepared to deal with transactional problems, and likely to try and shift the responsibilities for resolving difficulties to their trading partners and customers.

Standard Structures and the “Outsider”

A related issue is that standardized structures encourage organizations to persuade clients to behave in a uniform manner. The sharing of structures across organizations suggests that the pressure on clients to conform will increase. A predictable outcome is that customers with requirements outside standard parameters will receive worsening service, and will encounter increasing difficulties in obtaining knowledgeable and effective responses from organizational representatives.

Self-Perpetuating Systems

The progressive adoption of shared IS constructs has the potential to create a general dependence on such structures. This dependence will tend to discourage organizations (including government instrumentalities) from taking criticisms seriously or acting independently to correct problems. To an extent the systems (perhaps more accurately but less dramatically their vendors) will be in control of their own destinies.

Efficiency versus Flexibility

The adoption of shared IS structures implicitly ranks control ahead of flexibility, effectively reducing organizational and social options for change. The extent to which organizations could become “imprisoned” by the structures they implement is an interesting question; given the levels of investment currently being lavished on enterprise systems, major disincentives to change are becoming institutionalized. As organizational staff levels continue to be pared to the bone, the introduction of a new way of doing business,

at any level, can be portrayed as leading to a decrease in efficiency.

As already stated, this is an indicative list only, and no attempt has been made to discuss the issues in detail. The claim is however that there are already enough points of interest to suggest a possible direction for general theory development.

CONCLUSIONS AND RECOMMENDATIONS

Bourdieu has argued that cultural capital is a source of social power, and that it is crucial in the battle for relative standing within the academy (Swartz 1997). Theory is one form that cultural capital can take, and the ownership of interesting and controversial theories is one of the ways in which a field can consolidate its claims for relevance, interest and support. For a theory to generate that type of interest however, it is important that it addresses issues of general rather than specialized concern.

Two recommendations are made on the basis of the argument presented here. The first is for an empirical investigation into the issues surrounding disciplinary recognition to be undertaken. Research into the extent to which IS is a “recognizable” discipline could be expected to be both practicable and useful. A survey-based approach, designed to investigate the extent to which samples of different populations are aware of IS, its topics of interest, and its particular perspectives, is one possibility. Populations of interest would include secondary-level students, parents of school-age children, tertiary-level students already enrolled, and academics in other disciplines. Depending on their nature, the findings from such a study would help either to confirm a need for the discipline to generate “recognizable” intellectual products, or refute the idea that the discipline does in fact have an identity crisis.

The second recommendation is for further theory-oriented research into the social implications of contemporary IS developments. Detailed literature-based research into what is known about the “hard-wiring” of societal structures would be valuable. Anthropologists (for example Wolf 1999), sociologists (Foucault 1972) and

linguists (Chomsky 1996) have all addressed the ways in which societies constrain their human constituents. A synthesis of this work would be a useful preliminary to introducing IS considerations, and the fact that it is now possible for social controls to be exercised, and influence exerted, by IS that operate independently of people. Such systems are no longer “representations” of more fundamental systems (Weber 1997), but rather are independent entities with significant social autonomy.

The question of whether a general IS theory could or should be developed is of a different order. It has been argued that the opportunity exists for IS academics to develop a theory that links IS structures to social relationships and behaviors. An influential theory could bring with it a variety of benefits for the field, including an increase in public visibility, the provision of a source of concepts for practitioners working at the portfolio level, and a set of framing concepts for researchers. The difficulties of such a venture are nevertheless significant. Education theorists have noted that the nature of the criteria for evaluating academic performance are such as to inhibit theory development, which is time consuming and not guaranteed to generate a viable “product” (Aronowitz 2000; Slaughter and Leslie 1997). Targets for volumes of publications, the amounts of research funding obtained, and the numbers of new students signed up for courses can be specified, their achievement monitored, and funding rewards calculated, which is a situation tailored to the demands for quick results characteristic of modern management practice (Lavery 1996). This factor is inimical to theory development which takes vast amounts of time; salutary illustrations of the difficulties are provided by the thirty years or so it took Marx to develop his theory of capital (Ritzer 1992), by the several missteps Freud made during his development of psychoanalysis (Webster 1996), and by the case of Lamarck, who devoted a lifetime to developing grand theory in biology and geology, yet died lonely and impoverished with his reputation “unjustly” a victim of a “hard-nosed empiricist ethos” (Gould 2000, 116).

These issues give pause. The conclusion drawn here on the basis of the

overall argument is that current conditions are as favorable for the development of a general IS theory as they are likely to be in the foreseeable future. IS constructs now pervade business and social environments to an unprecedented extent, and IS theorists are ideally placed both to analyze the broader social effects of this, and to predict likely

future trends. Technical knowledge of the IS field must be in this regard an extremely valuable resource for IS academics as compared with sociologists and others concerned with social issues. Whether these considerations are sufficient to justify the effort that would be required remains an open question.

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