



Information technology and tourism a theoretical critique

Philip Alford^{a,*}, Steve Clarke^{b,1}

^a Bournemouth University, School of Services, Management, Dorset House, Talbot Campus, Poole, Dorset BH12 5BB, UK

^b Business School, The University of Hull, Hull HU6 7RX, UK

ARTICLE INFO

Keywords:

Information technology
Multi-stakeholder IT
Critique
Critical Social Theory
Habermas
Communicative action

ABSTRACT

This paper aims to initiate a debate regarding the paradigms underpinning the planning and implementation of IT in multi-stakeholder scenarios in the tourism sector. The problem is stated as: "how do we ensure that, as technological solutions are implemented within tourism, due consideration is given to human-centred issues?" The approach taken in this paper is to undertake a critique of the field—enabled by the application of a framework borrowed from social theory. A critique of three tourism case studies of failed IT implementation points to the dominance of a Postpositivist mindset which, it is argued, has contributed to the failure through its inability to manage the complexity of the human system involved. Critical Theory is suggested as an alternative paradigm, with its emphasis on the normative structures through which stakeholders view the world. Habermas' theory of communicative action offers a framework for identifying these structures and is recommended as an avenue for future research.

© 2009 Elsevier Ltd. All rights reserved.

1. Introduction

The development of IT forms an integral part of contemporary organizational strategy and plays a crucial role in its success. The information-intensity of tourism means that "no player in the tourism industry will be untouched by information technology" (Poon, 1993, p. 153). There is no question as to the benefits offered by technology-IT applications can reduce costs, enhance operational efficiency, and improve service quality. There is, however, evidence to suggest room for improvement, specifically in the context of IT implementation projects involving multiple stakeholders.

A growth area within Tourism IT is the increasing number of European Commission-funded projects, which comprise teams made up of stakeholders from the public, private and university sectors. One of the conditions on which funding is granted is the post-funding sustainability of the project. However, research stemming from the 1990s provides an early indicator of problems in the domain of EC-assisted tourism technology projects, reporting that "in all cases projects failed to address post-project sustainability" (Evans and Peacock, 1999, p. 256 citing CEC 1996 report).

Professor A. Frew, the President of the International Federation for IT & Travel & Tourism, refers to the failure rate of Destination

Management Systems (DMSs) in an email to the TRINET online tourism discussion group in March 2005:

Contrary to the high levels of performance of travel eMediaries, DMS (with the exception of a handful of cases) have experienced high failure rates as they seem to be unable to attract the support and commitment required from both the private and public sectors.

Buhalis and Deimezi (2004, p. 103) highlight the barriers to developing a DMS in Greece:

The low level of cooperation between SMTEs [small medium tourism enterprises], however, and the serious doubts about the ability of the National Tourism Organisation to coordinate the destination makes the prospect of a DMS development in Greece doubtful.

This paper does not set out to "prove" that Tourism IT is failing nor downplay the role of IT. On the contrary its aim is to explore philosophy and theory, which will begin a dialogue concerning the link between (post) positivist and Critical Theory and IT development and implementation. The following definition of the problem will start that dialogue:

multi stakeholder B2B Tourism IT projects are dominated by a view which privileges the technology at the expense of considering the interaction with that technology by human actors, and that this view is a contributory factor to a high rate of failure. We therefore have a problem which can be stated as: "how do we ensure that, as technological solutions are

* Corresponding author. Tel.: +44 1202 961646; fax: +44 1202 515707.

E-mail addresses: palford@bournemouth.ac.uk (P. Alford), s.clarke@hull.ac.uk (S. Clarke).

¹ Tel: +44 1482 463488; fax: +44 1482 463484.

implemented within tourism, due consideration is given to human-centred issues?” (Alford, 2007, p. 4).

This exploratory paper acknowledges, at the outset, advances in the field of Tourism IT relating to the study of human issues (Baker and Sussman, 1999; Sigala, 2003; Yuan et al., 2003); however it is suggested that, at the theoretical and paradigmatic levels, a debate needs to take place in order to address some of the weaknesses underlying multi-stakeholder projects. The need for this form of theoretical study was highlighted by Sheldon in her introduction to a special issue of the *Journal of Travel Research*, where she referred to the paucity of theoretical and conceptual studies in the field of Tourism IT research (2000). This suggests that the Tourism IT field has stressed technique at the expense of method and substituted ideology for theory.

The objectives of this paper are to:

1. explore some of the weaknesses underlying multi-stakeholder Tourism IT projects,
2. investigate a philosophical grounding for the study of Tourism IT,
3. critique Tourism IT through the application of a social-theoretical framework,
4. analyse the assumptions underlying different approaches to IT implementation,
5. investigate the contribution which Critical Theory can make to the study of multi-stakeholder Tourism IT.

Three multi-stakeholder Tourism IT case studies, characterised by varying degrees of failure, are described and then critiqued using the framework referred to above. The cases were chosen largely on the level of detail and insights they provided into multi-stakeholder issues. It proved a difficult task to find cases of failed IT in the literature, which provided sufficient detail to allow meaningful observations to be made. As an exploratory study, the aim of case study analysis is not to demonstrate internal or external validity or indeed reliability – concepts most often associated with the natural sciences. Rather it is to explore the “why” questions and to identify concepts and relationships that can add to the debate referred to above. Two of the cases were sourced through the literature and the third one is based on key informant interviews carried out with those involved first hand with the case.

2. Three multi-stakeholder cases

The first case, the English Tourist Network Automation (ETNA) project, was an attempt to develop a Destination Management System (IT infrastructure which enables destination management organizations to develop and market tourism in their destinations, WTO 1999) for England. Launched in 1990, ETNA was abandoned in 1993 with systems installed in only 17% of the targeted tourist information centres (Mutch, 1996). It aimed to be an inter-organisational system linking together a number of organizations that included the English Tourist Board, the regional tourist boards, and local authorities. In theory, the virtual nature of tourism facilitates the movement of information and the development of business processes across organizational boundaries. However, the political borders of the local government authorities and of the regional tourist boards proved very real and were central to the failure of ETNA. The tourism information centre manager was not close to the centre of decision-making power and, although the local authorities had a tourism remit, it came near the bottom of the list of priorities. The chief aim in many authorities was to standardize data and communication within

and across the authority, which was at odds with the outward facing priority of ETNA. Those authorities with a more open and developed approach depended on the presence of an informed and politically astute champion at the local level. In reality, ETNA was marginal to the computing strategies of the local authorities. A review of the annual reports of the tourist boards revealed little emphasis on IT, concentrating instead on their contractual agreements with the English Tourist Board. The failure of ETNA demonstrates above all else the need to address issues of power and conflict in a multi-stakeholder setting. Mutch refers to a “rich and complex picture of implementation of IT at local levels” (1996, p. 606) and to the “danger in separating strategy formulation from its resource consequences” (1996, p. 607).

The second case comes from the hotel sector. Three UK hotel chains were chosen by Peng and Litteljohn (2001) to study the role of organizational communication in the process of strategy implementation within multi-unit organizations. Each chain was in the process of implementing a yield management system, which is designed “to sell the right room at the right price to the right customer” (Sigala et al., 2001, p. 364). The effective communication of information is critical for multi-unit hotel chains seeking to maximize the revenue from their perishable room stock. The chain that relied most heavily on the implementation of a computerized yield management system was the one that was the least effective. It implemented the project almost entirely from head office with insufficient training and little consultation at the individual unit level. The result was a slow uptake of the yield management strategy and total neglect of the computerized system in some units. The hotel chain which was successful in its implementation of yield management grounded its initiative at the unit level, working with the general managers of each hotel in identifying suitable candidates to fulfil the role of room revenue managers. The result was a strategic chain-wide strategy with buy-in from individual units and high levels of both vertical and horizontal communication within the chain. The focus in this case was not on the technology but on the people and processes involved.

The third case, the GTI project, ‘was an attempt to produce a “standard” distribution method for tour operators using a new front-end—a replacement for Viewdata’ (personal email communication on 9 June 2003 with Di Lavers, a technology consultant to the travel industry). The acronym GTI refers to the initiators of the project—Galileo (UK), Thomson, and Istel. At that time, Galileo was one of the four leading global distribution systems; Thomson was one of the four major UK tour operators; and Istel (now ntl travel) was one of the two leading viewdata network providers (Inkpen, 1998). According to Alford and Karcher (2001, p. 176) “Viewdata (the British version of Videotext) has been the principal technology for electronic package holiday distribution in Britain and Ireland for almost two decades and remains so today”. However, Viewdata has a number of weaknesses for both agents and operators including, for agents, slow searching of multiple tour operator reservation systems and for operators, difficulty in developing more flexible holiday packages.

The problems with GTI began at the outset with the secretive way in which the project was developed:

For reasons, which I never really understood, it was all very secretive. And that was part of the problem. The technical side of it (business scenario design, data definitions and message specification was the part I was involved with) was progressing reasonably well. Commercially and politically it was not so easy, as it needed a critical mass of the tour operator community to be viable. The assumption within the project was, I believe, that once the prototype product had been produced, other players would see its value and join in. But of

course it didn't work like that (personal email communication with Di Lavers).

Other tour operators were suspicious of the motives behind the project and of the competitive advantage it would afford its initiators. Such suspicion and secrecy was not a sound foundation on which to build a community of interest. Another key informant involved in the business, rather than the technical aspects of holiday distribution, also testified to the "top secret" nature of the project (personal communication 24 July 2003 with Pete Newton, First Choice Holidays and Flights). He referred to 20–30 people, representing the "top electronic data interchange brains in the travel industry", being "squirreled away" in a secret location. Even though two other leading tour operators, First Choice and Airtours, were persuaded by Thomson to join the project at a later stage, there was already a climate of mistrust. There was also a problem with the basic objective of the project—the development of a standard distribution method:

Even if the suspicions about the secretiveness could have been calmed, the tour operators were still in competition with each other. Standardization of the front-end was seen to mean common selling methods and even common look-and-feel. Although the argument was that market edge was in the business offering, not in how it was presented, it wasn't and still isn't as simple as that. And despite long discussions, the tour operators didn't go for it. The project folded and that was that (personal email communication with Di Lavers).

Tour operators were "obsessed" (personal communication with Pete Newton) with brand differentiation and the GTI project would have reduced considerably the extent to which they could have imposed their branding on travel agency Viewdata computer screens. The cost of the project ran into millions of pounds with nothing to show for it in the end as different groups employed by GTI members took their work away with them. There was a perception of the project as "too theoretical and philosophical", an "academic exercise", and the tour operator bosses withdrew their support (personal communication with Pete Newton). A concluding remark by Di Lavers encapsulates the essence of the problem: "with hindsight, it was never going to work. The message of the whole project is not really about the use of technology in travel, but about commercial and political issues" (personal email communication with Di Lavers).

There are undoubtedly problem contexts, with clearly defined inputs and outputs, where a technology-based approach will suffice. An example of a computerized stock control system is provided by Clarke (2001, p. 9) to illustrate where such an approach was successfully applied. However, Mutch includes the following observation in his conclusion: "Information systems are complex social systems and as such their success or failure is going to be contingent on a large number of variables" (1996, p. 606).

This article argues that a theoretically informed framework is needed, which can broaden the vision of Tourism IT researchers and practitioners and provide them with a different lens through which to view their domain. In order to begin to develop such a framework, the next section supplies a social-theoretical critique of IT implementation starting with a philosophical perspective. This critique is part of a "thinking-outside-the-box" process.

3. A social-theoretical critique of the cases

Sheldon (2000, p. 135) identifies "theories and paradigm" as knowledge areas in need of development, advocating the use of interdisciplinary studies. A theory should provide understanding,

explanation and prediction, and this paper turns to the social sciences and the discipline of sociology in order to find an alternative position from which to critique the three Tourism IT cases. This critique commences with consideration of Immanuel Kant's philosophy (1787). It is the authors' view that a philosophical grounding is essential to building a theoretical position based on Critical Theory, and Kant's philosophy underpins the Critical Theory paradigm, which is central to the critique proposed in this paper.

3.1. Philosophical perspective

Whilst it might seem strange to ground an approach to a twenty-first century problem in the thinking of an eighteenth century philosopher, the author hopes that by the end of this paper the reader will agree that this is a relevant and fruitful direction.

In the previous section, a case has been made for one of the key causes of IT failure in tourism being an over concentration on technical issues at the expense of human-centred ones. In the next section, which looks at a possible theoretical background from which to inform this, social theory is explored in some depth. But first, in this section a review of some relevant issues from Kantian philosophy is undertaken.

Kant's critical problem, as first formulated in the letter to Herz (21 February 1772), concerns the nature of objective reality. Prior to Kant, all philosophical schemas took objective reality as a "given", and sought to explain how it was that we could have knowledge of this reality. If this were taken as definitive, it is easy to see how we might build (empirical) knowledge in the way suggested by Locke (1632–1704): that we are born with a "tabula rasa" or "blank slate" on which impressions are formed through experience. This explains the pre-Kantian debate of reason versus experience as the source of our knowledge. The rationalist view was that, by reason alone, we are able to formulate universally valid truths (for example, around such issues as God and immortality); empiricists, by contrast, see experience as the only valid source of knowledge. Kant's insight, and unique contribution, was to bring together rationalism and empiricism in his new critical transcendental philosophy. The basis of this is his "Copernican Revolution" in philosophy. Loosely stated, this says that objective reality may be taken as existing, but that, as human beings, we have access to this only through our senses and cognitive processes: we therefore see this objectivity not as it is, but as we subjectively construct it. Kant does not claim that objects *exist* only in our subjective constructions merely that this is the only way in which *we can know them*: objects necessarily conform to our mode of cognition.

What objects may be in themselves, and apart from all this receptivity of our sensibility, remains completely unknown to us. We know nothing but our mode of perceiving them—a mode which is peculiar to us ... Even if we could bring our intuition to the highest degree of clearness, we should not thereby come any nearer to the constitution of objects in themselves (Kant, 1787, p. 82).

For this to be so, Kant's philosophy has to contain *a priori* elements: there has to be an object-enabling structure in our cognition to which objective reality can conform, and thereby make objects possible for us. This is what lies at the heart of Kant's *Transcendental Idealism*:

- Whilst objects may exist (be "empirically real"), for us they can be accessed only through their appearances (they are "transcendentally ideal").

- Our cognition does not conform in some way to empirical reality; rather this “objectivity” should be seen as conforming to our modes of cognition. In this way, we “construct” our objective world.
- Objects of cognition must conform to our sense experience. So, in this sense, knowledge is sensible, or the result of experience.
- These objects must conform to the object-enabling structures of human cognition. The resultant transcendental knowledge is (at least) one stage removed from objective reality, and is, according to Kant, governed by *a priori* concepts within human understanding.

This distinction is absolutely fundamental to an understanding of the problems faced by implementation of IT. From this most basic philosophical level, there seems no logic to considering any form of technology to be independent of the views and opinions of those involved with and affected by it. The problem to be addressed by IT in tourism is therefore, from the perspective of Kantian philosophy, recast not as a technical domain independent of human perceptions, but as a domain, which, whilst enabled by technology, is nonetheless only accessible from a standpoint grounded in human activity.

3.2. Theoretical perspective

Kant’s philosophy is central to Clarke’s (2001) formulation of an information systems strategy:

Kant’s exposure of “synthetic *a priori* statements” brings forward the idea that we all carry around with us certain “mental baggage” which we accept uncritically. Not only do we accept this uncritically, but it becomes so ingrained in our culture that we no longer even think about it (Clarke, 2001, p. 178).

Critically examining the contents of this “baggage”, which contain certain values, judgments and assumptions, is essential as they will impact on the success of any systems development. Kant’s philosophy underpins the Critical Paradigm within management science, in particular the methodology of boundary critique (Ulrich, 1983; Midgley and Ochoa-Arias, 2001; Yolles, 2001). Clarke’s (2001) application of Kant in his critical framework for information systems management is based on a search for knowledge revolving around three basic questions. Firstly, “*what can I know?*” acts as a catalyst for actors in an IT context to think outside their personal or professional frames of reference and to question the boundaries that delimit the system of concern. Secondly, “*what ought I to do?*” encourages the adoption of a normative perspective and challenges the dominance of theoretical over practical reasoning. The former is concerned with *what is* while the latter is concerned with *what ought to be*. Reflecting back on one of the cases reviewed earlier, the adoption of a normative position underpinned the successful approach to yield management implementation in a chain of hotels (Peng and Litteljohn, 2001). Rather than taking the technical system as a start and end point, the head office team engaged the labour force of individual hotels in a process of consultation. Working closely with hotel managers at unit level, head office was debating the question “*what ought the system to be like?*” Installing room revenue managers in each hotel helped to ensure that the resulting technical system would work with the existing communication structures, rather than against them. In considering what *ought to be* the features of an IT system, it is important from a Kantian perspective to discover the values which underpin subjects’ positions.

The *a priori* knowledge, which we bring into the world, includes the ability to communicate through language. Language therefore represents a natural medium through which individuals can strive for a normative position and, through debate, begin to discover the values underpinning different positions. The natural inclination and ability to communicate through language plays a central role in determining the success of strategic initiatives.

Communicating is not organizing, as organizing involves structure arrangements, resource allocation and many other activities, which are beyond the capacity of communication. But communication is embedded in the processes of organizing, affecting the effectiveness and efficiency of these processes and, in turn, the process of strategy implementation (Peng and Litteljohn, 2001, p. 362).

The implication within an IT context is that people ought to communicate before they organize, rather than the other way round. The third question, “*what may I hope?*” emphasizes that while there are no guarantees of improvement through the application of IT, this Kantian question promotes “unashamedly utopian thinking in management” (Alvesson and Willmott, 1992, p. 16) encouraging planners to engage both the involved and the affected in a process of consensus-building through dialogue. Two case studies, which feature in Peacock’s (1999) work, illustrate the importance of considering both the involved and the affected. In the first case, referred to as the “male hotel”, managers involved in the implementation of an information system paid little attention to the needs of the operational staff in the front office; in fact they were the primary users of the system and therefore highly affected by it. This lack of consultation resulted in 15% of the front office staff resigning within one month and an increase in guest complaints of 37%.

Although the new property management system represented a considerable advance in technological sophistication over the old system, it has not generated additional revenue or reduced operating costs. Far from increasing profitability, there is no evidence that it made any contribution to its cost of over £100,000 (Peacock, 1999, p. 314).

Peacock contrasted this situation with the “highly co-operative style” (1999, p. 315) visible in the “female hotel”. Technology was integrated in a more seamless fashion with the hotel’s business processes, and frontline staff had a direct say in its implementation. In the “male hotel”, data contained in the information system were withheld from operational staff, whereas in the “female hotel” they were openly shared. This difference illustrates the way in which technology can be employed either as an enabling tool or in a coercive way.

Social theory provides an alternative position from which to develop a more human-centred view of the Tourism IT domain. Guba (1990) provides a model (Table 1) classifying the three main sociological paradigms—basic belief systems, which will be used here as a heuristic device for understanding the approaches to IT implementation.

The author has mapped these paradigms onto a grid (Fig. 1) based on the axes of subjective–objective and regulation–change (Burrell and Morgan, 1979).

The Burrell and Morgan model is often used in the information systems domain as a means for reflecting on different approaches to implementation. Its reflective potential is provided by the criteria (Tables 2 and 3) on which these axes are based.

Those theories, which are accepting of the status quo and emphasize the need for social order and consensus, are cast in the sociology of regulation. Those theories, which reject the status quo and concern themselves with issues of emancipation and

Table 1
Postpositivist, critical theory, and constructivist paradigms.

	Paradigm		
	Postpositivist	Critical Theory	Constructivist
Ontology	Critical realist	Critical realist	Relativist
Epistemology	Modified objectivist	Subjectivist	Subjectivist
Methodology	Modified experimental/manipulative	Dialogic, transformative	Hermeneutic, dialectic

(Guba, 1990).

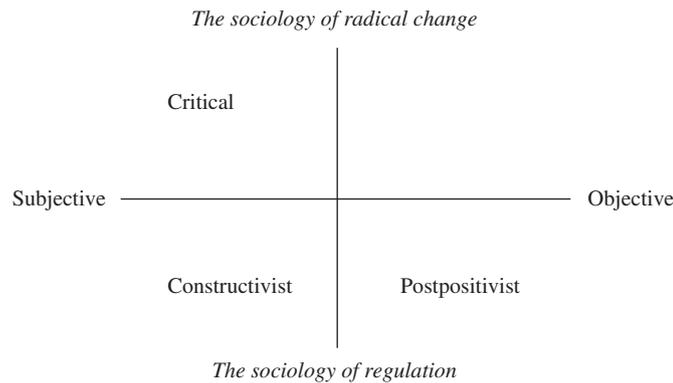


Fig. 1. A map of the three paradigms. Source: Burrell and Morgan (1979) and Guba (1990).

structural conflict, are cast in the sociology of radical change. They emphasize people's potentiality and the need to instigate change in order to realize it. The contradictory of regulation (order) is freedom, an idea, which Fromm (1962) uses to allow people to transcend the determinisms, which Marx and Freud attribute to them.

3.2.1. The dominance of the Postpositivist paradigm

The empirical evidence suggests that the three examples of failed IT implementation were governed by assumptions belonging to the Postpositivist paradigm. Although labeled *postpositivism*, Guba notes that its "basic belief system ... differs very little from that of positivism" (Guba, 1990, p. 23). Using this framework it is now easy to see how the GTI project was governed by an overly objective approach—an ontology where reality was considered to exist independent of the individual. This metaphysical stance prevailed in the failed GTI project, whose founding members believed, erroneously as it happened, that a replacement for Viewdata could be developed independently of, and involving no consultation with, other tour operators. "Epistemology is concerned with ... how the world might be understood" (Clarke, 2001, p. 47). The domination of GTI by technical experts reveals its positivist epistemology according to which, "knowledge is hard, real and capable of being transmitted in a tangible form" (Clarke, 2001, p. 47). The assumption underpinning GTI that "other players would see its value and join in" (personal communication with Di Lavers) exposes a deterministic view of human nature—ultimately other tour operators would fall in line behind a technically superior IT system. These viewpoints resulted in the choice of nomothetic methodologies, "hard, technology-based methods" (Clarke, 2001, p. 47) including "business scenario design, data definitions and message specification" (personal communication with Di Lavers), which could model the reality as observed by the GTI team. The decision to develop GTI was an attempt by the founding companies to preserve the status quo and satisfy their own needs uppermost, through a lack of participation

and consultation. They were not interested in hearing the views of other operators on what a new system of distribution ought to be like. Actuality, not potentiality, was their main concern.

This analysis places the GTI approach in the Postpositivist paradigm and there is evidence to suggest that the underlying tenets of this paradigm dominate IT implementation in the tourism domain. According to Peacock, "most managers within the tourism and hospitality industries perceive technological innovation as an external, autonomous process" (1999, p. 310). Evans and Peacock relatedly refer to the:

... Technological determinism ("optimism") and domination of ICT (information & communication technology) and online reservation systems by major travel and tour operators and integrated chains (e.g. hotels, car hire, tour operators, travel agents and transport carriers) and the problems of accessing such systems by SMEs (small medium enterprises) (1999, p. 248).

The foregoing is an example of IT systems reinforcing existing power structures and restricting the potentiality of smaller players. There was evidence of such power plays surrounding the GTI project. Another initiative, the Tour Operator Group, had been started at the same time by a number of operators including First Choice, Airtours, Cosmos and Best Travel. This group was also looking at electronic messaging but on a smaller more tactical scale than GTI. Thomson refused to join this initiative and later succeeded in recruiting First Choice and Airtours to GTI. Without the participation of Thomson, the market leader, the Tour Operator Group would enjoy limited success. The Viewdata debate continues today and is still dominated by the existing power structure. According to Yeates:

Therefore, it can be seen that the innovation decision on whether to replace Viewdata is a top down authoritative decision where the adoption of an innovation is decided by a small number of individuals possessing power, status and technical expertise (Yeates, 2002, p. 58).

3.2.2. The Constructivist challenge

Peacock counters the objective view, which he sees dominating the Tourism IT domain with the opinion that "technology interacts with the subjectivity of those who develop or use it" (1999, p. 310 citing Scarborough and Corbett, 1992). This is a Constructivist position located at the subjective end of the subjective-objective axis. The ontology considers reality a social construct and the epistemology is anti-positivist, i.e., reality can only be understood through the eyes of those who participate in it. Human beings are voluntaristic and have the free will to define their own reality. Had this position been adopted by the initiators of the GTI project, there would have been a greater likelihood that the views of other tour operators would have been consulted at the outset. For example, tour operators had specific objectives, such as brand differentiation, which they expected technology to enhance and support, not diminish. Technology is interwoven in the tour operating business and the idea that an external group

Table 2
The subjective–objective axis.

The subjectivist approach to social science		The objectivist approach to social science	
Nominalism	←	Ontology	→
Anti-positivism	←	Epistemology	→
Voluntarism	←	Human nature	→
Ideographic	←	Methodology	→
		Realism	
		Positivism	
		Determinism	
		Nomothetic	

Source: Burrell and Morgan, 1979.

Table 3
The regulation–radical change axis.

The sociology of regulation is concerned with:	The sociology of radical change is concerned with:
The status quo	Radical change
Social order	Structural conflict
Consensus	Modes of domination
Social integration and cohesion	Contradiction
Solidarity	Emancipation
Need satisfaction	Deprivation
Actuality	Potentiality

Source: Burrell and Morgan (1979).

could impose a technical solution proved untenable. A Constructivist, as opposed to Postpositivist position, would have indicated the choice of more human-centered, ideographic methods.

Constructivists take the view that reality is socially constructed and, rather than trying to reduce its complexity, they are concerned with interpreting the meanings and relationships which lie behind its construction. In the Constructivist paradigm, a “system” is viewed more as an ongoing process of inquiry and making sense, rather than as an end product. In the information systems domain there is a growing trend toward the use of Constructivism as more people acknowledge the inability of a purely Postpositivist approach to make sense of the complexity, which lies behind information systems. A 1991 survey found that between 1983 and 1987, 97% of information systems articles used a Positivist research framework (Orlikowski and Baroudi, 1991, cited in Mingers, 2001). A literature survey in 1997 found that 16% of papers employed an Interpretive Methodology (Nandhakumar and Jones, 1997, cited in Mingers, 2001). Interpretivism corresponds to Constructivism and, while achieving a more human-centered perspective in shifting the focus from the technical system to the users of that system, it still remains cast within the sociology of regulation (Burrell and Morgan, 1979). “It neglects questions about the origins, causes and results of actors adopting certain interpretations of their actions and social life, and neglects the crucial problems of social conflict and social change” (Carr and Kemmis, 1986, p. 95).

The ETNA and GTI projects demonstrate the limitations of the Constructivist paradigm in the IT domain. The IT strategies of local authorities and, to some extent, of regional tourist boards—both powerful stakeholders—ran contrary to the objectives of ETNA. A more radical approach to the design and implementation of ETNA would have provided a better understanding of this fundamental conflict. However, and ultimately, the positions that these stakeholders occupied, and potentially the structure of English tourism itself, would have to be opened up to critique and debate. They were stifling the free flow of information and the potential for regions to share information with each other to their mutual benefit. ETNA failed in large part due to the inability of the project team to discover the normative values driving the strategies of powerful stakeholders. This paper now offers a third perspective, Critical Theory, from which to critique IT implementation in the

tourism domain. Critical Theory is situated in the top half of the Burrell and Morgan grid and is cast in the sociology of radical change. The status quo is challenged and the concern is with issues of emancipation and structural conflict. The emphasis is on potentiality and the need to instigate change in order to realize it.

3.2.3. Critical Theory

Critical Theory offers a way forward and a means by which people can “move beyond a debate located firmly in the sociology of regulation to a critically reflective, radical position” (Clarke, 2001, p. 51). The radical nature of this position is derived from Kantian thinking and, in the modern era, from Critical Social Theory as expounded by Jurgen Habermas. Habermas’s thinking has its origins in a school of social theorists (Horkheimer, Adorno, Fromm, Marcuse) who wanted to distance themselves from the Positivism of traditional social theory (Ngwenyama and Lee, 1997). By using Habermas as the basis for adopting an alternative position from which to critique IT implementation in tourism, the present authors are building on an existing foundation in the information systems domain. According to Ngwenyama and Lee, “one reason for working with Habermas’s framework is that his work has had a greater impact on the IS (information systems) discipline than any other CST [critical social theory] school of thought” (1997, p. 151).

At the heart of Habermas’s theory of communicative action is his critique of instrumental reason (Morgan, 2002), which he sees as being afforded primacy over practical reason. This imbalance has resulted in a situation where “whole realms of social life are co-ordinated in terms of purposive-rational action and functional reason, with the requirement for mutual understanding and consensus being more or less suspended” (Kemmis, 2001, p. 96). This suspension is anathema to the critical position which borrows from the American Pragmatist School of Philosophy in defining truth as a position arrived at through unforced consensus and the force of a better argument (Carspecken, 1996). This position contrasts with the Postpositivist paradigm that measures truth on the basis of the concepts of validity and reliability borrowed from the natural sciences. Habermas’s theory of communicative action provides an intellectual counterfoil to the dominance of Postpositivism. He highlights the shortcomings of Positivism, which “serves the interests of control” and of Constructivism, which aims “at understanding meaning without influencing it” (Burrell and Morgan, 1979, p. 294). While the Critical Theory and Constructivist paradigms share a subjective ontology, the former has a more overtly radical intent. Indeed, “unlike most interpretive approaches, the CST perspective requires the researcher to attend not only to the matter of mutual understanding, but also the matter of the emancipation of organizational actors from false or unwarranted beliefs, assumptions, and constraints” (Ngwenyama and Lee, 1997, p. 151 citing Lee, 1994).

The critical, emancipatory element of Habermas’s work can be traced back through Marx and Hegel to Kant’s philosophy of practical reason. Kant believed that the citizens of his time, rather

than accepting the status quo, could free themselves through knowledge and reason. The dialectical principle inherent in Kant's philosophy opposes the instrumental and linear approach of theoretical reasoning. The Merriam-Webster's Collegiate[®] Dictionary & Thesaurus's definition of "dialectic" includes reference to "the Socratic techniques of exposing false beliefs and eliciting truth". These aims are central to Habermas's theory of communicative action. The essence of the Critical position therefore lies not only in challenging the practice as evident but also the norms and values which underpin it. The aim is to "reconstruct not only the practice and the practitioner but also the practice setting (or, one might say, the work, the worker and the workplace)" (Kemmis, 2001, p. 92).

Habermas, in his theory of communicative action, sees language as the means by which truth can be reached, and here again he reveals the Kantian roots of his thinking. Habermas conceived of the "ideal speech situation", "where all assertions are equally open to critical scrutiny" (Kemmis, 2001, p. 93) and truth can emerge. Habermas devised four criteria for assessing the extent to which communicative action measured up to this ideal. These are: "Is the utterance intelligible?", "Is its propositional content true?", "Is the speaker justified in terms of social norms in saying what he says?", and "Is the speaker sincere?" (Jackson, 2000). If one or more of these validity claims are unclear or in dispute then the actors should engage in discursive action to redeem them (Ngwenyama and Lee, 1997). For Morgan the rationale behind communicative and discursive action is straightforward—"we will not be able to reach consensus with others if they have no reason to believe what we say to them and if we morally violate their dialogical status as conversational partners" (2002, p. 286). The ideal, therefore, is that consensus can be reached through communicative and discursive action. However, as Morgan observes, violations can occur and such disruption is often through the exercise of power and control, leading to what Habermas refers to as "distorted communication". There is empirical evidence to suggest that power is exercised through technical systems in order to control other actors in the organization. As Peacock intimates,

Managers who define success in terms of the perception of their superiors were overwhelmingly male, but these were also managers who worked in places with both highly autocratic styles and information systems, which reduced the discretion and autonomy of the individual manager. In these more 'masculine' workplaces the strategy behind the development of information systems was the control of subordinates. Computer systems are a means of achieving predictability from subordinates (Peacock, 1999, p. 313).

4. Conclusion

This paper aimed to stimulate a debate concerning the paradigm and beliefs which underpin both research and practice within Tourism IT. The three cases of failed IT implementation all exhibited elements of Postpositivist beliefs and a mindset which, it has been argued, contributed to the failure. The theoretical criteria on which the axes in Burrell & Morgan's framework are founded have proved useful in encouraging reflective thought concerning the assumptions underpinning IT implementation. The Critical view of truth as a state arrived at through unforced consensus appears to have something to offer multi-stakeholder projects, and contrasts with the scientific concepts of validity and reliability linked to truth which are less applicable to complex human system scenarios. Finally Habermas's theory of communicative action is presented as a framework worthy of future

investigation for its ability to identify the normative and objective positions to which stakeholders adhere.

References

- Alford, P., 2007. A communicative model. *Communicative Model for stakeholder consultation: towards Stakeholder Consultation: Towards a framework for action inquiry*. *Action Inquiry in tourism*. Tourism IT, University of Bedfordshire, p. 318.
- Alford, P., Karcher, K., 2001. The endeavour extranet: building and managing a B2B e-community in the British and Irish leisure travel industry. In: Sheldon, P., Woher, K., Fesenmaier, D. (Eds.), *Information and Communications Technologies in Tourism*. Springer, Wien/New York, pp. 176–186.
- Alvesson, M., Willmott, H., 1992. Critical theory and management studies: an introduction. In: Alvesson, M., Willmott, H. (Eds.), *Critical Management Studies*. Sage, London, pp. 1–20.
- Baker, M., Sussman, S., 1999. Factors affecting the contribution of information and communication technology in the hospitality industry. In: Buhalis, D., Schertler, W. (Eds.), *Information and Communication Technologies in Tourism*. Springer, Vienna, pp. 290–299.
- Buhalis, D., Deimezi, O., 2004. E-tourism developments in Greece: information communication technologies adoption for the strategic management of the Greek tourism industry. *Tourism and Hospitality Research* 5 (2), 103–130.
- Burrell, G., Morgan, G., 1979. *Sociological Paradigms and Organisational Analysis*. Heinemann, London.
- Carr, W., Kemmis, S., 1986. *Becoming Critical*. Falmer Press, London.
- Carspecken, P., 1996. *Critical Ethnography in Educational Research*. Routledge, New York.
- Clarke, S., 2001. *Information Systems Strategic Management: An Integrated Approach*. Routledge, London.
- Evans, G., Peacock, M., 1999. A comparative study of ICT and tourism and hospitality SMEs in Europe. *Information and communication technologies in tourism*. In: *Proceedings of the International Conference*. Springer, Innsbruck, Wien/New York.
- Fromm, E., 1962. *Beyond the Chains of Illusions*. Simon and Schuster, New York.
- Guba, E., 1990. The alternative paradigm dialog. In: Guba, E. (Ed.), *The Paradigm Dialog*. Sage, London, pp. 17–27.
- Inkpen, G., 1998. *Information Technology for Travel and Tourism*. Harlow.
- Jackson, M., 2000. *Systems Approaches to Management*. Kluwer, New York.
- Kant, I., 1787. *Critique of Pure Reason*. Macmillan, London (1929).
- Kemmis, S., 2001. Exploring the relevance of critical theory for action research: emancipatory action research in the steps of Jurgen Habermas. In: Reason, P., Bradbury, H. (Eds.), *Handbook of Action Research*. Sage, London, pp. 91–102.
- Locke, J., 1632–1704. *An Essay Concerning Human Understanding*. World Publishing Co., Cleveland and New York.
- Midgley, G., Ochoa-Arias, A., 2001. Unfolding a theory of systemic intervention. *Systemic Practice and Action Research* 14 (5), 615–649.
- Mingers, J., 2001. Combining IS research methods: towards a pluralist methodology. *Information Systems Research* 12 (3), 240–259.
- Morgan, W., 2002. Social criticism as moral criticism. *Journal of Sport & Social Issues* 26 (3), 281–299.
- Mutch, A., 1996. The English tourist network automation project: a case study in interorganisational system failure. *Tourism Management* 17 (8), 603–609.
- Nandhakumar, J., Jones, M., 1997. Too close for comfort? Distance and engagement in interpretive information systems research. *Information Systems Journal* 7, 109–131.
- Ngwenyama, O., Lee, A., 1997. Communication richness in electronic mail: critical social theory and the contextuality of meaning. *MIS Quarterly* (June), 145–167.
- Orlikowski, W., Baroudi, J., 1991. Studying information technology in organizations: research approaches and assumptions. *Systems Research* 2 (1), 1–28.
- Peacock, M., 1999. The future is feminine: gender issues and information systems in hospitality and tourism. *Information and communication technologies in tourism*. In: *Proceedings of the International Conference*. Springer, Innsbruck, Austria, Wien/New York.
- Peng, W., Litteljohn, D., 2001. Organisational communication and strategy implementation—a primary inquiry. *International Journal of Contemporary Hospitality Management* 13 (7), 360–363.
- Poon, A., 1993. *Tourism, Technology and Competitive Strategies*. CAB International, Wallingford.
- Sheldon, P., 2000. Introduction to the special issue on tourism information technology. *Journal of Travel Research* 39 (November), 133–135.
- Sigala, M., 2003. The information & communication technologies productivity impact on the UK hotel sector. *International Journal of Operations and Production Management* 23 (10), 1224–1245.
- Sigala, M., Lockwood, A., Jones, P., 2001. Strategic implementation and IT: gaining competitive advantage from the hotel reservations process. *International Journal of Contemporary Hospitality Management* 13 (7), 364–371.
- Ulrich, W., 1983. *Critical Heuristics of Social Planning: A New Approach to Practical Philosophy*. Haupt, Berne.
- WTO, 1999. *Marketing Tourism Destinations Online: Strategies for the Information Age*. Marketing tourism destinations online: strategies for the information age. World Tourism Organisation Business Council, Madrid, 168pp.

- Yeates, A., 2002. Viewdata R.I.P.: A Study to Examine the Potential for the Widespread Adoption of IP-Based Reservation Systems in the UK Travel Industry. University of Brighton 99pp.
- Yolles, M., 2001. Viable boundary critique. *Journal of the Operational Research Society* 52, 35–47.
- Yuan, Y., Gretzel, U., Fesenmaier, D., 2003. Internet technology use by American convention and visitors bureaus. *Journal of Travel Research* 41 (3), 240–256.



Philip Alford is a Senior Lecturer at Bournemouth University where his specialist teaching area is e marketing, brand marketing and CRM. His Ph.D. completed in 2007 is a B2B study of IT implementation in the tourism industry and examines the non-technical factors which affect the success of IT partnerships. It is an interdisciplinary study strongly

underpinned by Critical Systems Practice within the Management Science domain. Philip is a visiting professor at Institut de Management Hôtelier International-ESSEC Business School, Paris. Philip has previously undertaken consulting assignments for the EU and a number of UK-based organizations including TOWARD Europe and Travel Technology Initiative. He recently completed a two-week assignment in Cairo advising the Egyptian Tourism Authority on their e-marketing. Philip is currently working on a consulting and training project for Farm Stay UK advising small accommodation businesses on their e-marketing strategies. Prior to working in higher education, Philip worked in the fields of destination marketing for the Scottish Tourist Board and tour operating—for a niche pilgrimage travel company in London.