

Chapter 2

A Question for Research: Do We mean Information Systems or Systems of Information?

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ABSTRACT

In this chapter I raise questions about the nature of Information systems, the way that they are designed and developed and suggest areas that IS researchers may wish to investigate. A concern is raised about the way we think about the domain of information systems and a suggestion made that rather than think of it in terms of the mnemonic IS, with its association with IT, it should be thought of in terms of as systems of information. This suggestion is made as a means of highlighting considerations developers have to take into account which go beyond those of technology alone. As a means of instigating this proposition four questions are raised in the chapter which are intended to stimulate further information systems research. These questions are about the nature of IS, design Methods, the underpinning philosophy and finally, IS failure.

GENERAL INTRODUCTION

Information Systems, as a domain on knowledge, is rarely satisfactorily explored in the literature. There are papers which discuss IS within the context of a particular area of application e.g. Management Information Systems but few deal with the nature of Information Systems. Although IS researchers and practitioners refer to IS theory rarely do they define what they mean. The dearth of discussion

about the constituents of the subject itself implies that there is universality of understanding about the nature and composition of IS. It is true that the range of knowledge and the variety of skills that IS embraces makes its definition, in terms familiar to the more traditional areas of expertise, difficult to achieve. The lack of a common and acceptable description has vexed the IS community for some years and a sound theory of IS is still elusive (see also Gregor, 2006, p612).

We can argue that the mnemonic IS, which is the common way of referring to the area, has added

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to this difficulty which is compounded by many examples in the literature where IS and IT are used interchangeably. This apparent confusion between IS and IT may be seen, by some academics and practitioners, as an indication that Information Systems is a transitory domain of knowledge created by the accessibility of Information Technology which will disappear as the technology itself becomes part of the cultural infrastructure e.g. much like users of mobile telephones have become expert in their usage with little practical guidance.

So what can we say about Information Systems? We can say is that Information Systems is a general term that defines our branch of learning, our discipline. It is an area of knowledge which is concerned with the way of using technology which is determined by purposeful (willed activity becomes action) human activities. We can argue that the practice is concerned with gaining understanding about *systems of information*. The separation of the two terms serves to emphasise our branch of learning i.e. IS relates to the intellectual underpinning and associated learning about the domain, and systems of information refers to our area of interest i.e. any situation where we take action and from that action learn from it which in turn contributes to the formation and reformation of knowledge about the domain itself.

Rather than attempt to define Information Systems I have chosen instead to raise 4 issues in the form of questions which I believe reflect important areas of research and practice which will contribute to the body of knowledge. The first question is: What is an Information System – how do we recognise one?; the second question relates to Methods - How do we set about designing Information Systems and what approaches do we use that are distinctly IS?; the third question relates to what philosophical ideas underpin IS as a subject domain and, finally; What constitutes a failure? The latter being important as there are many IT/IS failures reported where there is no actual failure of the IT but the “system” as a whole is deemed

by the users as having failed. Is it failure which acts to differentiate between IT and IS?

WHAT IS AN INFORMATION SYSTEM?

Whilst we can accept that computers are at the heart of most businesses it should not lead us to assume that Systems of Information (our territory) is solely about computing any more than it is about marketing or stock control. It is about all of the components that together make up a system of information for the collective clients. It is worth reminding ourselves that there is a difference between data processing and information; people are interested in identifying and understanding what a data object means but computers only need to identify data objects. Traditional Data Processing (DP) is not concerned with information because it produces data which are used to guide routine activities without being explicitly interpreted to the activity and the human actors informed by the data. It seems axiomatic that such straightforward considerations are incomplete when looking at the “system” as a whole.

The knowledge base of Information Systems (as a discipline) is concerned with information technology (IT) but it also requires an equal knowledge of other areas including social and management science and of business practices. The development of IT systems require skills that focuses upon the technology and the way that it might be used to assist the client (end user) undertake some tasks, whereas IS is concerned with knowledge and skills required first, to gain understanding and then to be used as a means of improving the clients system of information as a whole.

The failure of commentators (and some academics), to differentiate between IT (data) and IS (information) has resulted in a profusion of reports in the literature (both academic and practitioner) that are referring to data processing

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