An Empirical Assessment of Researcher Perspectives

Roger Clarke
Xamax Consultancy Pty Ltd, Canberra, Australia
Visiting Professor, Research School of Computer Science, ANU, Canberra
Visiting Professor, UNSW Law, Sydney
Roger.Clarke@xamax.com.au

Abstract
The notion of researcher perspective refers to the viewpoint from which the object of study is observed. It appears to have to date attracted very little attention in the IS and cognate literatures. On the basis of preliminary studies undertaken in relation to a range of IS publishing venues, the author's contention is that the vast majority of IS research adopts the perspective of the system sponsor, with very little adopting the perspectives of users, usees or the environment, and very little of it reflecting the reality that stakeholders in information systems have distinct and often conflicting interests.

A review was undertaken of the perspectives adopted by researchers in papers presented at the Bled eConference. On the basis of a 20% sample, Bled papers were found to have been very strongly oriented to the interests of system sponsors. Although a larger proportion of papers at recent events have been on the social dimension, most studies of social media are motivated by the desire of corporations to exploit social media users. Few researchers rise to the considerable but important challenges of dual-perspective and multi-perspective studies. The quality of IS research can be much-improved if researchers give more careful consideration to the perspective(s) that they adopt in their work.

Keywords: Object of study, stakeholders, system-sponsor perspective, dual-perspective research, generic-perspective research, public policy research
1. Introduction

The term 'perspective' is often encountered in discussions of research methods. Most of those mentions, however, refer to the 'theoretical perspective' that the researcher is adopting, which provides the lens through which the phenomena of interest are observed. The sense in which 'perspective' is used in this paper is different. Rather than the lens, the concern here is about the angle from which the phenomena are viewed.

Hence:

By 'researcher perspective' is meant the viewpoint from which phenomena are observed

Previous work has considered the influence of the researcher's perspective on the design, conduct and outcomes of research (Clarke 2015). This paper summarises those findings, and reports on an examination that was undertaken of a sample of the corpus of over 1,000 papers published in the Bled conference proceedings in the 28 years 1988-2015.

The following section provides an outline of the notion of perspective as developed in prior research and applied in this paper. The nature of the Bled Conference is then discussed, and the factors identified that were reflected in the research design. The results are presented, and their implications discussed.

2. The Notion of Perspective in Research

Interpretivism's point of departure is that "our knowledge of reality is gained only through social constructions such as language, consciousness, shared meanings, documents, tools, and other artifacts" (Klein & Myers 1999, p.69). Importantly for the current analysis, "the phenomenon of interest [is] examined ... from the perspective of the participants" (Orlikowski & Baroudi 1991 p.5). However, this is better expressed as 'from the perspectives of the participants', to avoid the presumption that all participants share the same view.

The acceptance of interpretivist approaches within the information systems (IS) discipline brought with it the insights that phenomena are subject to multiple interpretations, and hence that the perspective adopted by any one party is not determinative, but is merely one among many. This has important implications that have attracted far too little attention in the IS literature:

A perspective adopted by a researcher is specific rather than universal.

The choice of perspective(s) influences the conception of the research and the formulation of the research questions, and hence the research design, the analysis and the results

The categories of entity that have an interest in particular phenomena are commonly referred to as stakeholders, and the viewpoint that an IS researcher adopts is commonly that of one of the stakeholders. Many of the stakeholders are participants in the process or intervention, in such roles as investor, data source, technology provider, system sponsor or user (Seddon et al. 1999).

Some stakeholders, however, are not participants, yet they are directly impacted by the process or intervention. The term 'usee' is sometimes applied to non-participant stakeholders (Clarke 1992). Some parties that are even more remote from the process or intervention may be indirectly affected by its implications, where for example a new information system has the effect of
disintermediating a company, resulting in the cessation of business operations, layoffs, and economic hardship for employees' families, and perhaps for others in the regions in which the company operated. To achieve a comprehensive understanding of phenomena, indirectly-affected parties also need to be treated as stakeholders.

It is important to distinguish the concept of researcher perspective from those of the object of study and the unit of study. The 'object of study' is the set of phenomena that the researcher observes. The notion 'unit of study' refers to the level of granularity of the observation. Figure 1 provides a diagrammatic representation that draws out the distinctions. In textual form:

'a researcher adopts a perspective from which observations are made of an object of study, at a level of abstraction called the unit of study'

Figure 1: Conceptual Model and Example

These ideas are presented in greater detail in Clarke (2015). In that paper, it was argued that researchers must make clear to their readers the perspective that they have adopted, in order to avoid readers overlooking the inevitable limitations of the work. This gives rise to obligations on researchers to appreciate the influence of the perspective that they adopt on the outcomes of their research, to consider alternative perspectives, and to be clear about which they have chosen and why.
Across the IS discipline, many categories of stakeholder can be identified, each with their own perspective, and they exist at different levels of abstraction. For example, a corporation or government agency has multiple sub-organizations, and individual roles within them; and the interests of humans affected by information systems can be considered at the level of each individual employee, of work-groups or of the employed workforce as a whole; or at the level of each individual external to the organisation, the communities with which they identify, or society, variously at the level of a region or a nation. Table 1 provides examples of perspectives that may be relevant to various kinds of IS research. They are categorised according to the dimensions on which they lie, and sequenced in descending order of generality.

Table 1: Dimensions and Levels of Abstraction of Alternative Researcher Perspectives
Reproduction of Table 1 from Clarke (2015)

<table>
<thead>
<tr>
<th>Economic Dimension</th>
<th>Social Dimension</th>
<th>Environmental Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>World Economy</td>
<td>Humanity</td>
<td>The Planet</td>
</tr>
<tr>
<td>Supra-National Region (e.g. EU, NAFTA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nation-State</td>
<td>A Society</td>
<td>The Troposphere</td>
</tr>
<tr>
<td>Regional Economy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector / Value-Chain</td>
<td>A Community</td>
<td>The Biosphere</td>
</tr>
<tr>
<td>Strategic Partners</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation</td>
<td>A Person</td>
<td>A Localised Ecology</td>
</tr>
<tr>
<td>Sub-Organisation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Clarke (2015), it was argued that the Economic Dimension dominates IS research, and that the Researcher Perspective adopted is in most cases that of the particular stakeholder that this author refers to as 'the system-sponsor'. By that term is meant the organisation that is developing, implementing or adapting a system, process or intervention, or for whose benefit the initiative is being undertaken. In some cases, however, the system sponsor may be a cluster or category of organisations.

The following examples indicate how different researcher perspectives give rise to different research questions, in this case in the currently-popular field of social media research:

- **Perspective: System-Sponsor**
  RQ: What proportion of social media subscribers need to authorise the provider to exploit their data to ensure that advertising-based business models are viable?

- **Perspective: Other Than the System-Sponsor's**
  RQ: What techniques and tools are available to social media subscribers to enable them to obfuscate, subvert or falsify their identities and locations, and how understandable and practicable are those techniques and tools?

- **Perspective: Dual-Perspective**
  RQ: How do the views of social media users and providers compare in relation to providers’ Terms of Service and privacy features and policies; and to techniques and tools for user identity and location obfuscation, subversion and falsification?
• Perspective: Generic-Perspective

RQ: What are the social and economic impacts of the current, exploitative business model for social media; and what benefits and disbenefits would accrue to which stakeholders if regulatory measures were imposed in order to achieve balance between the interests of providers and subscribers?

In Clarke & Pucihar (2013), it was argued that "The perspective of a single organisation is valid, but so too are those of industry segments and sectors, of regions, of nations and of supra-national economic collectives or blocs such as the EU, NAFTA and APEC. But in order to lift [electronic interaction] research beyond the economic to the social, it is necessary to also reflect the interests of not-for-profits, NGOs and associations, of communities, of consumer and citizen segments, of social groups, and of individuals". The survey reported here is part of a larger study being conducted in order to understand how authors in key IS venues approach the question of researcher perspective.

3. The Bled eConference

The results of IS research are published in many different venues, primarily journals, journal special issues and sections, and conference proceedings (but also edited volumes, sponsor-supported volumes and web-sites, institutional and personal repositories, and – far too rarely – magazines targeted at professionals and managers, and reports by and for business and government). Some venues solicit and publish contributions on any and all aspects of the information discipline, and the spread of researcher perspectives adopted in papers could reasonably be expected to reflect those evident in the discipline as a whole. Other venues are oriented to particular aspects of the discipline, to particular theories, particular research methods, or particular research domains.

The Bled eConference has been run annually since 1988 in Bled, Slovenia, hosted by the University of Maribor. It has been international in nature since its inception, and its standing in its field is high, with all papers during the 21 years commencing in 1995 fully-refereed, with all years since then giving rise to Special Sections in journals (primarily the A journals International Journal of Electronic Commerce and Electronic Markets), and with revised versions of many further papers subsequently appearing in a wide range of journals.

The Bled eConference is focussed on a research domain. Given the dynamic nature of the IS discipline and of electronic technologies during the last three decades, the way in which the conference's domain is perceived has adapted over the years. Analysis of the 1988-2011 events in Clarke (2012) noted the migration of the titles from EDI (5 years), via EDI and Inter-Organizational Systems (3 years) and Electronic Commerce (9 years) to 'the eConference' (for the 12th successive year in 2016). In Clarke & Pucihar (2013), the term 'interaction' was adopted as a unifying term, referring to "any form of communications facilitated by electronic tools, provided that they have the capability to support two-way communications".

The declared Conference Themes of the 29 events 1988-2016 are listed in Appendix 1. Many of the Themes were very specifically oriented to the needs of organisations, particularly for the first 13 events until 2000. By that time, however, it was apparent that extra-organisational systems (Clarke 1992) had become common, and that individuals and communities were becoming significant participants. The 14th event in 2001 included 'e-Household' and 'e-Democracy', in 2006 the title was 'eValues', in each of the three years 2009-11 'Society' figured prominently, and in 2015, 'eWellbeing'.
The notion of researcher perspective was mentioned in the Bled eConference opening sessions in 2014 and 2015. In 2016, the theme was set firmly on the Economic Dimension, as 'Digital Economy'. However, the perspectives of several categories of individuals were explicitly mentioned in the Call for Papers (emphasis added), as follows:

"We will focus on many aspects pertaining to the dawn of the Digital Economy ... we will examine issues such as how organizations can benefit from the Digital Economy ..., but also from the perspective of the individual, including: the empowered (ageing) citizen, the entrepreneur, the patient, the consumer, the student, the lecturer and the employee"

This paper reports on a survey of papers in Bled eConferences whose purpose was to assess the perspectives adopted by authors of papers presented there. This author's impressions, supplemented by some pilot studies, suggested that, within the IS discipline as a whole, there has been a heavy leaning towards Researcher Perspectives on the Economic Dimension (~ 90%), a modest proportion on the Social Dimension (~ 10%), and almost none on the Environmental Dimension (~ 0%). Further, a very large proportion of the papers in the IS discipline at least include the interests of the System-Sponsor, with most being oriented solely that way (~ 90-95%). Of the papers that have Humans as the object of study, a large majority are neither on the Social Dimension, nor include the Perspectives of relevant individuals (~ 80-90% oriented to the System-Sponsor).

On the other hand, it would be reasonable to expect that the Bled eConference, since adopting the 'Electronic Commerce' tag in 1996, incorporating 'information society' into its Theme in 1998, and particularly since specifically adding in such topics as e-Household and e-Democracy since 2001, might feature a somewhat higher percentage of papers adopting a perspective other than that of the system sponsor.

4. The Research Method

This section commences with a description of the population of Bled papers, defines the research questions, and reports on pilot testing. This lays the foundations for explanations of the protocol and coding scheme, and the research design, with particular emphasis on the sampling strategy.

4.1. The Bled Proceedings

The Conference has run every June since 1988. There are 29 sets of Proceedings, one for each year 1988-2015 plus a special section of 9 papers for the 25th anniversary in 2012. All 16 sets since 2001 were published in CD form, and are accessible both on the Bled eConference site and in the AIS eLibrary. The 13 sets for 1988-2000, on the other hand, exist only in the form of printed and bound volumes. The papers from 1988-1994 were edited, but were not subjected to peer review. They totalled c. 147 papers. (The Proceedings for 1988 and 1989 were not readily available, and were estimated at 10 formal papers each). All 22 sets 1995-2015, totalling 953 papers, have been peer-reviewed.

Of the 29 sets of Proceedings, all 27 from the period commencing in 1990 were readily available, 16 of them in PDF on the Conference's own web-site (for 2001-15), and the remaining 11 in hard-copy form in the author's own library (for 1990-2000). In addition, an extract of the authors, titles and abstracts of the 786 papers in the 17 sets 1995-2011 is available at Appendix 3 to Clarke (2012).
4.2. Research Questions

The following specific questions were considered:

(1) What researcher perspectives are evident in papers published in Bled Proceedings?
(2) What changes in researcher perspectives are apparent in Bled Proceedings over time?

4.3. Pilot Testing

Early in 2015, a protocol and a coding scheme were devised, and pilot testing was undertaken on several sets of papers. The first experiment was conducted on the Bled eConference Proceedings for 2014. Clarke (2015) reports on an examination of the 38 papers in the Australasian Journal of Information Systems (AJIS) Vol. 18 (2014), and a 20% sample of the Proceedings of the Australasian Conference in Information Systems (ACIS) for 2014, a total of 36 papers. Several further journal volumes and conference proceedings, and a journal Special Issue, have been subsequently examined.

4.4. The Protocol and Coding Scheme

Each phase of the pilot testing gave rise to extensions to and iterative refinements of the protocol and coding scheme, with the result that the author had confidence in the efficacy of the version adopted for the study reported here. The protocol used is in Appendix 2. Each paper was identified by a unique key, and then reviewed in its own terms. The research question was extracted or inferred, and expressed in the worksheet. In the case of constructive approaches such as action research and design science, rather than a 'research question', the term 'objective' was generally more appropriate. In some cases, the researcher's perspective is, if not explicit, at least apparent, from the phrasing of the research questions. In many cases, however, it is necessary to infer it from comments in the Introduction and Conclusions, and the audience to which the paper appears to be addressed (e.g. in the 'Implications for Practice' section).

The Researcher Perspective and the Dimension on which it lay were each classified, in a manner consistent with the descriptions provided earlier. Some IS research does not adopt the perspective of any stakeholder in the phenomena. Examples include discussions of research methods, testing of survey instruments and teaching cases. Such papers are accordingly not relevant to the study, and were categorised as 'Discipline-Internal'. Sufficient data about, and quotations from, each paper were captured to enable review and moderation of the coding, to provide contextual information and thereby support some degree of analysis of the results, and to enable the research to be subjected to audit.

4.5. Research Design

The pilot testing had found that:

• it is uncommon for authors to expressly declare the perspective they have adopted
• the assessment of papers requires broad knowledge of the field, and considerable concentration
• the analysis is resource-intensive
• some dimensions and perspectives are likely to be represented in very small numbers of papers
A survey of the entire population of 1,100 papers, or of the entire refereed corpus of 953 papers, was infeasible. From the pilot testing, it appeared likely that, for some of the attributes being measured, many papers would fall into one category – particularly the Economic Dimension and the System-Sponsor Perspective. This militated against the use of a small pseudo-random sample, because of the considerable likelihood that small sub-populations would be under-represented and might not even appear at all.

The approach was adopted of a stratified rather than random sample, by including within the sample all papers from particular sets. In addition, at least one set was to be from a conference whose Theme strongly implied that papers were encouraged that reflected interests broader than those of the system sponsor alone. The Special Section for the 25th anniversary event in 2012 comprised 9 papers that reviewed particular themes within the accumulated collection. Because of its reflective and to some extent self-referential nature, it was omitted from the sampling frame.

In order to gauge change over time, a longitudinal element was necessary, requiring that the sets of different years be selected. Change year by year may be small, whereas differences over a longer period may be more marked. It was therefore preferable for the sample years to be separated. Further, the assumption was made that change would be steady rather than abrupt, and hence it was desirable that the separation be by a consistent period.

It was uncertain how large a sample would be feasible given the resource and elapsed-time constraints. There was accordingly an advantage in selecting the spacing between sample-years in such a manner that the project could start with a sparse sample and later, if adequate resources were available, additional years could be selected, evenly spaced between those already sampled.

The strategy adopted was to define three possible rounds. The first was to examine the sets for 2015 and 2003 (12 years apart). The second round would first interpolate the set for 2009 (midway between them), and then 1997 (which would provide 4 sets spaced 6 years apart) and 1991 (5 sets, 6 years apart). To the extent feasible, the third round would interpose at 3-year intervals (initially 2012 and 2006 to increase the intensity for recent years, then 2000 and 1994). The choice of 2-year intervals instead of 3 appeared to be too resource-intensive, and to offer diminishing return on investment. The number of papers in each sample-year in each Round is shown in Table 2. The selection constraint was satisfied, in that the Theme for 2009 expressly focussed on 'eSociety'.

Table 2: The Sample

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>88</td>
<td>68</td>
<td>90</td>
<td>91</td>
<td>92</td>
<td>94</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>71</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>29</td>
<td>23</td>
<td>33</td>
<td>48</td>
<td>52</td>
<td>55</td>
<td>50</td>
<td>49</td>
<td>42</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>10</td>
<td>22</td>
<td>27</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>68</td>
</tr>
<tr>
<td>4</td>
<td>10</td>
<td>10</td>
<td>22</td>
<td>27</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>108</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>21</td>
<td>28</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>35</td>
<td>715</td>
</tr>
<tr>
<td>6</td>
<td>10</td>
<td>21</td>
<td>28</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>35</td>
<td>715</td>
</tr>
<tr>
<td>7</td>
<td>10</td>
<td>21</td>
<td>28</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>35</td>
<td>715</td>
</tr>
<tr>
<td>8</td>
<td>10</td>
<td>21</td>
<td>28</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>35</td>
<td>715</td>
</tr>
<tr>
<td>9</td>
<td>10</td>
<td>21</td>
<td>28</td>
<td>26</td>
<td>37</td>
<td>42</td>
<td>45</td>
<td>50</td>
<td>41</td>
<td>35</td>
<td>715</td>
</tr>
</tbody>
</table>

5. Results

This section commences with an outline of the conduct of the study, and an assessment of the appropriateness of the protocol and coding scheme. An overview of the results is provided, including the distribution of the object of study. The distribution of papers across the Dimensions is analysed, and then the distribution across Researcher Perspectives. Particular attention is paid to the Perspectives adopted in the 26% of cases in which the object of study was humans.
5.1. Conduct

The available resources were sufficient for the completion of both Rounds 1 and 2, resulting in assessments of 212 of the c. 1,100 Bled papers 1988-2015 (19%), including 29 of the c. 147 unrefereed papers from 1988-1994 (20%), and 183 of the 953 refereed papers since 1995 (19%). 2003 was an exceptional year, in that the event was enlarged to 71 papers, whereas the other four sets averaged 35 papers, range 29-42. Five papers were coded as Discipline Internal in nature, as they did not adopt the perspective of any stakeholder in the domain under study. The number of papers relevant to the study was accordingly 207.

The coding scheme proved to be generally very workable, but a few boundary-cases needed to be managed, and managed consistently. For example, a number of papers contained very modest empirical content in support of theory development, and a somewhat arbitrary threshold was applied in order to assign the paper as Theoretical rather than Empirical. Another boundary-condition arose with a paper that was coded as being primarily Theoretical but was also methodological in nature and hence was arguably Discipline-Internal. One paper was coded on the Social Dimension, but from the System-Sponsor Perspective. (This was a study of an eHealth intervention to address worksite health risk factors). Two papers were expressly concerned with 'socio-economic' factors, but were coded on the Social Dimension. TAM research was coded as being from the Perspective of the System Sponsor, although consideration was given to allocating it to 'Discipline-Internal', because its significance to real-world stakeholders is very limited.

A further challenge for the coding technique arose from a small number of articles whose focus was on unincorporated business enterprises comprising a single individual, in each case in a developing country. The Dimension was coded as Economic and the Perspective as System-Sponsor. The questions arose as to whether the secondary concerns about social aspects were sufficiently significant to warrant the recording of multiple dimensions, and whether 'System Sponsor' is a suitable descriptor where the intended beneficiaries of the research are large numbers of self-employed craft-workers in a developing country.

The challenges encountered in terms of threshold and boundary judgements may have been more readily dealt with if a team-based approach to the research had been adopted, or if a panel of reviewers had been used. However, the number of such instances is sufficiently small that the choices made do not appear to have a material influence on the results.

5.2. Overview

The 1991 set of papers, as was natural for an event with a narrow focus on EDI, and that was specifically an industry-academe crossover event, contains straightforward papers on business processes and impacts. The refereed papers in the other four sets are both much stronger from a research perspective and rather more varied in their styles. The overall counts and percentages for the five sets are provided in Appendix 3.

Papers of a predominantly theoretical nature (i.e. in which there was no empirical content or it performed only a supportive role) dropped from 93% in 1991, via 48% and 45%, to 35% in each of the last two sets. Constructive research was very low in the first two sets (0 and 4%), growing to 10, 15 and 16%. This reflects the fact that Bled has historically attracted far more theoreticians and observers than system and software developers. Strongly empirical research, including both scientistic and interpretivist approaches, and both quantitative and qualitative data, was only 7% at the unrefereed event in 1991, but has been in the range 45-50% in all of the later four sets.
The following sub-sections consider each of the aspects discussed in the earlier part of the paper. The analyses primarily use percentage measures in order to avoid confusions arising from the varying sizes of the individual sets. Examples are drawn on in order to highlight particular aspects of the results.

### 5.3. The Object of Study

The published Themes of the first two sets were unequivocally oriented towards inter-organisational systems: 'EDI: Business Strategy for 90s' in 1991, and 'Global Business in Practice' in 1997. In 2003, the rather more ambiguous and multi-facetted Theme was 'eTransformation'. The 2009 event adopted a more inclusive Theme – 'eEnablement: Facilitating an Open, Effective and Representative eSociety' – and 2015's Theme was 'eWellbeing'. The migration in themes has reflected the capacity of ICT to reach beyond organisations to people, both as citizens and consumers, and to social groups at various levels of abstraction.

Across the sample as a whole, 63% studied organisations (131 of the 207 papers), 11% had a particular technology as the focal point (23), and 26% had humans as the object of study (53). As Table 3 shows, the focus on organisations as the object of study was intense in the early years, but the intensity has progressively reduced. The proportion of papers with humans as the object of study was zero in 1991, but interest emerged in 1997 soon after the advent of Internet access to services, especially the Web, and has grown steadily since then to almost half in 2015. Technologies per se have attracted far less attention in the last two sets than was the case in the first three.

#### Table 3: Object of Study

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisations</td>
<td>86</td>
<td>70</td>
<td>59</td>
<td>63</td>
<td>49</td>
<td>63</td>
</tr>
<tr>
<td>Humans</td>
<td>0</td>
<td>12</td>
<td>28</td>
<td>32</td>
<td>49</td>
<td>26</td>
</tr>
<tr>
<td>Technologies</td>
<td>14</td>
<td>18</td>
<td>13</td>
<td>5</td>
<td>2</td>
<td>11</td>
</tr>
</tbody>
</table>

### 5.4. The Dimensions

Although the objects of study have changed significantly over time, both the Researcher Perspectives, and the Dimensions on which those Perspectives lie, have changed far less. As Table 4 shows, the proportion of research conducted on the Economic dimension was 91-100% across the first four sets, and an overall average of 93%.

#### Table 4: Dimension

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic</td>
<td>100</td>
<td>91</td>
<td>99</td>
<td>93</td>
<td>84</td>
<td>94</td>
</tr>
<tr>
<td>Social</td>
<td>0</td>
<td>9</td>
<td>1</td>
<td>7</td>
<td>16</td>
<td>6</td>
</tr>
<tr>
<td>Environmental</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
The Social Dimension has averaged only 6% of papers. It emerged in 1997 with 9% (3 papers), faltered to 1% (1 paper) in 2003 (despite the implied invitation of the 'eTransformation' theme), recovered to 7% (3 papers) in 2009, and climbed to 16% (6 papers) in 2015. The 3 papers in 2009 were studies of social networking services, in two cases from the user perspective, and in the other taking into account the interests of both the user and the service-provider. In 2015, on the other hand, driven by the Theme of eWellbeing, all of the 6 Social Dimension papers were eHealth-related. Five considered the interests of people, either as users or usees, with one adopting the employer's perspective.

Not a single paper among the 207 across the five sets was on the Environmental dimension. Only 1% (2 papers) even considered environmental topics, and both were on the Economic Dimension – one on environmental sustainability practices, and the other (by this author) on the application of eCommerce theory and practice to carbon trading.

### 5.5. Researcher Perspectives

From Table 5, it is clear that the interests of the System Sponsor are just as dominant as in other segments of the IS literature – in 85% of papers as the sole perspective (175 of the 207, of which 180 were single-perspective papers), plus a further 8 percentage-points as one of the perspectives reflected (17 of the remaining 27 among the total of 207 papers). The proportion of sole-perspective System-Sponsor research has declined from 100% in 1991 to around 80% in 2009 and 2015. This is because the frequency of research that considers multiple perspectives was zero in 1991, but jumped to the range 13-19% from 1997 onwards. In the majority of multi-perspective studies, however, the System Sponsors' interests are among those considered, such that the measure remained in the range 90-97% for 1997, 2003 and 2009, dropping to 84% in 2015 as a result of the eWellbeing Theme.

**Table 5: Researcher Perspective**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>System Sponsor</td>
<td>100</td>
<td>82</td>
<td>86</td>
<td>80</td>
<td>78</td>
<td>85</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Multiple</td>
<td>0</td>
<td>15</td>
<td>13</td>
<td>15</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Total System Sponsor</td>
<td>100</td>
<td>97</td>
<td>90</td>
<td>95</td>
<td>84</td>
<td>92</td>
</tr>
<tr>
<td>O=Human Object &amp; P=System-Sponsor</td>
<td>0</td>
<td>25</td>
<td>89</td>
<td>77</td>
<td>72</td>
<td>75</td>
</tr>
</tbody>
</table>

Previous papers have analysed the ways in which Bled conference papers have been particularly concerned with the organisational settings within which eInteraction technologies are used (Clarke 2012, Clarke & Pucihar 2013). Within the sample studied here, 74% fell into those categories. Of those, 90% of the studies of organisations were from the perspective of the System Sponsor (118/131), and 8% from multiple perspectives (11). The 2 studies from a single perspective other than the System Sponsor (<2%) were Wilde et al. (1997), which adopted the perspective of rural business enterprises as users of information and services from commercial
websites, and de Campos Costa & Joia (2003), a survey of individual Brazilian investors who use
Internet stockbrokers. Of the Multi-Perspective studies, 7/11 included the system sponsor's
perspective, such that it was reflected in 95% of papers (125/131).

Of the studies of technologies, 74% were solely from the System Sponsor perspective (17/23),
and none from any other single perspective (0%); but 26% recognised multiple perspectives (6).
Of these, all included the System Sponsor perspective bringing that measure to 100% (23/23).

Of the papers that had humans as the object of study, in 75% of cases the perspective adopted was
solely that of the System Sponsor (40/53). In 19% two or more Perspectives were adopted
(10/53), and 6% reflected the interests of a single stakeholder other than the System Sponsor
(3/53). Of the multi-perspective studies, 70% (7/10) included the interests of the System
Sponsor, bringing that perspective to 89% (47/53).

5.6. Humans as the Object of Study

In 26% of the papers (53), the object of study was humans. A key motivation for the conduct of
this research was the author's strong impression that the system sponsor's perspective dominates
IS research. This has been borne out by the results of both pilot testing and the research reported
in this paper. A corollary is that, where humans are the object of study, it is likely that the
dominance of the system sponsor's interests is harmful to the interests of those people. This
section accordingly probes more deeply into this aspect.

The papers were first assessed for the extent to which they reflected the System Sponsor's
perspective. Of the 53 papers, in 40 cases (75%) the perspective was solely that of the system-
sponsor. In 7 of the 10 multi-perspective papers, the system-sponsor's interests were among those
considered (an additional 13%age points, making 89% in all). On the other hand, the human
objects' interests were represented in only 3 single-perspective papers (6%), but also in all of the
10 multi-perspective papers (19%, making 25% in all). Table 6 summarises the results.

Table 6: Perspectives Where the Object of Study is Humans

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Other Than System Sponsor</td>
<td>6%</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Multi-Perspective</td>
<td>19%</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Dual-Perspective</td>
<td>11%</td>
<td>6</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Generic-Perspective</td>
<td>8%</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>System Sponsor Only</td>
<td>75%</td>
<td>40</td>
<td>0</td>
<td>0</td>
<td>14</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Reasonably Sensitive</td>
<td>47%</td>
<td>25</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>One-Sided</td>
<td>28%</td>
<td>15</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Total System Sponsor</td>
<td>89%</td>
<td>47</td>
<td>0</td>
<td>4</td>
<td>18</td>
<td>13</td>
<td>18</td>
</tr>
<tr>
<td>Total the Humans Under Study</td>
<td>25%</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Other</td>
<td>8%</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The 3 papers that adopted a single Perspective which was not that of the System Sponsor were
concerned with users of social networking services (Tuunainen et al. 2009), sight-impaired users
of social networking services (Leahy & O‘Brion 2009), and women employed in ICT (Berghi &
Bielli 2015).
Two categories of multi-perspective research are usefully distinguished. Dual-perspective research most commonly observes the phenomena of interest from both sides of a provider-user or provider-consumer dyad. This is potentially highly valuable, but it is somewhat challenging and not often reported at Bled. Adie & Castleman (1997) brought industrial relations and sociology to bear on teleworking, from both employer and employee Perspectives:

"There are complex and paradoxical interests among the various parties in the employment relations context. ... Satisfactory resolution of the employment relations issues requires a recognition of the contradictory pressures and interests among employers and employees".

Gattiker et al. (1997) investigated how respondents feel about invasions of privacy arising from e-mail and telephone marketing. The primary beneficiary was system-sponsors, but the perspective of consumers was also addressed – in this case as usees, i.e. individuals affected by the system. Similarly, the primary perspective of Schubert et al. (2003) was that of the system sponsor, but the interests of the student-users were also considered:

"Do [groupware systems] really improve collaborative processes? Do they save time or kill additional time? Do people like to work with such tools or is it an extra burden for them? Are these systems as user-friendly as their marketing leaflets claim them to be?"

The paper by vom Brocke et al. (2009) considered adoption factors for social networking services from the viewpoints of both the provider and the user. Cruz-Cunha et al. (2015) outlined features of an e-Marketplace for services, from the perspectives of both elderly people and their caregivers (with only indirect implications for providers); and Mezei & Nikou (2015) examined benefits of recommender systems for both system sponsors and the young-elderly.

The term 'Generic-Perspective Research' was applied to papers that in some manner reflected the interests of multiple stakeholders. At worst, papers of this kind can be vague about who is meant to benefit from the research. One 2003 paper on how young people are developing new and innovative ways of interacting using technology drew some inferences, but identified no clear implications for any particular stakeholder.

There were 3 papers, however, which either searched for policy implications, or examined specific policy implications, with the (in some cases implicit) aim of achieving economic and/or social betterment. The earliest, Schubert et al. (1997), was expressly concerned with socio-economic aspects of electronic markets:

"Relevant socio-economic aspects are the composition of society (social structure), the ongoing change in social patterns (social change), the phenomenon of new social formations of people (communities, genres), psychological aspects and the allocation of power on the basis of access to information (government and world politics)".

In Binhadyan et al. (2015), proposals were made in relation to e-mental health services intended to address the needs of all stakeholders, and Carlsson & Walden (2015) considered the use of mobile technology to enhance wellness among the young elderly, considering also the public health and budgetary aspects relevant to society as a whole.

Almost half of the papers whose object of study was humans demonstrated at least some degree of sensitivity to the interests of the particular category of people under study. One positive
example was Hawryszkiewycz (2003) which suggested a flexible approach to customizing learning spaces to learners' needs. Another was Head et al. (2003), which concluded that:

"A humanized approach to Website design would incorporate various human-centric elements, such as emotive textual descriptions, relevant pictures of people, appropriate audio and video clips, virtual communities, virtual and real shopping agents. ... If vendors are not able to instill customer trust in their e-Commerce operations, they are doomed to online failure"

In Jutla & Bodorik (2003), the unusual proposition was put forward of 'a client-side business model':

"Strengthening the user perception of privacy and trust on the Internet will require user-focused technological approaches, enforceable privacy laws, and business interventions. We propose a novel user-focused business model for privacy with a supporting client-side e-privacy architecture"

Similarly, Ng-Kruelle et al. (2003), in structuring a framework for analysing privacy sensitivity in relation to wireless applications, concluded that:

"It becomes necessary therefore to understand how privacy requirements from the end user works, and how the basic privacy principles can be best adapted for business development strategies to achieve consumer satisfaction"

These 4 are, however, the only well-balanced examples. In 2003, 8/14, and in 2009 all 9/9 papers, were concerned with adoption factors, and regarded humans as an awkward object of study whose behaviour was subtle and hence needed careful examination in order that business enterprises could achieve their objectives.

The remaining 2/14 papers in 2003 were concerned with the behaviour of employees and online consumers. In 2015, only 2 papers showed a degree of sensitivity, although only marginally so. One evaluated requirements for a mobile financial advisory service and the other crowdsourced software development. In each case, the attitude evident to the humans under study was tending away from sensitivity towards manipulation.

The remaining category is at best strongly biassed to the System Sponsor's interests, and in some cases shows elements of authoritarian and exploitative attitudes. Fully 28% of the sub-sample (15/53 papers) was judged to be in this category. Lichtenstein & Swatman PMC (1997) studied the development by organisations of acceptable usage policies:

"The diffusion of the Internet within the workplace has introduced serious new organisational security concerns ... many employees have been misusing or abusing their employer-provided connection to the Internet"

In the Outstanding Paper Award-winning paper that year, Koch & Möslein (2003), an argument was pursued for "user-centric global identity management":

"Personalization and community support are increasingly considered to be an important ingredient of successful (Web) applications for e-commerce and collaboration. ... The availability of user profile information will be important for future Internet based Electronic Commerce and Community Support services. Information about the users is needed ... ""
In Sigala (2003), the treatment of students was as objects whose attributes were to be improved:

"Findings provide useful suggestions for developing successful e-learning... ... correction actions... students should be assisted in becoming motivated, skilled and active members of online communities that can contribute to learning processes"

Centralised electronic Customer Relationship Management (eCRM) was investigated by John et al. (2009) as a means of improving consumer 'loyalty', and this was followed by 4 papers in 2015 that discussed Social CRM in terms that were unambiguously supportive of business enterprises utilising social media as a means of manipulating consumer behaviour. In addition, 2 papers were concerned with the use of individuals' postings on social media as a means of conducting market surveillance.

Other 2015 papers examined worksite health risk factors, and misfit between individual KPIs and corporate objectives. More aggressively, Frank et al. (2015) proposed that functional features of first-person shooter (FPS) games were relatively unimportant, because hedonic motivations dominated gamers' adoption behaviour; and Derikx et al. (2015) studied means of "buying-off" users' privacy concerns in order to achieve more rapid adoption of mobility services.

Even more hostile to users' interests was Gand et al. (2015), which argued that lifetime electronic health records (LEHRs) should be imposed on individuals in order to gain (unproven and indeed contentious) benefits to public health, and asserted that "the collection of data from every necessary or available source should be considered as reasonable".

The Theme in 2015 was eWellbeing, and several authors rose to that challenge. Despite that, the 2015 set saw a substantial shift towards approaches hostile to human interests. An appreciable number and proportion of researchers went beyond merely assuming that the interests of individual users and useses were irrelevant to the research. Papers in 2015 on so-called 'social media' were almost entirely from the perspective of corporations, individuals were perceived as no more than an object of study, and their interests are considered if, and even then only to the extent that, they represented potential impediments to adoption or otherwise worked against corporations' interests. Some authors are actively working to assist corporations to exploit IT users; and one trio of authors adopted the position that the collectivist interest dominates that of the individuals who were the object of study.

6. Discussion

The patterns anticipated for the IS discipline as a whole were generally evident in the sample of Bled eConference papers. The Dimension was on average 93% Economic, 7% Social and 0% Environmental. The 2015 Proceedings showed a small increase in the proportion of papers on the Social Dimension, in response to a human-oriented Conference Theme.

In 85% of papers, the Researcher's Perspective was solely that of the system-sponsor, with a further 8% coming from the multi-perspective papers. In only 2.5% of cases was a single Perspective adopted that was other than that of the system sponsor.

Prior to 2000, Bled Themes were strongly focussed on organisations and technologies, but since then about one-third have had humans as the object of study. Among these, the dominance of the system-sponsor's Perspective is almost as great as for the population as a whole – (89% including 75% sole-Perspective, cf. 93% and 85%). Moreover, the proportion of the papers in which a
A reasonable degree of sensitivity was evident plummeted from 80-90% in 2003 and 2009 to only 15% in 2015. It may be that the single-mindedness of US business school thinking is migrating across the Atlantic and changing the flavour of European research into eInteractions.

Membership of IS professional associations generally brings with it moderately strong and comprehensive obligations in relation to society and human well-being, and to privacy in particular. To date, IS researchers have been subject to less stringent standards. Nonetheless, the AIS Research Code includes as "recommended ethical behavior" the following: "Give priority to the public interest, particularly when designing or implementing new information systems or other designed artefacts" (AIS 2015). There would appear to be a conflict between IS researchers' conduct and their nominal ethical responsibilities. This is arguably the case with any research that is conducted solely from the system-sponsor's Perspective, but it is very clearly so in the case of the human-hostile examples identified towards the end of the previous section.

The results of this study suggest that, in respect of the Bled eConference, but quite probably in respect of research into eInteractions quite generally, researchers' perspectives are dominated by the system sponsors' interests, to the extent that the interests of people and society are mostly treated as impediments to system sponsor's intentions. There are signs that the dominance may be turning into arrogance, with an increasing proportion of research being focussed on the exploitation of humans and their behaviour.

7. Conclusions

If, as this author argues, the dominance of system sponsor interests is at least undesirable, and even unconscionable, what is to be done about it? Calls for Papers need to expressly address, or at least include and encourage, research on Dimensions other than the economic, and from Perspectives other than that of system sponsors. It appears to be necessary for AIS to mature its Code beyond the protection of its members from inappropriate behaviour by other researchers, and impose specific obligations on its members in relation to the nature of the research they conduct, and in particular the perspectives that they adopt. A stronger hand is needed from editors and reviewers, in order to to weed out unduly insensitive, exploitative, manipulative and authoritarian approaches to research.

On a more positive note, the research on perspectives draws attention to opportunities for researchers on eInteractions at the Bled conference, and on IS generally, to improve the effectiveness of their work. Single-perspective research is entirely justifiable, but its limitations need to be appreciated and explained. Similarly, the system sponsor's perspective is entirely legitimate; but excessive focus on it, to the substantial exclusion of the interests of other stakeholders, is indicative of capture, and not an attribute of a healthy discipline.

Dual-perspective research is capable of offering far deeper insight into phenomena than one-sided studies. Too many people continue to pursue 'impediments' and 'barriers to adoption', despite that whole field of research being an aberration. If the IS discipline's scope and body of knowledge were well-balanced, there would be no such field of study. One way to achieve that, and consign 'impediments' to the dustbin of history, is by concentrating on dual-perspective research, reflecting both the system-sponsor and user / consumer views, and inter-relating them, to the benefit of both.

Beyond dual-perspective research, multi-perspective approaches need to be understood, their benefits appreciated, and appropriate research techniques adopted and matured. The IS discipline has for too long avoided research that has relevance to public policy issues. It needs to broaden its horizons, conduct policy-relevant research, and thereby contribute to economic, social and
environmental wellbeing. But it can only do so if some proportion of researchers, in some of their projects, conduct their work other than on behalf of corporate sponsors, and lift their sights beyond single-perspective research to reflect multiple perspectives.

References


Acknowledgements

Thanks to Robert Davison for the opportunity and the drive, to Frank Land for both the inspiration and the feedback, and to Doug Vogel for his constructive comments and encouragement. The comments of the anonymous reviewers were both supportive and very helpful in identifying several representational errors and clarifying aspects of the argument.
Appendix 1: Bled Conference Titles

Electronic Data Interchange (EDI)

1988 (01) – (Electronic Data Interchange)
1989 (02) – (Electronic Data Interchange)
1990 (03) – Electronic Data Interchange
1991 (04) – EDI: Business Strategy for 90s

EDI and Inter-Organizational Systems

1993 (06) – EDI: Strategic Systems in the Global Economy of the 90s
1994 (07) – Electronic Commerce, Electronic Partnership
1995 (08) – Electronic Commerce for Trade Efficiency

Bled Electronic Commerce Conference

1996 (09) – Electronic Commerce for Trade Efficiency and Effectiveness
1997 (10) – Global Business in Practice
1998 (11) – Electronic Commerce in the Information Society
1999 (12) – Global Networked Organisations
2000 (13) – Electronic Commerce: The End of the Beginning
2002 (15) – eReality: Constructing the eEconomy
2003 (16) – eTransformation
2004 (17) – eGlobal

Bled eConference

2005 (18) – eIntegration in Action
2006 (19) – eValues
2007 (20) – eMergence: Merging and Emerging Technologies, Processes, and Institutions
2008 (21) – eCollaboration: Overcoming Boundaries Through Multi-Channel Interaction
2009 (22) – eEnablement: Facilitating an Open, Effective and Representative eSociety
2010 (23) – eTrust: Implications for the Individual, Enterprises and Society
2011 (24) – eFuture: Solutions for the Individual, Organisations and Society
2012 (25) – eDependability: Reliable and Trustworthy eStructures, eProcesses, eOperations and eServices for the Future
2013 (26) – eInnovations: Challenges and Impacts for Individuals, Organizations and Society
2014 (27) – eEcosystems
2015 (28) – eWellbeing
2016 (29) – Digital Economy
Appendix 2: Coding Protocol

For each paper:

1. Review the paper, with a particular focus on the Title, Abstract, research method, intended beneficiary and target audience

2. Select one from these CATEGORIES:
   - DI – Discipline-Internal, incl. research method, issues, teaching-related (DI papers are not relevant to the current study)
   - T – Theoretical, with at most a minor empirical component
   - E – Observational / With a significant Empirical component
   - C – Constructive, incl. Design Research, Action Research

3. For Categories T and E, extract or infer and capture the Research Question
   For Category C, extract or infer and capture the Objective

4. Select the DIMENSION on which the Perspective lies:
   - Ec – Economic
   - Soc – Social
   - Env – Environmental

5. Select the UNIT of STUDY:
   - O – Organisation(s)
   - H – Human(s)
   - T – Technology

6. Select the PERSPECTIVES:
   - SS – System Sponsor (sole or dominant)
   - O – Other-than-System-Sponsor (sole or dominant)
   - M – Multiple perspectives

7. For Perspectives O and M, capture the Perspective(s) in text form

8. Capture key quotations that are indicative of the Perspective

9. Assign code HSS if the article is both H (Human Unit of Study) and SS (System-Sponsor Perspective)
## Appendix 3: The Results

<table>
<thead>
<tr>
<th>Year</th>
<th>No.</th>
<th>Ec</th>
<th>Soc</th>
<th>Env</th>
<th>Org</th>
<th>Human</th>
<th>Tech</th>
<th>Sys</th>
<th>Sp</th>
<th>Other</th>
<th>Multi</th>
<th>All</th>
<th>H &amp; SS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td></td>
<td></td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>24</td>
<td>0</td>
<td>4</td>
<td>28</td>
<td>0</td>
<td>0</td>
<td>28</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>86</td>
<td>0</td>
<td>14</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>1997</td>
<td>30</td>
<td>3</td>
<td>0</td>
<td>23</td>
<td>4</td>
<td>27</td>
<td>1</td>
<td>5</td>
<td>32</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>91</td>
<td>9</td>
<td>0</td>
<td>70</td>
<td>12</td>
<td>82</td>
<td>3</td>
<td>15</td>
<td>97</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>68</td>
<td>1</td>
<td>0</td>
<td>41</td>
<td>18</td>
<td>59</td>
<td>1</td>
<td>9</td>
<td>61</td>
<td>16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>99</td>
<td>1</td>
<td>0</td>
<td>59</td>
<td>28</td>
<td>86</td>
<td>1</td>
<td>13</td>
<td>90</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>37</td>
<td>3</td>
<td>0</td>
<td>25</td>
<td>13</td>
<td>32</td>
<td>2</td>
<td>6</td>
<td>38</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>93</td>
<td>7</td>
<td>0</td>
<td>63</td>
<td>32</td>
<td>80</td>
<td>5</td>
<td>15</td>
<td>95</td>
<td>77</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>31</td>
<td>6</td>
<td>0</td>
<td>18</td>
<td>18</td>
<td>29</td>
<td>1</td>
<td>7</td>
<td>31</td>
<td>13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>84</td>
<td>16</td>
<td>0</td>
<td>49</td>
<td>49</td>
<td>78</td>
<td>3</td>
<td>19</td>
<td>84</td>
<td>72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>194</td>
<td>13</td>
<td>0</td>
<td>131</td>
<td>53</td>
<td>175</td>
<td>5</td>
<td>27</td>
<td>190</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>%</td>
<td>94</td>
<td>6</td>
<td>0</td>
<td>63</td>
<td>26</td>
<td>85</td>
<td>2</td>
<td>13</td>
<td>92</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Appendix 4: Supplementary Materials

The coded data us available as follows:

- 2003 – [http://www.rogerclarke.com/SOS/Persp-BledP-03.xls](http://www.rogerclarke.com/SOS/Persp-BledP-03.xls)