

## **Editorial: A Brief Retrospective (2013-2019)**

By: Suprateek Sarker, [Prashnat Palvia](#), Abdullah Oguz, Caven Wu, Xiao Xiao

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### **Abstract:**

In this editorial, we wish to offer: (1) some reflections on my experience as EIC—initially and as I got involved in the role, as well as after I retired from the role; (2) an overview of what JAIS published in the six years of my term—the credit for preparing this part of the article goes to my co-authors; and (3) heartfelt thanks to members of the community for supporting the journal and its EIC.

**Keywords:** editorials | information systems | publications

### **Article:**

**\*\*\*Note: Full text of article below**



## Editorial: A Brief Retrospective (2013-2019)

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As the year 2019 comes to an end, I realize that this is my last chance to say a few words regarding the six years that I served as the editor in chief (EIC) of the *Journal of the Association for Information Systems (JAIS)*. Even though my term ended in June, Professor Dorothy Leidner, the current editor in chief, has kindly allowed me and my co-authors this opportunity to share some thoughts in this final issue of the year.

In this editorial, we wish to offer: (1) some reflections on my experience as EIC—initially and as I got involved in the role, as well as after I retired from the role; (2) an overview of what *JAIS* published in the six years of my term—the credit for preparing this part of the article goes to my co-authors; and (3) heartfelt thanks to members of the community for supporting the journal and its EIC.

### 1 Getting Started... and Navigating Through the Journal Reputation Maze

I distinctly remember that when I started in the editor-in-chief role, there was a strong perception in much of the IS community that *JAIS* was a journal primarily for qualitative researchers, and that it published only theory-heavy papers. I am not sure where this perception originated from, but it was widespread. In fact, I realized that because of these two assumptions, many scholars in the information systems (IS) discipline did not perceive any relevance of *JAIS* (“the flagship journal of the AIS”)

to their own research. *JAIS* was a highly rated journal at some universities but, at others, I was told it had minimal, if any, impact on promotion and tenure decisions (and any form of career advancement of faculty). And, this was true not only for highly demanding doctoral-granting institutions but also for those with relatively modest research requirements.

As a new editor full of enthusiasm, I was determined to publish exceptionally good papers that would prompt the community to change its view regarding the stature of the journal. I soon realized that it was not enough to publish good papers, which *JAIS* editors had been doing for long anyway—in fact, *JAIS* had published some excellent papers, and many of them had been recognized as being among the Best IS Papers of the year by the AIS Senior Scholars. For *JAIS* to be universally considered a leading journal by members of the discipline, and for researchers to consistently submit their best work to the journal, we had to ensure that they would receive due credit, which means their universities or departments would need to formally recognize the quality and stature of the journal.

Meanwhile, to further complicate matters, there was also a rising trend toward using the “impact factor” (sometimes solely!) as a yardstick for evaluating journals. *JAIS* did not have a particularly impressive impact factor then. Furthermore, I came to understand that journals “lists” published by different organizations appeared to have a huge say in determining the reputation and stature of journals. Finally, many

countries had their own national lists, and a large proportion of North American universities maintained their own lists of journals that were considered “elite,” “Tier 1,” “A+,” and so on.

With the help of a number of willing supporters—most notably the AIS Presidents, Helmut Krchmar, Jae Kyu Lee, Jason Thatcher, Matti Rossi, TP Liang, and Alan Dennis, whose terms overlapped with my term as EIC, and the AIS VPs of Publications Virpi Tuunainen followed by Carol Saunders, as well as many others, notably Michael Barrett, Dubravka Cecez-Kecmanovic, Jens Dibbern, Bob Galliers, Joey George, Elena Karahanna, Joe Nandhakumar, Matt Nelson, Radhika Santhanam, Rajiv Sabherwal, Sumit Sarkar, Sia Choon Ling, and Viswanath Venkatesh—we started to make some progress with respect to making a case for *J AIS* to be placed highly in the different lists. A number of other prominent scholars in the discipline, many of them members of the *J AIS* Advisory Board or the Editorial Board, also contributed to enhancing the stature of the journal at their own universities and in their own research networks. We had earlier expanded the editorial board to include many prominent and promising scholars from around the world to reflect the journal’s truly global nature.

Several interesting special issues were commissioned and published in this period (e.g., those related to blockchain, Bright society, ICT4D, environmental sustainability, open innovation, and neuroIS), to ensure that the journal’s coverage remained current and balanced. Furthermore, to allow authors some freedom in reflecting on important issues related to our community, theorizing, methodology, and emergent topics, *J AIS* published a series of informative editorials. In addition, to ensure that *J AIS* is well-rounded and of interest to the entire IS community, we have published a variety of work, including policy papers (edited by John King), interdisciplinary/path-breaking papers (edited primarily by Varun Grover), research perspectives (edited by Allen Lee and Dirk Hovorka), review and theory development papers (edited by Dorothy Leidner), economics of IS papers (primarily edited by Kenny Cheng), design research papers (primarily edited by Jeffrey Parsons and Sandeep Purao), and data analytics papers (primarily edited by Roger Chiang and Sudha Ram).

An issue that I was surprised to learn about was that because *J AIS* is an online journal, some deans and senior faculty of other disciplines were reluctant to accept it as a leading journal for business schools. Also, it was expected that *J AIS* papers, once printed, would look like papers in well-known rigorous academic journals to be

credible to tenure and promotion committees, in addition to being aesthetically pleasing to read online for readers around the world. To this end, Prabuddha De, Matti Rossi, Ulrike Schultze, Indranil Bardhan, Elena Karahanna, Jason Thatcher, Elizabeth Baker, and I formed a task force that came up with the look and feel of the journal that you see today.

Partly owing to this multipronged effort, the reputation of *J AIS* and its widespread acceptance has undoubtedly risen. I dare say that most IS scholars today would not disagree with the assertion that *J AIS* is among the top three or four mainstream journals in the discipline. The impact factor is currently decent (>3), which appears to meet the approval of many of those interested in this metric, and the journal has been doing quite well in surveys of disciplinary members and on many national rankings. However, the journal has yet to be listed in the Financial Times (FT) and University of Texas Dallas (UTD) lists—I am certain that initiatives are underway to change this in the future. For scholarly purists who find such obsession with rankings and reputation irritating and pointless, I would like to emphasize that I feel the same way, and all of these initiatives were undertaken *in addition* to the best efforts by the incredibly dedicated senior editors to develop and publish the most outstanding papers in the discipline.

I also believe that, with very few exceptions, the authors have found the *J AIS* review process to be constructive and charitable, even if demanding. This is perhaps reflected in the high Net Promoter Score for the journal<sup>1</sup>. Timeliness of the review process has been decent in most cases, but it is an area that needs to be further improved.

Being the *flagship journal* of the AIS, it was important that we published work that reflected the research achievements, challenges, and aspirations of the *entire IS community*, irrespective of authors’ methodological, theoretical, or philosophical orientation. As a journal, *J AIS* also sought to be inclusive in defining what can be considered to be “IS research.” Personally, I did not see it my role to impose a specific definition of IS or to prioritize a certain theoretical or methodological perspective as part of my strategic leadership. For me, giving voice to the various subcommunities in the discipline was far more important.

In the following section, we present an overview of work published in *J AIS*. The heavy lifting for the section has been done by my co-authors.

<sup>1</sup> See results of the Inaugural “Senior Scholar Journal Review Quality Survey” (2018) on the AIS website at: [https://aisnet.org/page/SeniorScholarSurvey/Senior-Scholars-Journal-Review-Quality-](https://aisnet.org/page/SeniorScholarSurvey/Senior-Scholars-Journal-Review-Quality-Survey.htm?fbclid=IwAR0JEgUocLaMKixhcPyEWsCh8vcPg1QVUJOJS-svSWdzMdmQxU23eoQhM90)

[Survey.htm?fbclid=IwAR0JEgUocLaMKixhcPyEWsCh8vcPg1QVUJOJS-svSWdzMdmQxU23eoQhM90](https://aisnet.org/page/SeniorScholarSurvey/Senior-Scholars-Journal-Review-Quality-Survey.htm?fbclid=IwAR0JEgUocLaMKixhcPyEWsCh8vcPg1QVUJOJS-svSWdzMdmQxU23eoQhM90)

## 2 What Did We Publish During this Period?

The field of information systems changes constantly. As a result, the boundaries of IS research continue to expand due to the rapid development of information technology, the acceptance of new research paradigms, the emergence of newer research methodologies and models, the application and development of new theories, and the increasing diversity in researchers' backgrounds. Thus, it is important for IS researchers to keep up with research trends and issues in the field.

The journal is inclusive in many respects, including topics covered, theory, epistemological and methodological approaches, and geographical scope. In order to inform the IS community about research published in *J AIS*, we conducted a review of articles

published over more than six years. According to Webster and Watson (2002), such periodic introspection can be useful and has the potential to improve the progress of research in the IS field.

Meta-analysis and systematic review are useful approaches to curate information for further analysis. While there are shades of difference between the two terms, many authors use them synonymously. According to Stemler (2001), meta-analyses enable researchers to navigate a massive knowledge base with relative ease and systematic methods. Similar to Palvia et al. (2004) and Palvia et al. (2017), we systematically examine the papers published in *J AIS* between 2013 and 2019 along the following attributes: research topics, research methodologies, research approaches, and theories. In addition, we also examine other attributes such as author-related information.

**Table 1. Paper Attributes Examined**

Attribute	Definition / Content
Main topic	The paper's primary interest as emphasized in its research questions and/or on which the theoretical framework was developed.
Author country	<ol style="list-style-type: none"> <li>1. Countries were based on the author's affiliations.</li> <li>2. Up to five authors and their countries were coded.</li> <li>3. If one author named more than one country (a rare occurrence), all countries were included.</li> </ol>
Focus on outcomes in the study	<ol style="list-style-type: none"> <li>1. Instrumental only</li> <li>2. Humanistic only</li> <li>3. Both</li> </ol>
Social/technical emphasis	<ol style="list-style-type: none"> <li>1. Predominantly social</li> <li>2. Predominantly technical</li> <li>3. Both social and technical</li> </ol>
Research methodology	<ol style="list-style-type: none"> <li>1. Qualitative (e.g., case study, interview, ethnography)</li> <li>2. Quantitative behavioral (e.g., survey, experiment)</li> <li>3. Design science study</li> <li>4. Modeling</li> <li>5. Econometric</li> <li>6. Other (e.g., conceptual, commentary, literature review, meta-analysis)</li> </ol>
Data source	<ol style="list-style-type: none"> <li>1. Primary data</li> <li>2. Secondary data</li> <li>3. Not available</li> </ol>
Country of investigation	<p>Where the study was conducted.</p> <ol style="list-style-type: none"> <li>1. If two or more countries were involved and they are cross-continent, it was coded as "worldwide."</li> <li>2. If no specific country was mentioned, it was coded as NA.</li> </ol>
Theory	The perspective on which the study is based on. There may be more than one theoretical perspective. A maximum of three theories were considered for each article.
Research approach	<ol style="list-style-type: none"> <li>1. Positivist</li> <li>2. Interpretive</li> <li>3. Critical</li> <li>4. None</li> </ol>

**Table 2. Papers Analyzed by Years**

Years	Number of Papers Analyzed
2013	28
2014	32
2015	29
2016	25
2017	32
2018	37
2019	41
<b>TOTAL</b>	<b>224</b>

In the next subsection, a description of the review methods used in this study is presented. It includes a description of the various attributes that were captured and the coding scheme. In the following subsection, we provide analysis and results from the systematic review that include topics of investigation, author country, research focus, research outcomes, methodology, data source, target country of investigation, theory, and research approach. The subsequent subsection reports on sample results of deeper multidimensional analysis and looks at various patterns. Thereafter, we discuss our findings and some implications.

The total number of papers analyzed between January 2013 and December 2019 is 224. Editorials have been excluded in the analysis. In order to examine which attributes to capture from each paper, we examined analysis in previous studies (Palvia et al. 2015; Sarker, Chatterjee, Xiao, & Elbanna, 2019). The final set of attributes extracted from each paper included the main topic, the study's focus on the type of goals, the relationship between the social and the technical, the research methodology, the data source, sample size, country of investigation, theory or theories used, and the research approach. Table 1 presents the details of each attribute we coded.

## 2.1 Coding

The coding process followed the method introduced by Palvia et al. (2015). Two coders discussed and evaluated the definitions of the classification attributes in several meetings prior, as well as throughout the coding stage. The goal of these meetings was to create a uniform understanding of the classification and purpose of the research and to clarify any ambiguity between coders. Coders were first assigned to code the same 20 papers and, in the second round of coding, another set of 20 papers. Coding attributes included the main topic, study's focus on type of goals, relationship between social and technical perspectives, research methodology, data source, sample size, country of investigation, theories, and research approach. The

attributes were all checked for inter-coder agreement, and the average percentage of commonly coded parameters among coders was calculated. The inter-coder reliability percentage was computed at 86% and 92%, respectively, for the first and second set of 20 papers. This high percentage of the inter-coder reliability demonstrates an acceptable level of conformity between the coders (Weber, 1990). Therefore, each coder subsequently coded 92 papers individually for the remaining 184 papers. The distribution of 224 papers (excluding the editorials) by year is given in Table 2.

## 2.2 Analysis and Results

### 2.2.1 Primary Topics

Among 224 papers, a total of 43 topics were identified. We found the most investigated topics to be *improving IS research* (i.e., issues in conducting research; 33 papers), followed by *privacy and security* (24 papers), *IS design and development* (19 papers), *health IS* (14 papers), *IS usage/adoption* (13 papers), and *e-commerce* (10 papers).

Papers that addressed the broad area of *improving IS research* generally discussed how research in the information systems discipline could be further developed—e.g., how to better use the semantic differential scale in IS research (Verhagen, Hooff, & Meents, 2015); how IS research contributes to the scholarship of cyberprojects (Kirsch & Slaughter, 2013); and intradisciplinary and interdisciplinary approaches in IS research (Tarafdar & Davison, 2018). Some of the papers investigated the possibility of applying underutilized or promising research methodologies in future studies—e.g., guidelines for conducting mixed-methods research (Venkatesh, Brown, & Sullivan, 2016) and design science research in doctoral projects (Cater-Steel, Toleman, M. & Rajaeian, 2019).

The next most investigated topic in *J AIS* during this time period was *privacy and security*. This topic

accounted for 24 (11%) of the papers. Beyond these, a health IS paper also discussed the privacy of personal health information in virtual health communities (Kordzadeh & Warren, 2017). Papers focusing on privacy and security examined intellectual property issues, such as unauthorized file sharing and digital piracy, fake website detection tools, online customer fraud, organizational violations, neuro-IS, phishing, smart meter technology, state-led cyberattacks, information goods, patient privacy, and how leadership affects IT security policy compliance.

Nineteen papers (8%) examined the topic of *IS design and development*. These papers investigated information infrastructure, carbon management systems, agile IS development practices in large-scale IT projects, knowledge sharing, information services development, IT project status reporting, requirement mining system, job satisfaction in agile development teams, improving requirements elicitation, systems development projects, and ICT-enabled openness in bureaucratic organizations. One study regarding organizational design discussed the contribution of IS in designing business models. Among these 19 papers, 9 papers concentrated on information infrastructure. These studies examined information infrastructure innovation, designing generic systems in the local context, the role of architecture in information infrastructure evolution, sensor data interpretation, innovating financial information infrastructures, formation of a healthcare information infrastructure, and growth tactics in information infrastructure.

*Health IS* comprised the main subject of 14 papers (6%), and it was also the secondary topic of another 7 papers that dealt with information infrastructure, IT value creation, innovation, and privacy and security. Health IS papers focused on agility in social enterprises, use of IT in healthcare institutions, stakeholder management, privacy in virtual health communities, role of physicians in patients' privacy decisions, online health information use by people with physical disabilities, accountability, sociomaterial practices in less developed countries, emergency response, healthcare information infrastructure, and mobile health.

Thirteen studies focused on the issue of *IS usage/adoption*. One study on privacy and security also examined technology adoption. These papers investigated extrinsic and intrinsic motivators, contribution of sociability, adoption of personal technologies, postadoption issues, functional affordances and symbolic expressions, mindfulness in technology adoption and continuance, and online consumer support. Three studies proposed adoption models: a hedonic-motivation system adoption model (Lowry et al., 2013), a multimotive information systems continuance model (Lowry et al., 2015), and

an integrated temporal model of belief and attitude change (Xu et al., 2017).

*E-commerce* was the main topic of 10 studies. These papers examined online recommendation systems in the business-to-consumer context, development of multisided platforms, online group purchases, electronic auctions, e-commerce product networks, advertising in online retailing, performance of online sellers, and IT-enabled social features in online peer-to-peer businesses for cultural goods.

*Societal issues* were examined in 9 studies that investigated IT-mediated elections, technostress, trust in technology, cyberbullying victimization in social networking sites, detecting cyberbullying messages, fostering societal transformations, and specialized IS for the digitally disadvantaged. Two studies investigated IT and agility in social enterprises such as children's research hospital and IT-enabled community empowerment in crisis response.

Nine papers dealt with *online platforms*. They investigated corporate blogosphere, online waiting experience, C2C sharing platforms, group-buying platforms, online petitions, online game platforms, charity website evaluation, and digital platform leadership.

*Innovation* seems to be an emerging topic reflected by 7 studies that discussed product and service innovation, IS's contribution to technology and innovation management, IT-enabled knowledge creation for open innovation, practices in the newspaper industry, IS innovation in healthcare, use of information systems in innovation networks, and information technology-embedded product innovation. Four papers dealt with *organizational design*; health IS, IT-business alignment, and IS design and development were also developed within the umbrella of innovation.

*Knowledge management* also received attention in *J AIS* with 7 studies devoted to this topic. These papers examined online learning conversations, organizational knowledge-sharing mechanisms, ethical considerations in knowledge management, knowledge transfer ecosystems, knowledge-centric examination of signaling and screening activities, and affect infusion and detection using faces in computer-mediated knowledge sharing.

Other topics included crowdsourcing, IT investments, value cocreation, neuro-IS, online reviews, business intelligence/data analytics/expert systems, social media, blockchain, green IT, and virtual reality, among others. All 43 topics are listed on the word cloud in Figure 1.



Figure 1: Topics Covered

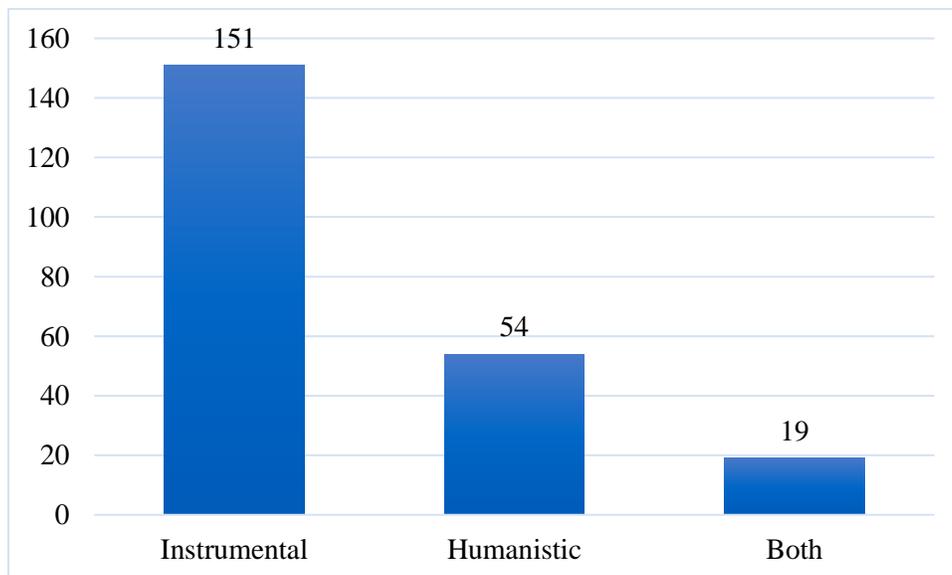


Figure 2. Focus on Outcomes

### 2.2.2 Focus on Outcomes or “Dependent Variables”

Our analysis sought to investigate whether the authors of the 224 *J AIS* papers we examined focused on instrumental outcomes (such as efficiency and productivity) or humanistic outcomes (such as well-being, equality, and freedom), as detailed by Sarker et al. (2019). If the papers focused on both outcomes, they were coded as “both.” Of the 224 papers, 151 (67%) focused on instrumental outcomes, 54 (24%) focused on humanistic outcomes, and 19 (8%) focused on both types of outcomes (see Figure 2). A recent review by Sarker et al. (2019) of 991 papers published in the two premier IS journals, *MIS Quarterly* (MISQ) and *Information Systems Research* (ISR), from 2000 to 2016, revealed that a majority of these studies (91%) focused exclusively on instrumental outcomes whereas only 7% considered both humanistic and instrumental outcomes. The remaining 2% of studies addressed humanistic outcomes alone. It is interesting to see that, for whatever reason, papers published in *J AIS* reflect greater attention to humanistic outcomes.

### 2.2.3 Social and Technical Perspectives

With regard to the enactment of the sociotechnical character of the framing of IS research, Sarker et al. (2019) categorized the relationship between social and the technical into six different types: predominantly social, social imperative on the technical, social and technical as additive antecedents to outcomes, social and technical interactive to produce outcomes, technical imperative on the social, and predominantly technical. In our analysis, we evaluated the 224 papers

based on three classifications by merging four types as a blend of both social and technical perspectives. Therefore, the types based on the relationship between social and technical perspectives are classified as predominantly social, predominantly technical, and social and technical together.

Among papers that could be coded according to this dimension, 75 papers (33%) focused almost exclusively on the social aspects related to the phenomenon of interest, 53 papers (24%) focused almost solely on how to develop or improve technical components, and 96 papers (43%) focused on both social and the technical perspectives (see Figure 3).

### 2.2.4 Theory

Of the 224 papers, 50 of them (22%) did not use any theory, 97 papers (43%) utilized one theory, 59 papers (26%) utilized two theories, and 18 papers (8%) utilized three or more theories. There is a high diversity of theories utilized in the papers. The word cloud in Figure 4 shows the theories used by at least two papers. The technology acceptance model (TAM) and the theory of planned behavior (TPB) still attract much attention and top our list with 5 papers each. Other theories used by 4 or more of the papers we examined include social identity theory, resource-based view, contingency theory, and information processing theory. Note that most theories in IS research published during this time period in *J AIS* originate from psychology (36%), economics (15%), organizational theory (11%), and sociology (11%). Only 8% of the theories we identified came directly from the IS field.

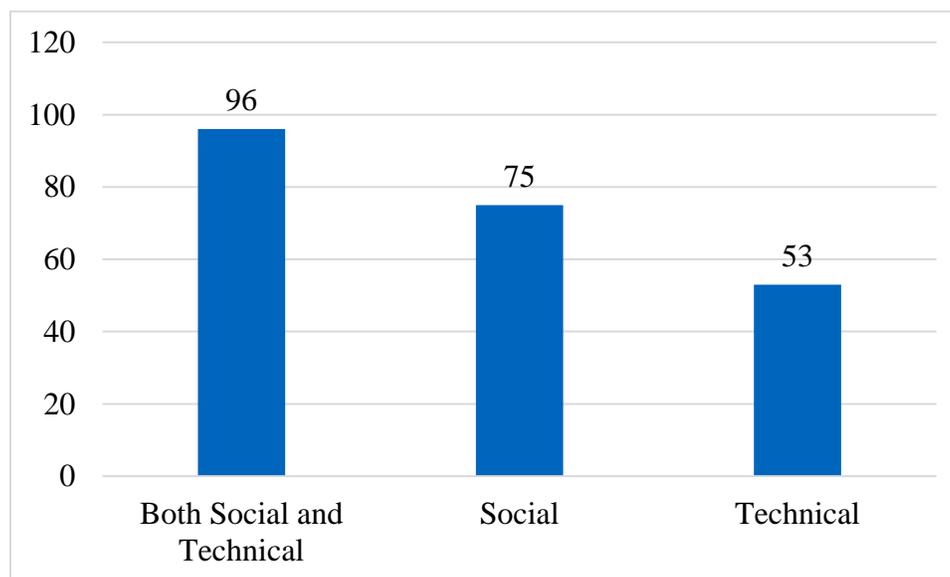


Figure 3. Social and Technical Emphasis in Papers



Figure 4: Theories Used

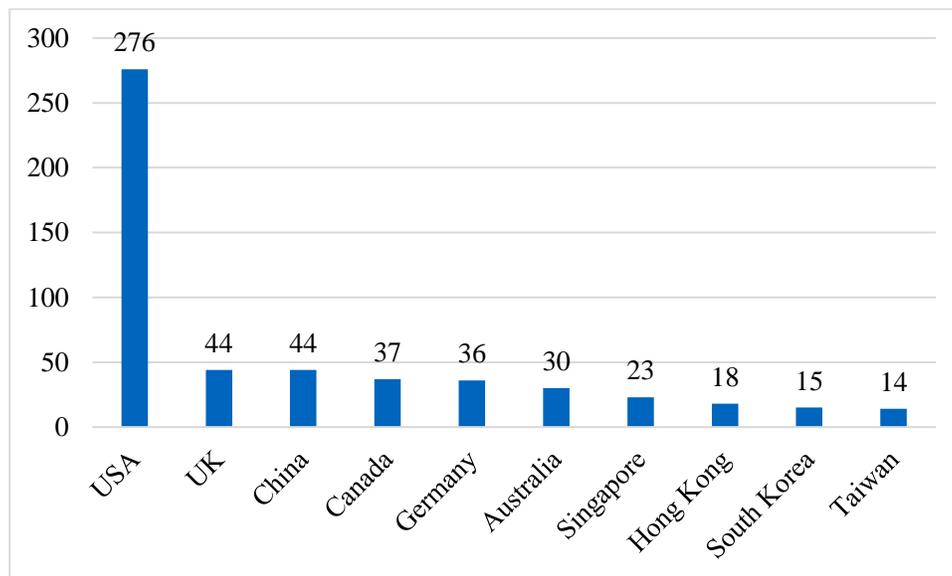


Figure 5. Top 10 Author Countries

### 2.2.5 Author Countries

Figure 5 shows the number of author countries, based on university affiliation. Not surprisingly, about 44% of the authors of the papers we included had US affiliation. China and the UK shared second place with 44 papers each during the six-year period. Other top countries included Canada, Germany, Australia,

Singapore, Hong Kong, South Korea, and Taiwan (See Figure 5).

### 2.2.6 Research Methodology

Figure 6 presents the IS research methodologies most frequently used in our set of 224 papers. Quantitative behavioral research methods (e.g., survey, experiment) were the most commonly used, with 85 papers (38%).

This is in line with general IS research as reported by Palvia et al.'s (2015) findings that 38% of IS research papers used either surveys or experiments. The qualitative method (e.g., case study, interview, ethnography) emerged as the second most popular methodology and was used in 59 papers (26%). Modeling also had a respectable showing with 16 papers (7%); however, design science research published during this period was surprisingly low, given that *J AIS* has traditionally been seen as a friendly outlet by the design community. However, it is worth noting that while five studies utilized design science, four conceptual papers discussed the use and improvement of design science research. A mix of other methodologies constituted the remaining papers

(27%). These included: conceptual papers, commentaries, literature reviews, meta-analyses, and content analysis.

### 2.2.7 Research Approaches

Figure 7 presents the percentage of IS research approaches used (previously also referred to as “research paradigms”) in our group of 224 papers. The most prominent research approach was positivist with 120 papers (54%). Sixty-five papers (29%) assumed an interpretive stance in their studies. Interestingly, we also identified 5 critical studies in our dataset; in general, IS research has been perceived as slow in utilizing the critical research approach.

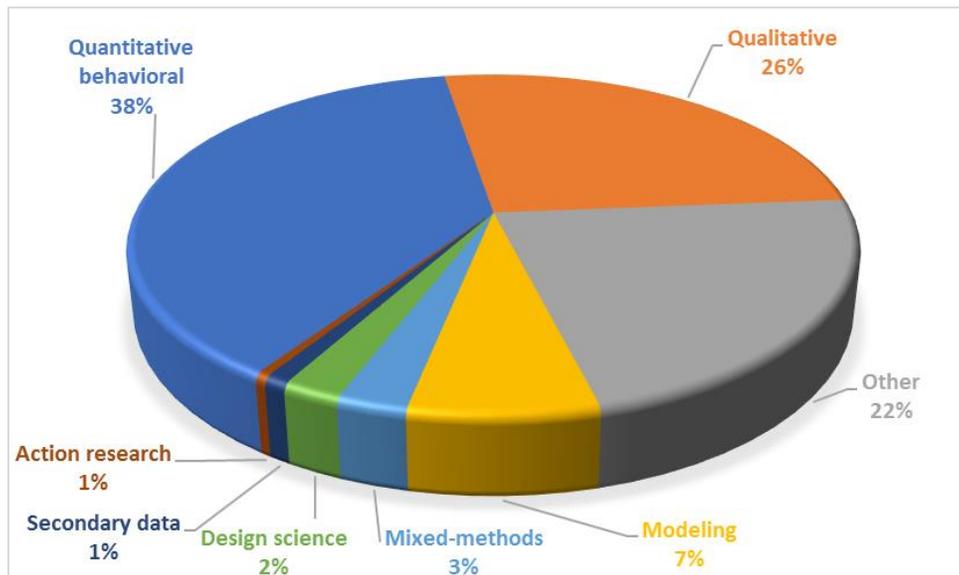


Figure 6. Research Methodologies

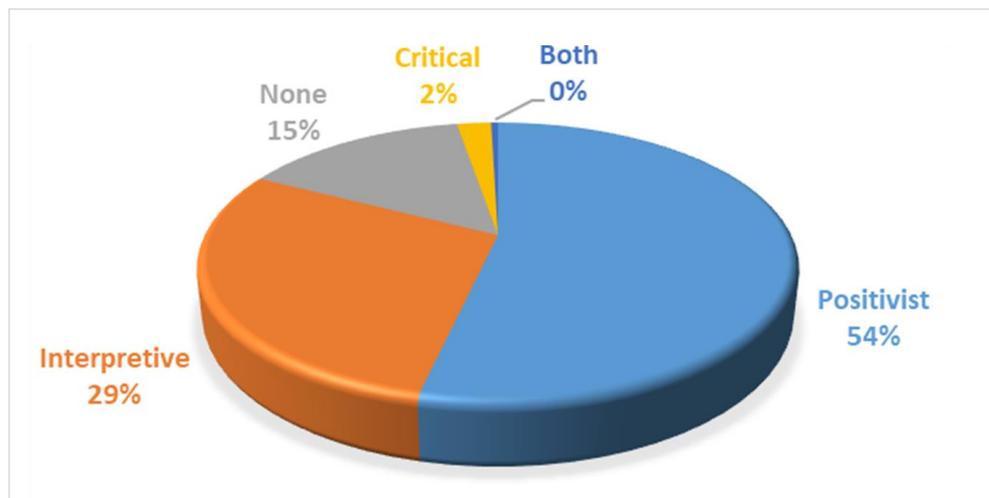


Figure 7. Percentage of Papers by Research Approach

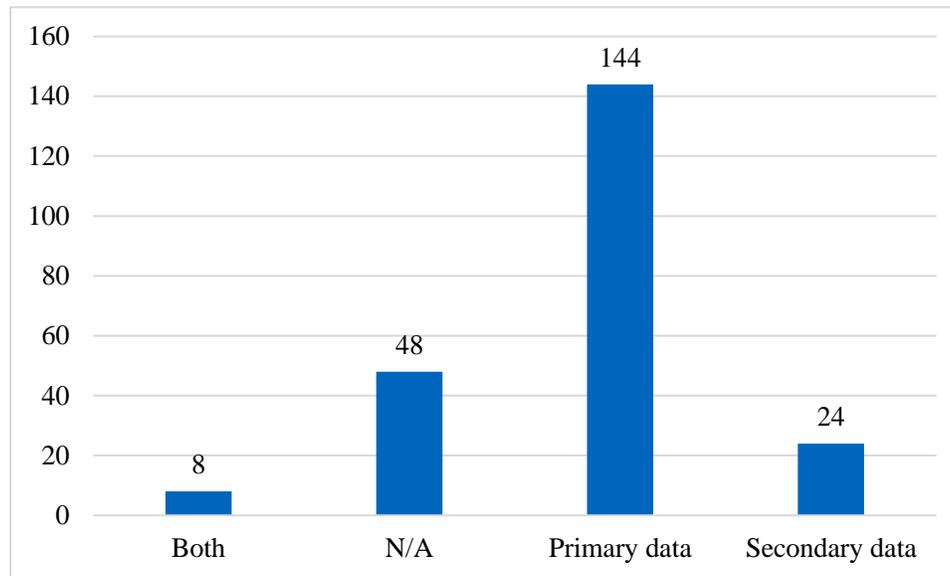


Figure 8. Data Sources

### 2.2.8 Data Sources

Figure 8 shows the types of data sources for the 224 papers. Primary data dominated this category with 144 papers (64%). Only 24 papers (11%) used secondary data, and 8 papers (3.5%) used both data sources. 48 papers (21%) did not utilize any data.

### 2.2.9 Geographic Focus of Investigation

Figure 9 displays the number and percentage of papers based on the continents where data were collected. Although 84 papers (38%) did not mention their data source, most of the geographically identified data used in our set of 224 papers came from North America (57 papers from the US and 4 from Canada for a total of 61 papers). The US was also included in 3 papers that used data from another country (India, South Korea, and the UK). We labeled these papers as “worldwide,” i.e., having data from two or more countries on different continents.

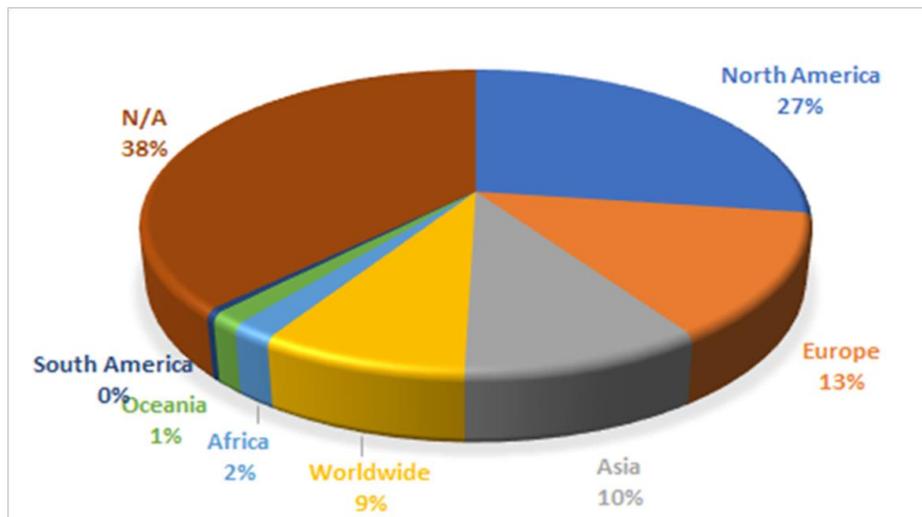
After North America, the most common data sources were Europe (30 papers) and Asia (22 papers). There were a large number of papers (12) that used data from China alone. Beyond these papers, the Asian subcategory included papers using data from Hong Kong (3 papers), India (1 paper), Singapore (2 papers), South Korea (2 papers), Taiwan (1 paper), and Thailand (1 paper). Studies using data from South America, Africa, and Oceania were scarce, represented by Brazil (1 paper), Ghana (1 paper), Kenya (2 papers), Morocco (1 paper), Australia (2 papers) and New

Zealand (1 paper). However, worldwide studies also included data from Brazil, Mexico, Peru, Ecuador, India, Vietnam, and Malawi.

### 2.2.10 Multidimensional Analysis: Topic and Theory

Our findings illuminating the relationships between various combinations of attributes offer many interesting insights. We examined the relationship between the main topics and the theories utilized. In order to contain the analysis, we examined the five most common topics, i.e., improving IS research, privacy and security; IS design and development; health IS; and IS usage and adoption.

As might be expected, given the nature of papers on the *improving IS research* topic, almost half of the papers we examined (16 out of 33) did not use any theories. The other half of the papers engaged with a variety of theories and we were unable to identify any dominant theoretical paradigm. For example, papers employed system-related theories (e.g., work system theory, work system life cycle model, process theory), the Kuhnian paradigm concept, classification theory, measurement theory, and theories from the fields of IS (e.g., technology acceptance model), psychology (e.g., deterrence theory, information processing model, theory of reasoned action, theory of planned behavior), economics (e.g., rational choice theory), sociology (social capital), mathematics (e.g., graph theory, representation theory), organizational theory (e.g., contingency theory), and history (e.g., change theory).



**Figure 9. Percentage of Papers by Regions from which Data were Collected**

The 24 privacy and security papers we examined used theories from the disciplines of psychology (e.g., fear appeal theory, protection motivation theory, impression formation theory, privacy calculus model, social cognitive theory) and criminology (e.g., social bond theory, neutralization theory, strain theory, social disorganization theory).

The 19 papers in IS design and development we identified utilized a wide variety of theories including grounded theory, actor-network theory, and system-related theories (e.g., systems theory, persuasive system design theory, theories for generic systems, theory of nonlinear dynamic systems).

The 14 papers in health IS we examined utilized theories from psychology (e.g., affordances theory, privacy calculus model, regulatory focus theory), economics (e.g., rational choice theory), sociology (e.g., social capital theory, practice theory, social constructionism), social sciences in general (e.g., activity theory, structuration theory), information systems (e.g., IS success model), and business ethics (e.g., stakeholder theory).

The 13 studies we found that discussed IS usage and adoption utilized theories from mainly two disciplines: IS and psychology. The IS theories included the technology acceptance model, the unified theory of acceptance and use of technology, task-technology fit, and the modified IS success model (Wixom & Todd,

2005). The psychology theories included social cognitive theory, social identity theory, motivation theory, expectation-disconfirmation theory, coping theory, dual-processing theory, and theory of emotion process.

### **2.2.11 Multidimensional Analysis: Topic, Research Methodology, and Research Approach**

Other multidimensional analyses can be conducted to investigate IS research from multiple perspectives. For illustrative purposes,<sup>2</sup> we present a few examples to generate potential insights. Two charts (Figure 10) show the research approach and methodology used for two research topics (IS design and the development and IS usage/adoption). Similarly, for e-commerce, the dominant research approach is positivist, and modeling was the most popular research method used in our e-commerce papers. For health IS, the interpretive approach and qualitative methods were the most commonly used approaches. For IS design and development research, the interpretive approach was dominant and qualitative and quantitative methodologies were employed about equally. IS usage/adoption research in the papers we examined used quantitative behavior methods and the positivist approach, like the papers devoted to privacy and security and those devoted to societal issues.

<sup>2</sup> Many interesting insights can be gained from such multidimensional analyses but we are limited by space considerations in one single paper. However, we will entertain requests from readers, editors, and reviewers for

further analyses and studies to be disseminated via additional outlets.

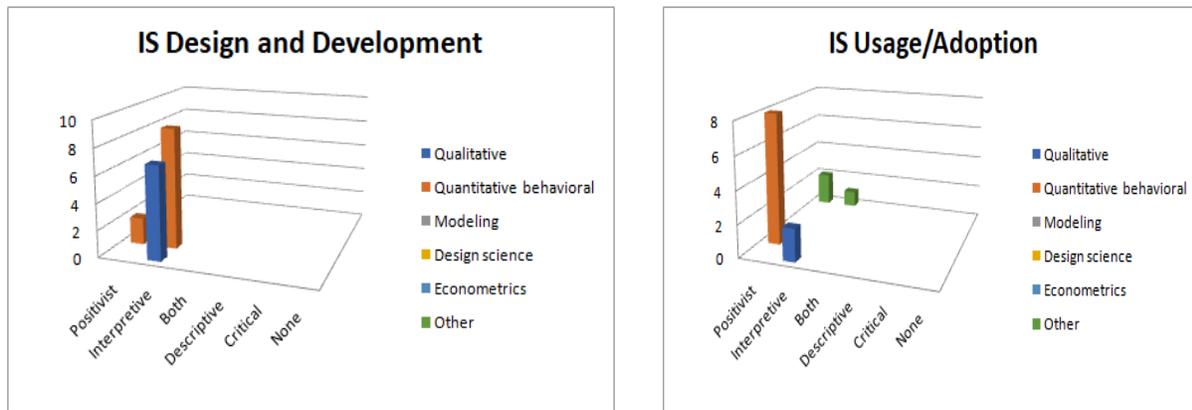


Figure 10. Research Methodology and Approaches for Two Topics

## 2.3 Discussion

In our analysis of 224 papers, the top ten topics were improving IS research, privacy and security, IS design and development, health IS, IS usage/adoption, e-commerce, societal issues, online platforms, innovation and knowledge management. Although there are many similarities between our set of papers and those examined in Palvia et al.'s (2015) review of a large set of papers published between 2004 and 2013, we also found differences. These differences can be attributed to differences specific to *J AIS* itself, as well as to the evolving nature of IS research. In Palvia et al.'s review, e-commerce topped the list, followed by IS usage/adoption, IS research, and security and privacy. While these also represent top topics in our paper set, the top ten topics of the *J AIS* paper set are rounded out by other topics reflecting the latest trends in IS—e.g., privacy and security, innovation, and health IS. While these topics also appear in the Palvia et al. review, they are much less prominent. For example, Palvia et al.'s ranks health IS and innovation as the 14th and 23rd most popular topics, respectively. Another difference between the two studies is related to the research approach. For example, the *J AIS* paper set included a higher percentage of interpretive studies (29%) than Palvia et al.'s paper set (22%). Overall, however, the *J AIS* paper set reflects general IS research topic trends.

Another important finding concerns the number and diversity of theories utilized in the *J AIS* papers we examined. *J AIS* has a reputation of emphasizing theoretical engagement in research, which is reflected in our review of the papers and in the theories used. According to Popper (2005, p. 37), "Theories are nets cast to catch what we call 'the world'; to rationalize, to explain and to master it. We endeavor to make the mesh even finer and finer." It is worth mentioning that despite its positive orientation toward theory, the journal continues to invite and publish discussions and

debates about theory (for example, see vol. 20, issue 9; also vol. 19, issue 5) rather than simply accepting the nature and importance of theory as a given.

## 2.4 Limitations

We would like to acknowledge that a detailed review of 224 papers requires a significant commitment of time and effort and may be prone to some amount of error. Although coding differences between the two coders were minimized through engaging in several consultations and conducting intercoder reliability tests, some errors in this regard may remain. Nevertheless, we feel fairly comfortable in claiming that the overall patterns shown are accurate. We also acknowledge that additional analysis could have been conducted and reported, e.g., trends over time and more multidimensional analyses. Space considerations limited us from doing this. However, we are open to such requests from our readers.

This review of *J AIS* points primarily to the fact that the journal has an open stance toward topics and theoretical and methodological approaches, and that it strives to be a truly global journal. Our review also demonstrates that the research in the IS community not only concerns instrumental outcomes but also humanistic outcomes. Furthermore, while we identified some tendency toward papers that focus solely on technical or social (with technology as the context) perspectives, respectively, we did find that a good proportion of work remains at least somewhat true to the idea that IS work is sociotechnical in nature and blends the technical and the social in a number of interesting and insightful ways.

## 3 Reflections: Looking Back... and a Final Bow

As we move forward in a changing environment in which virtually every discipline appears to be engaged

with some form of information technology, I hope that as a collective, we pause to think about two key issues: (1) *Our discipline's position in the world* (academic and/or practice) and how we might contribute to a discipline that promotes and celebrates diversity but is also coherent, that is expansive yet distinctive, and that is pragmatic with respect to priorities of businesses yet maintains a high ethical stance. My colleagues and I have offered some reflections on the nature of the IS discipline in a recent paper (Sarker et al. 2019) and have argued for the need for an "axis of cohesion." Irrespective of whether readers find any merit in our perspective, we urge the community and future authors to consider the dilemmas and challenges posed by this new era of ubiquity, data abundance, and enormous distributed computing power, and contribute to the critical discourse on the nature of scholarship we should pursue and on the types of work our journals should seek to publish. (2) *Our journal review process tends to privilege the sophistication of theoretical discourse and methodological wizardry over the mastery of phenomena that we want to know about.* Often times, successful (accepted or published) manuscripts on any topic (say, security, blockchain, cloud computing, or big data) say little that is novel, substantive, or meaningful about the topics themselves. Again, many may disagree with this critique, but all we ask is that *the actual understanding of the IS issue* be given at least as much importance as all of the other requirements of producing a good paper.

To conclude, *JAIS* is a key asset of our discipline and it has reached this point because of the past editors in chief, the senior editors and editorial board members, the reviewers, the readers and, most notably, the authors. It is the global IS community that has helped develop and sustain the journal. The level of support

from the AIS and its key officers as well as from many advisory board members and editorial board members has made a huge difference over the last six years. During my two terms, the managing editors Tanya Beaulieu, Xiao Xiao, and Elizabeth Baker have made enormous contributions, sometimes at significant personal cost, to the smooth running of the journal's operations and to support authors, reviewers, and editors. In addition, I should mention that Suti Chatterjee was always available to step in as an emergency reviewer and, when needed, as a guest senior editor. The *JAIS* workshops at ICIS and PACIS have been successful because of the organizers, mentors, authors, panelists, and keynote speakers including Varun Grover, Ola Henfridsson, Allen Lee, Dorothy Leidner, Fred Niederman, Suzanne Rivard, and V. Venkatesh. The dean of the McIntire School of Commerce at the University of Virginia has also provided generous support to the journal to help in the production process. Obviously, there are many more than those I have been able to individually acknowledge here whose support was extremely valuable.

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## References

- Cater-Steel, A., Toleman, M. & Rajaeian, M. M. (2019). Design science research in doctoral projects: An analysis of Australian theses. *Journal of the Association for Information Systems*, 20(12).
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Hariharan, A., Adam, M. T. P., Lux, E., Pfeiffer, J., Dorner, V., Müller, M. B., & Weinhardt, C. (2017). Brownie: A platform for conducting NeuroIS experiments. *Journal of the Association for Information Systems*, 18(4), 264-296.
- Kirsch, L. J., & Slaughter, S. A. (2013). Managing the unmanageable: How IS research can contribute to the scholarship of cyber projects. *Journal of the Association for Information Systems*, 14(4), 198-214.
- Kordzadeh, N., & Warren, J. (2017). Communicating personal health information in virtual health communities: an integration of privacy calculus model and affective commitment. *Journal of the Association for Information Systems*, 18(1), 45-81.
- Léger, P. M., Sénécal, S., Courtemanche, F., Ortiz de Guinea, A., Titah, R., Fredette, M., & Labonte-LeMoine, É. (2014). Precision is in the eye of the beholder: application of eye fixation-related potentials to information systems research. *Journal of the Association for Information Systems*, 15(10), 651-678.
- Lowry, P., Gaskin, J., Twyman, N., Hammer, B., & Roberts, T. (2013). Taking “fun and games” seriously: Proposing the hedonic-motivation system adoption model (HMSAM). *Journal of the Association for Information Systems*, 14(11), 617-671.
- Lowry, P., Gaskin, J., & Moody, G. (2015). Proposing the multimotive information systems continuance model (MISC) to better explain end-user system evaluations and continuance intentions. *Journal of the Association of Information Systems*, 16(7), 515-579.
- Sarker, S., Chatterjee, S., Xiao, X., & Elbanna, A. (2019). The sociotechnical axis of cohesion for the IS discipline: Its historical legacy and its continued relevance. *MIS Quarterly*, 43(3), 695-719.
- Palvia, P., Leary, D., Mao, E., Midha, V., Pinjani, P., & Salam, A. F. (2004). Research methodologies in MIS: An update. *Communications of the Association for Information Systems*, 14, 526-542.
- Palvia, P., Kakhki, M. D., Ghoshal, T., Uppala, V., & Wang, W. (2015). Methodological and topic trends in information systems research: A meta-analysis of IS journals. *Communications of the Association for Information Systems*, 37, 631-650.
- Palvia, P., Chau Y.K. P., Kakhki, M. D., Ghoshal, T., Uppala, V., & Wang, W. (2017). A decade plus long introspection of research published in Information & Management. *Information & Management*, 54(2), 218-227.
- Popper, K. (2005). *The logic of scientific discovery*. Abingdon, UK: Routledge.
- Stemler, S. (2001). An overview of content analysis: Practical assessment, *Research & Evaluation*, 7(17), 137-146.
- Tarafdar, M., & Davison, R. M. (2018). Research in information systems: Intra-disciplinary and inter-disciplinary approaches. *Journal of the Association for Information Systems*, 19(6), 523-551.
- Weber, R. P. (1990). *Basic Content Analysis*. Thousand Oaks, CA: SAGE.
- Webster, J., & Watson, R. T. (2002). Analyzing the past to prepare for the future: Writing a literature review. *MIS Quarterly*, 26(2), xiii-xxiii.
- Wixom, B. H., & Todd, P. A. (2005). A theoretical integration of user satisfaction and technology acceptance. *Information Systems Research*, 16(1), 85-102.
- Xu, J., Abdinnour, S., & Chaparro, B. (2017). An integrated temporal model of belief and attitude change: An empirical test with the iPad. *Journal of the Association for Information Systems*, 18(2), 113-140.
- Venkatesh, V., Brown, S. A., & Sullivan, Y. W. (2016). Guidelines for conducting mixed-methods research: An extension and illustration. *Journal of the Association for Information Systems*, 17(7), 435-495.
- Verhagen, T., Hooff, B. V. D., & Meents, S. (2015). Toward a better use of the semantic differential in IS research: An integrative framework of suggested action. *Journal of the Association for Information Systems*, 16(2), 108-143.

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