The Effects of the Quantification of Faculty Productivity: Perspectives from the Design Science Research Community

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Abstract:

In recent years, efforts to assess faculty research productivity have become more focused on the measurable quantification of academic outcomes. For benchmarking academic performance, different ranking and rating lists have been developed that define what is regarded as high-quality research. While many scholars in IS consider lists such as the Senior Scholar's Basket (SSB) to be good guidance, others who belong to less-mainstream groups of the discipline could perceive these lists as constraining. We analyze the perceived impact of the SSB on Information Systems (IS) academics working in Design Science Research (DSR), and in particular how it affected their research behavior. We found the DSR community felt a strong normative influence from the SSB. A content analysis of the SSB shows evidence that some of the journals in the SSB have become more accepting of DSR. We noted the emergence of papers in the SSB that outline the role of theory in DSR and describe DSR methodologies, indicating that the DSR community is rallying to describe what to expect from a DSR manuscript to the broader IS community, and to guide the DSR community on how to organize papers for publication in the SSB.

Keywords: Senior Scholar Basket, Information Systems Discipline, Research Inquiry, Design Science Research

1 Introduction

Discussions about research productivity are not new in academic circles. Historically, faculty evaluation processes often relied on qualitative assessments such as peer evaluation, chairs writing annual reviews, or field-based benchmarking of individuals (Centra, 1977). For example, when awarding tenure or promotion, many universities continue to solicit external reviews of a faculty members' performance relative to his/her peers. More recently, quantitative metrics for evaluating productivity and impact have become more pervasive. For example, Harzing's Publish or Perish and Google Scholar[1] provide access to raw citation counts and calculated scores such as the H-index and I-index. Perhaps due to the greater availability of quantifiable data, a growing literature focuses on developing and applying metrics for evaluating faculty productivity and journal quality (Lowry, Romans, & Curtis, 2004).

Quantitative comparisons of faculty performance and journal quality have entered the consciousness of various academic disciplines, such as business administration. The corresponding journal ranking lists come in many forms. Differentiated lists of journals, constructed by professional associations, such as the Chartered Association for Business Schools (ABS) or German Economics Association (GEA), are used to identify and rank faculty and university research productivity. Undifferentiated lists of high-quality outlets, constructed by entities such as the Financial Times (FT)[2] or BusinessWeek[3], are used to rank MBA programs. Such rankings have different normative and financial rationales, having implications for institutions, departments, and individuals in terms of reputation, merit pay, tenure and promotion, teaching assignments, PhD and Masters' student application rates, and alumni giving.

The Information Systems (IS) discipline could not exclude itself from the increasing pressure to provide direct social and economic impact with its research. Thus, performance indicators that have not been common in the past are more and more used to measure the productivity of academics given benchmarks or lists (see Katerattanakul, 2005; Lowry et al., 2004) to quantify faculty performance (see Chen et al., 2015; Dennis, Valacich, Fuller, & Schneider, 2006). The Association for Information Systems (AIS) Senior Scholars Basket (SSB) [4] offers a discipline-based view of refereed journals of high standing. Announced in 2007, the AIS SSB identified six journals as high-quality outlets for IS research, including *MIS Quarterly (MISQ)*, *Information Systems Research (ISR)*, *Journal of the Association for Information Systems (JAIS)*, *Journal of Management Information Systems (JMIS)*, *Information Systems Journal (ISJ)*, and *European Journal of Information Systems (EJIS)*. In 2011, the Senior Scholars named *Journal of Information Technology (JIT)* and *Journal of Strategic Information Systems (JSIS)* to the basket.

There are many reasons one might support the development and adoption of a field-specific journal list. First, such a list can serve as guidance and orientation for younger scholars and provide a mechanism to support junior faculty survival in tenure and promotion processes. For example, the Senior Scholars and the AIS have promoted the SSB as a resource for external letter writers to cite when assessing the quality of applicants for jobs, tenure or promotion. Second, such a list can position IS as a diverse discipline in concert with other disciplines such as Computer Science or Management. Third and finally, a field-supported list can serve as a necessary response to scant representation of IS journals on the FT list or in the UT-Dallas research rankings. Based on the SSB list and underscoring this point, Venkatesh constructed an interactive tool that made it easier to assess IS faculty and school productivity by country or globally[5].

Published research on journal lists tends to focus on list construction and justification. IS researchers have questioned the composition of "business journal" lists for making cross-discipline comparisons. For example, Templeton and Lewis (2015) found that some business disciplines, including management information systems, were at a disadvantage in terms of recognition and inclusion relative to other disciplines. Other IS researchers have questioned the methods used to construct and assign value to IS journal lists. For example, after applying journal quality metrics to the AIS SSB, Lowry et al. (2013) identified two tiers of journals, with "MIS Quarterly, Information Systems Research, and Journal of Management Information Systems belonging, in that order, to the highest A+ tier (p. 993-994)." Most

[1] https://scholar.google.com/
[2] http://www.ft.com/cms/s/2/3405a512-5cbb-11e1-8f1f-00144feabdc0.html#axzz44uO6vtGp
[3] http://www.bloomberg.com/news/articles/2008-11-13/full-time-mba-rankingsbusinessweek-business-news-stock-market-and-financial-advice
[4] https://aisnet.org/?SeniorScholarBasket
[5] https://myvisionresearch.com/

questioning has focused on the composition of or value assigned to journals by lists rather than on their implications for scholarship.

In contrast, relatively few conference panels or published studies have questioned how the emergence of a field-based journal list has affected IS scholarship. Although journal list objectiveness and composition are important, we believe it is important to consider the broader normative implications of journal lists in general, and the SSB list in particular, as they pertain to our scholarship. *As a field comprising scholars with many different intellectual heritages and traditions, we ask, how have journal lists influenced our discipline? How have the growing quantification of faculty performance and the construction of journal quality lists influenced our discipline? Are there any unintended consequences?*

Answering such questions is important. Although journal lists can appear to be the product of an objective process, they signal which types of research we value as a community of scholars. Deliberately or not, they are used to evaluate performance formally and informally and to grant status or assign rank within our home departments, across disciplines, and within the broader IS discipline itself. How we evaluate performance affects what we prioritize when socializing students, making life-altering tenure and promotion decisions, and constructing research projects. It defines our field and thereby us.

From a behavioral economics point of view, a list is an example of mechanism design (Hurwicz, 1973). We as a community implement lists as normative guidance and a set of incentives, such as being promoted or receiving tenure when publishing in the journals on those lists. If the mechanism has been aligned with the interests of the community and the individuals, it will work. Community members will play the game to develop their careers. If possible, some will try to circumvent the mechanism to achieve their aim with less effort and burden, but that is also already known and described as the principle agent dilemma (Eisenhardt, 1989). Others will go into opposition and deny the legitimacy of such a list if they cannot or do not want to follow the normative rules implemented by the community to which they belong. Thus, from a behavioral game theory point of view, there are different strategies for how to react to social norms such as journal lists. A community or its representatives, such as senior scholars, try to act in the best interests of the community, “nudge” community members to behave in their own interest, and maximize social welfare.

Furthermore, lists have an influence on careers, whether implicit or explicit, wished or unwished. Once quantification has been applied to something that was previously not countable, it is human nature to count and compare. In other words, data will always beat intuition or gut feelings, independent of how good the data quality is. That is why we as a discipline must be mindful when bringing lists and other normative instruments into existence.

Without a doubt, lists such as the SSB make or break academic careers. Without lists, we might lose the safety fences by which we are recognized as a discipline by other fields. Conversely, if the safety fences are too tight, if they stand too narrow relative to one another, we might risk excluding communities of IS researchers whose natural publication outlets might differ from the mainstream.

In this manuscript, we investigate the impact of lists on IS research, in particular, the impact on the experiences of Design Science Research (DSR) community within the IS field. We chose DSR as a context for evaluating lists’ impact on IS scholarship, because DSR scholars may have different scientific goals than those of other IS researchers. For example, the qualitative data collected at several design science-oriented conferences indicates that our colleagues often have to request external funding in order to do their work, and proj. Many worked in multi-disciplinary teams, which resulted in premier publications in other fields such as biology or computer science.

The primary goal of DSR is the creation of novel socio-technical artifacts (S. Gregor & Hevner, 2013) with a view to realizing alternative futures (Purao, 2013). Though not always labeled as DSR, there is a rich tradition IS scholars conducting technical, design-focused research (Nunamaker Jr & Chen, 1990; Rossi, Henfridsson, Lyytinen, & Siau, 2013; Walls, Widmeyer, & El Sawy, 1992). The DSR community, however, has historically struggled in defining their identity within the broader IS community (R. Baskerville, 2008) and as such might be impacted more by the existence of such lists than other scholars in the field. By considering how DSR researchers perceive the SSB to be affecting the DSR community, we hope to draw lessons and implications more broadly for how journal lists may be affecting scholarship within the IS discipline, and in academia in general.

Our findings indicate that the creation of the SSB list had both positive and negative effects on the DSR community. The DSR community came together and successfully published in SSB journals. However, we

also see evidence of three additional effects. As indicated by our survey results, DSR scholars reported changing their method, a potential indicator that the safety fences are too tight and could be narrowing the field. Second, we found evidence of a broadening of themes in the literature within what was labeled DSR in SSB journals. Finally, we saw evidence of a small increase in the number of publications in SSB journals.

The remainder of this paper is organized as follows. We begin with a brief introduction to Design Science Research. We then present qualitative data collected at several design science-oriented conferences. We present the results of a survey of design science researchers intended to capture their perception of the receptivity and impact of journals both within and outside of the SSB. We present an analysis of DSR research published in the SSB list and compare perceptions with actual publications. We conclude with a discussion of the impact of the SSB list on DSR research.

2 Design Science Research

DSR focuses on socio-technical artifacts (S. Gregor & Hevner, 2013) that solve real-world problems. The primary goal of DSR is to create innovative artifacts that provide solutions to perceived problems (Purao, 2013). Design science methods can be applied for adapting (or creating) the IT artifact to appropriate the goals of the surroundings in which it operates (Simon, 1981). This differs greatly from the social science worldview, wherein the primary goal is the pursuit of truthful laws, or theory. In positivistic behavioral research, which is the leading research method in IS, theory is based on observation and becomes accepted and extended over time as further observation supports the relationships established in the theories. The DSR community's focus on normative improvements and utility as a goal is clearly different from the goals of behavioral IS research, with its focus on explaining observed phenomena. One might ask, then, whether the publication outlets for these two IS communities are aligned. We consider this question next.

3 Perceptions from the DSR Community: Difficulties in publishing DSR work in SSB journals

We began our investigation into the effects of lists, particularly discipline-based lists, by seeking signals from faculty across the discipline. We wondered how lists were affecting DSR scholars and their scholarship. We speculated that lists might shift priorities and goals among DSR researchers and wondered whether these shifts might be mirrored in the scholarship of the broader IS discipline. We began by participating in conferences, attending panels, and conducting informal interviews seeking indicators of impact from the community.

In 2013, we attended the International Conference on Design Science Research in Information Systems and Technology (DESRIST) and Workshop on Information Technologies and Systems (WITS) meetings. At the 2013 DESRIST and WITS meetings, we listened to the general conversation in panels, participated in small-group discussions, and asked fellow DSR scholars their impressions of the future of the field and its place within the IS community.

DESRIST was established in 2006 and has become a valued venue for DSR. The conference includes work that presents new and innovative constructs, models, methods, processes, and systems. DESRIST includes a mix of research; it includes prototypes, posters, and research papers on both artifacts and methodologies. The conference draws scholars from different backgrounds, such as information systems, computer science, software engineering, energy informatics and medical informatics. These scholars are interested in design problems and information systems.

In June 2013, DESRIST was held in Helsinki. Approximately one hundred DSR scholars attended, including a mix of senior faculty, junior faculty and PhD students. The acceptance rate for research papers was approximately 40%. Participants presented papers, demonstrated prototypes, and participated in panels. The two panels, "Doing Design Research" and "The IT Artifact in Design Research," focused on defining the artifact and defining DSR methodology. Faculty panelists described how to include theory and how to package DSR research for journal publication. The conversation and questions asked by junior faculty of the panelists appeared to concentrate on how to publish DSR in the SSB list.

The Workshop on Information Technologies and Systems (WITS) was established in 1991. WITS includes quantitatively/technically oriented work that addresses complex business problems or societal issues

using current and emerging information technologies. Of particular interest to the WITS community is research that can change how information technology functions (e.g., by designing, modifying, or constructing systems), such that IT can better solve real-world problems.

In December 2013, WITS was held in Milan. There were 140 participants, with an acceptance rate of 17%. Given the workshop's longevity, the attendees differed from DESRIST. They were often senior in the discipline, secure in their positions, and less likely to feel it necessary to justify their research. As with DESRIST, the program included research papers, a prototype session and panels. Despite the workshop attendees' being more senior, the keynote, delivered by Paulo Goes, was entitled "Looking for Design Science Research in Top-Tier IS Journals. Has anyone seen it?"

At DESRIST and WITS, we found a sense of unease with IS and business journal lists. We heard many conversations discussing how to craft and conduct a DSR paper that can be published to the SSB or the UT Dallas list. Senior and junior DSR scholars offered surprisingly consistent comments on journal lists; they viewed them as affecting how DSR scholars approached their work and affecting their prospects for promotion. A more senior scholar commented,

> *"My department has always accepted ACM and IEEE journals. This is no longer true. They are glad I can teach the technical courses, but as far as they are concerned, I will be a permanent associate unless I change my research. When I was recruited, these were not the conditions. But the rules have changed."*

Many IS scholars, who were actively engaged in high-quality DSR research, voiced frustration with the IS discipline's growing focus on a narrow basket of lists and expressed fear that such a focus would affect their ability to achieve tenure or promotion. Echoing this sentiment, a junior scholar noted,

> *"I have been told that [being] an assistant professor conducting DSR research is risky; work will not publish to UT Dallas. I come to the conference to network with people that might help me package my work for those journals."*

4 Perceptions from the DSR Community: Receptivity and Impact, and Shifting Methods

We left DESRIST and WITS with a qualitative understanding of how DSR scholars viewed journal lists and their impact on the scholars' work. DSR researchers felt that the introduction of the AIS SSB journal lists had pushed them to publish in a narrower set of outlets and to create a narrower set of scholarly contributions. To publish papers in "listed journals," DSR researchers actively discussed how best to conduct and package their work. This discussion was necessary because publication in top IS journals appeared to require adhering to implicit normative scripts used by the SSB editorial boards. To diffuse knowledge of how to conform to such scripts, DSR scholars were giving keynotes, sponsoring panels, having public small-group sessions, and participating in private conversations at their meetings about how to create a broader script of what was "good IS research." DSR researchers appeared to feel compelled to do so because, absent publications that appeared in journals on the SSB, they felt it was substantially more difficult to earn recognition in the field or tenure at their home institutions.

To validate our qualitative understanding, we conducted a survey that asked DSR community members to rate journals' receptivity to DSR work and their perceptions of journal impact on their careers (LeRouge & De Leo, 2010). Our survey captured the breadth of the journals that publish IS research – behavioral, quantitative, and technical. We asked respondents to rate any journal that was ranked by more than 50% of the 9 rankings considered on the AIS MIS Journal Rankings page (AIS, 2012). We also asked them to rate all of the journals listed in the "Design Science Research in Information Systems" page (DESRIST Wiki). Combining these sources yielded 60 journals. We received 57 completed responses to our survey. Given that DESRIST and WITS draw approximately 200 participants and that we received responses from faculty at all ranks (e.g., lecturers, assistant professors, associate professors, and full professors), we felt that our sample captured a reasonable percentage, and was representative, of the DSR community. Appendix B describes our method, sample characteristics, and the survey.

In addition to asking about journal receptivity and impact, we solicited opinions on whether DSR community members were changing their publication outlets, topics and methods to conform to requirements created by journal lists. We asked our respondents to rate three statements (1=strongly disagree, 5=strongly agree):

1. The journals my unit expects for tenure and promotion are receptive to work in design science research.
2. I have altered my research methodology to publish toward my unit's expected journal.
3. I have altered my research topics to publish toward my unit's expected journals.

Additionally, we provided an open-ended comment box for respondents to provide richer responses to these three statements.

Our survey's results offered ample confirmation of our qualitative understanding, that is, that there was a disconnect between the SSB and outlets for DSR research. Table 1 presents the top 10 journals by mean receptivity, and Table 2 presents the top 10 journals by mean impact. With the exception of *Decision Support Systems* and *Journal of the AIS*, we found no overlap between the top 10 journal lists. In fact, *Journal of the AIS* was the only journal from the SSB that appeared in the top 25 most receptive journals. Appendix C presents the full set of journal rankings by receptivity and impact. This analysis confirmed our intuition that DSR researchers felt that the outlets that were most likely to have a positive career impact were less receptive to their type of research.

Table 1 – Journals Ranked by Mean Receptivity[1]

Journal Name		**Mean Receptivity**
1	ACM Transactions on Management Information Systems	4.44
2	Decision Support Systems	4.28
3	IEEE Transactions on Knowledge and Data Engineering	4.09
4	ACM Transactions on Information Systems	4.06
5a	Journal of Database Management	3.82
5b	ACM Transactions on Database Systems	3.82
7	IEEE Transactions on Software Engineering	3.81
8	Data and Knowledge Engineering	3.74
9	Communications of the ACM	3.69
10a	IEEE Transactions on Systems, Man, and Cybernetics Part A: Systems and Humans	3.68
10b	Journal of the Association of Information Systems	3.68
[1]The anchors are 1=strongly disagree, 5=strongly agree		

Table 2 – Journals Ranked by Perceived Impact[1]

Journal Name		Mean Impact
1	Information Systems Research	4.60
2	MIS Quarterly	4.54
3	Journal of Management Information Systems	4.38
4	Management Science	4.24
5	Journal of the Association of Information Systems	4.12
6	Decision Support Systems	4.02
7	European Journal of Information Systems	3.96
8	Information Systems Journal	3.89
9	Organization Science	3.83
10a	Decision Sciences	3.82
10b	Communications of the ACM	3.82
[1]The anchors are 1=strongly disagree, 5=strongly agree		

To gain richer insight into which journals DSR researchers felt were open to their work and held the potential to advance their careers, we constructed a third list of journals which sat at the intersection of receptivity and impact (see Table 3). We included journals rated at least 3.6 for both receptivity and impact. We used this cutoff because there was a natural gap for both axes when the data were plotted, not unlike a "knee" in a factor analysis.

Table 3 – Journals Ranked by Mean Impact and Mean Receptivity[1]

Journal		Mean Impact	Mean Receptivity
1	Journal of the Association for Information Systems	4.12	3.68
2	Decision Support Systems	4.02	4.28
3	Communications of the ACM	3.82	3.69
4	IEEE Transactions on Software Engineering	3.79	3.81
5	ACM Transactions on Database Systems	3.71	3.82
6	ACM Transactions on Management Information Systems	3.69	4.44
7	IEEE Transactions on Knowledge and Data Engineering	3.69	4.09
8	ACM Transactions on Information Systems	3.64	4.06

[1]The anchors are 1=strongly disagree, 5=strongly agree

Consistent with the DSR community's focus on technical topics, the majority of the most receptive, high-impact journals were more technical and interdisciplinary than were journals found in the SSB. A comment from one of the Assistant Professor respondents underscored the importance of valuing interdisciplinary journals, when reflecting on his/her own situation.

> *"… a viable way to publish, we have a decent A list and I have a design science article accepted at one of our A journals and a revise and resubmit at another. If it were all about MISQ and ISR here it would be an issue, but there are more outlets available to me."*

Of the eight journals, six were sponsored by the Association for Computing Machinery (ACM) or the Institute of Electrical and Electronics Engineers (IEEE). Moreover, consistent with the DSR ethos of conducting research relevant to solving real-world problems, the listed included Communications of the ACM, a journal focused on disseminating technical knowledge to a broad general audience. This focus on interdisciplinary outlets is consistent with comments offered by one Assistant Professor.

> *"Journal rankings for tenure positions do not reflect the broad scope of design science research (e.g., they completely miss many important CS journals and almost all specialized conferences)."*

Notably, the list included Journal of the AIS, the youngest of the SSB baskets. Although JAIS is on the impactful-receptivity list, it is notable that it is the lowest-rated journal for receptivity. The list also included Decision Support Systems, a historically significant outlet for DSR research. This analysis underscored our implicit understanding that the DSR community is more technically oriented, values placing work in interdisciplinary outlets, and seeks to speak to practice.

When we examined whether our respondents felt that journal lists changed how they selected their publication outlets, topics and methods, we found evidence that assistant, associate, and full professors perceived and responded to lists in different ways (see Table 4).

Table 4 – Means for Journal Acceptance, Choice of DSR Topics and Methods by Position[12]

	The journals my unit expects for tenure and promotion are receptive to work in design science research.	I have altered my research methodology to publish toward my unit's expected journals.	I have altered my research topics to publish toward my unit's expected journals.
Assistant Professor (n=17, 31%)	3.06	3.59	2.94
Associate Professor (n= 12, 21.8%)	3.50	3.25	3.33
Full Professor (n=26, 47.2%)	3.81	2.58	2.46
Overall (n=55)	3.51	3.00	2.79

1 Our dataset included an instructor and one adjunct professor who were dropped from this analysis, for a total sample size of 55.
2 The anchors are 1=strongly disagree, 5=strongly agree

We conducted independent-sample two tailed t-tests to compare means by respondent rank for each of the three questions for 9 tests. A Levene's Test of Equality confirmed that assumptions of homogeneity of variances were met. We found three significant differences in means.

First, on the question concerning whether participants perceived that the journals expected for tenure and promotion were receptive to work in design science research, we found a significant difference ($p = 0.037$) in the scores between Assistant Professors ($M=3.06$, $SD =1.029$) and Full Professors ($M=3.81$, $SD=1.167$). These results suggest that Assistant Professors were not as confident that the journals expected for tenure and promotion would publish DSR work. An Assistant Professor underscored this point when commenting on the peer review process.

> *"Reviewers and editors don't know how to consider design science. The exception is IEEE and ACM transactions. My department accepts them as top shelf. However, many IT/IS departments around the country do not consider those to be premier outlets."*

Second, on the question concerning whether participants perceived that they had to alter research methodology to publish toward journals expected for their unit, we found a significant difference **(**$p=0.004$) in the scores of Assistant Professors ($M=3.59$, $SD=1.004$) and Full Professors ($M=2.58$, $SD=1.102$). These results suggest Assistant Professors, who are worried about tenure, feel the pressure to change methodology and abandon DSR to publish to the journal list.

Third, on the question concerning whether participants had altered research topics to publish toward the journal list, we found a significant difference ($p=0.05$) in the scores Associate Professors ($M=3.33$, $SD=1.497$) and Full Professors ($M=2.46$, $SD=1.104$). These results suggest that Associate Professors were more likely to alter topics to publish work in an SSB journal.

Taken together, the second and third findings were quite illuminating, particularly when one considers responses by faculty rank. Assistant Professors appear to indicate that they remained committed to their research topics but were willing to amend their choice of methods to publish in the SSB. Assistant professors appear more willing to conform to the broader normative scripts for "good IS research" found in the broader field. For example, one Assistant Professor reported,

> *"Our department has a long history of DSR and is a strong supporter of design-oriented research approaches in which researchers collaborate with practitioners. However, the ongoing discourse about relevance and rigor in combination with the "right" research approach, of course, affects also our internal debate."*

This willingness could be a function of the short timelines for Assistant Professors – feeling pressure from the tenure clock, they might lack time to completely retool their topics; consequently, they turn to different methods that they feel are more likely to fit the script of a top journal.

Perhaps absent pressure from a tenure clock but still seeking promotion, Associate Professors appear to be most willing to change topic. Associate Professors' willingness to change might result from recognizing that the IS discipline's context has shifted in terms of topics and methods. Consistent with this view, one Associate Professor reported,

> *"Conducting the research is not an issue, but publishing in the top MIS journals is not as easy as publishing a typical behavioral or survey-based research using SEM or PLS."*

Enjoying the privileges that come with tenure and rank, Full Professors reported the highest level of commitment to studying DSR topics using traditional DSR methods. Absent the pressure to secure further promotion, one Full Professor commented,

> *"I have total freedom in pursuing my research agenda in design science. I have been working in design science for over 20 years and just love it."*

Another Full Professor echoed the sentiment that with rank came the freedom to pursue a DSR-focused agenda.

> *"As a chaired professor at a high-ranked European university and the only chaired professor in the department, I to a very large extent am able to do what I want. My DSR work and my DSR view affect my colleagues (incl. my PhD students). Compared with 10 years ago, we are doing much more DSR, and several DSR dissertations have been completed in the last five years."*

From our survey, junior faculty seemed to be facing the strongest perception of risk in their choice of method. To gather further information from this demographic, we organized a panel of "DSR natives" at DESRIST 2016. The panelists were either late-stage PhD students or early-stage junior faculty whose dissertations contained a significant DSR element.

The panelists reported gratitude for methodological guidance:

> *"Thanks to the DSR giants for publishing guidelines on DSR. This was very helpful in knowing how to present our work."*

However, they also reported challenges with acceptance of the method:

> *"My university had no experience with DSR, and didn't really understand it. But it was clear that the DSR method was the right way forward for our problem."*

Further, they reported concerns about expectations going forward:

> *"It's easier to publish the results of a lab experiment based on a DSR artifact, as opposed to the DSR artifact itself. It's as if the artifact becomes an appendix."*

And they reported a possible strategic decision to be made in the context of lists:

> *"My department is accepting of DSR work, but the university I'm going to has clear expectations for publications in the SSB. Do I stay true to myself? Or do I adapt to the expectations of the list?"*

Our survey data, along with the discussion from the DESRIST 2016 panel, indicate that DSR researchers perceive a disconnect between the type of research they would prefer to do (and the outlets receptive to this work) and the type of work that the SSB journals have traditionally published. We consider whether this disconnect holds true in the SSB publication record in the next part of our analysis.

5 Design Science Research in the Basket Journals: Is it Growing More Prevalent?

We wondered whether we could find evidence in the SSB publication record to corroborate the DSR scholars' perceptions of SSB receptivity to DSR work, i.e., whether the SSB journals are publishing DSR work. If in fact these journals have begun to consider DSR work with greater receptivity, we postulated that we would expect to see such an impact longitudinally in the years following the introduction of the SSB. If we do find greater rates of publication, we wondered whether we could detect aa point in time at which DSR papers started to appear at greater rates in SSB journals. To evaluate this notion, we performed a content analysis of published papers in SSB journals[6].

Our analysis began with papers published since 2004 for two reasons. First, 2004 marks the year that Hevner et al. (2004) introduced the term "design science research" with an accompanying descriptive framework in MIS Quarterly. Although DSR has been a part of the IS field since its inception, Hevner's work provided a readily searchable label for this broad body of technical work. Second, the introduction of the SSB in 2007 provided a three-year lead during which DSR scholars would have felt no impetus to publish on the "list." Thus, 2004 provided a reasonable opportunity to detect evidence of a "knee" developing when DSR researchers might have more actively started pursuing publication in basket journals after 2007.

We utilized Web of Science to search for all the manuscripts published in the SSB from 2004-2017 containing one of the following terms within the title, abstract, or keywords: "design science," "design research," "design science research," "design theory," "science of design," or "design principles" (search terms are a modified search based on Fischer (2011)). One journal, JAIS, was not indexed in the Web of Science prior to 2006[7]. To include data for these years, we searched for JAIS articles using the same terms in the JAIS website. Guided by Peffers, Tuunanen, and Niehaves (2018), we created the coding scheme displayed in Table 5. We read the abstract, and in many instances, also the manuscripts in order to classify the papers. We also relied on the keywords supplied by the authors.

[6] We wish to thank our anonymous reviewer that provided strong guidance on how to conduct and analyze our content analysis.
[7] https://proquest.libguides.com/ld.php?content_id=22114745

We began with a list of 177 papers. For our analysis, we removed papers that: mentioned DSR in passing (31), editorials (23), research commentaries (9), and literature reviews (1). Clearly, articles that mention DSR in passing are not relevant to our analysis. We opted to remove editorials and research commentaries because they typically do not follow customary blind review process. Finally, we removed the literature review because it represents a historical view of DSR, rather than a new contribution in DSR. After screening, the reduced dataset included 113 articles. Appendix D lists the full set of 177 papers, and their corresponding labels.

Table 5 – DSR Publications in SSB Journals Coding Scheme

Label	Definition	Count
Action Design Research (ADR)	Designing a problem-solving artifact, while learning from the intervention, practice-inspired research (Sein, Henfridsson, Purao, Rossi, & Lindgren, 2011)	8
Artifact (Artf)	Applicable artifact development (Peffers, Tuunanen, Rothenberger, & Chatterjee, 2007; Winter, 2008)	58
Design Principles (DPrin)	Captures knowledge about instances of a class of artifacts (Chandra, Seidel, & Gregor, 2015; Sein et al., 2011)	13
Design Theories (DT)	Composition and presentation of design theories (Shirley Gregor & Jones, 2007)	16
Editorial	Non-peer-reviewed editorial (such as the introduction to a special issue)	23
Literature Review	Literature analyses and bibliometric content analysis	1
Methodology (Met)	Illustrates a particular procedure or set of procedures for conducting design science research	18
Mentioned in Passing	DSR mentioned in passing (e.g., discussing future DSR as a potential implication or as one of many possible methods, mentioned the word design)	31
Research Commentary	Invited by Editor in Chief to discuss a research stream or methodological approach and offer important insights into where the field should go (MISQ Website)	9

Our initial analysis shows some evidence that, although DSR scholars reported a sense of unease with the SSB, they appeared to be publishing papers in SSB journals at greater rates (see

Figure 1). When one adjusts for the five papers published in the DSR special issue of MIS Quarterly in 2008 (four artifacts, one design principles), our bar graph clearly revealed a slight increase in 2010 in the publication of DSR papers in SSB journals.

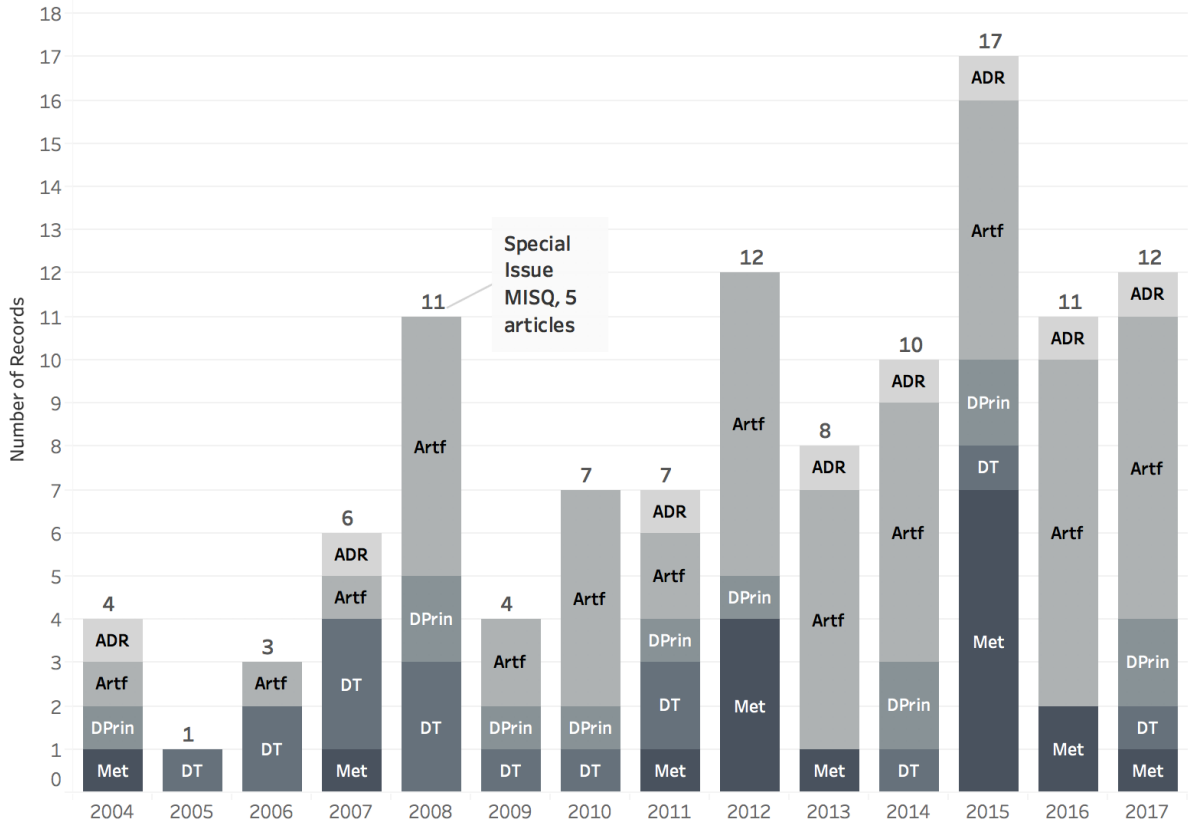
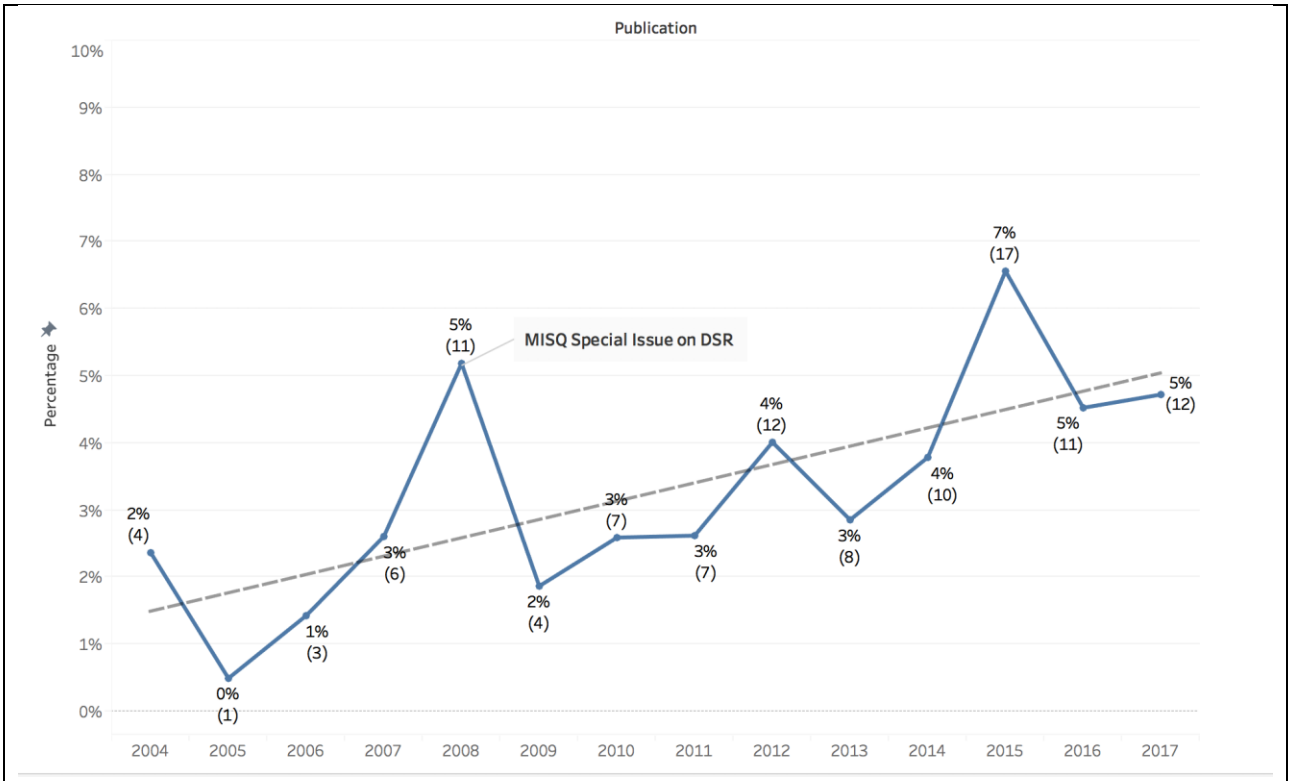


Figure 1 – DSR work appearing in SSB Journals

To get a sense of how the number of DSR publications compares to total publications in the SSB, we used Web of Science to conduct a second analysis for all articles published in the SSB from 2004-2017 (again we conducted a separate search for 2004 and 2005 for JAIS articles). For each journal, we gathered data on total publication counts in each journal on an annual basis. We again excluded all articles that were labeled as editorials, research notes and literature reviews.

In Figure 2, we demonstrate our results both as a crosstab and a line graph and include a trend line for percentage of DSR publications by year. We believe that our data does indicate an increasing trend of DSR publications in the SSB. A cautionary note is that the percentages are very small (between 3 and 7 percent) of total publications. Though we can see there has been an increase, though it is small.

In this context, we consider the question of whether or not the DSR perceptions from the qualitative and survey data are validated by this content analysis. As noted above, we see a small increasing trend in DSR. Given these numbers, for a not-insignificantly-sized group of researchers (minimally, at least a few hundred researchers, based on conference attendance at DESRIST and WITS), it is clear that publishing DSR work in the SSB journals remains a challenge. Further, we note that perception data tends to place a strong focus on the historical record, i.e., not only what is happening now, but also remembering what has happened in the past. According to our analysis, the greater bulk of DSR publications have occurred in the last few years. For the first half of our analysis period (2004 to 2010), there were only 36 DSR-related publications in the SSB, an annual average of 5 per year. Given this, it is not surprising that perceptions from the DSR community describe significant challenges in this regard.



Year	*2004*	*2005*	*2006*	*2007*	*2008*	*2009*	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*2016*	*2017*
All	169	202	210	230	212	214	270	267	299	280	264	259	243	254
DSR	4	1	3	6	11	4	7	7	12	8	10	17	11	12
%	2%	0%	1%	3%	5%	2%	3%	3%	4%	3%	4%	7%	5%	5%

Figure 2 – DSR publications compared to all publications appearing in SSB Journals

We further investigate the DSR articles published in the SSB by analyzing DSR publications by individual journals (Table 6). We report both the total number of publications identified as DSR and DSR work as a percentage of the total publications by journal. We find that DSR scholars were correct in their perception

of JAIS as the most accessible SSB journal. On a yearly basis, between 3-10% of JAIS publications are DSR. We were surprised and encouraged to find that MISQ published 31 DSR papers, more than JAIS. The editors of MISQ demonstrated public support of DSR work through a special issue focused on DSR (March & Storey, 2008), and a later editorial (Goes, 2014) calling for more DSR research in IS (page vi). Yet, relative to the total number of papers MISQ publishes, the percentage of DSR papers is small, but showing evidence of growth. The same holds true for JMIS. The rest of the SSB journals also indicate some growth, albeit small, in the number of DSR papers published. Overall, this finding suggests that, though DSR scholars are correct in perceiving limited opportunities to publish papers in the SSB, there is evidence that the editorial boards for these journals are demonstrating a willingness to publish DSR papers.

Table 6 – DSR publication counts and percentages by SSB Journals

	JAIS	***MISQ***	***JMIS***	***ISJ***	***EJIS***	***JSIS***	***JIT***	***ISR***
2004		3 *17%*	1 *3%*					
2005	1 *7%*							
2006	1 *4%*			1 *8%*			1 *5%*	
2007	4 *14%*		1 *3%*	1 *6%*				
2008	2 9%	5 *17%*			4 *11%*			
2009	3 *10%*		1 *3%*					
2010	3 *10%*	1 *3%*	1 *3%*			1 *5%*	1 *4%*	
2011	2 *7%*	5 *11%*						
2012	3 *9%*	4 *7%*	1 *3%*		1 *3%*		1 *6%*	2 *3%*
2013	1 *4%*	4 *7%*	2 *5%*			1 *5%*		
2014	1 *3%*	2 *4%*	3 *8%*	1 *6%*	3 *8%*			
2015	3 *10%*	1 *2%*	6 *12%*	2 *12%*	2 *6%*	1 *6%*	1 *4%*	1 *2%*
2016	2 *8%*	3 *6%*	2 *5%*	2 *8%*	2 *7%*			
2017	2 *7%*	3 *6%*	2 *5%*	1 *4%*		1 *6%*	1 *5%*	2 *4%*
Total	28 *7%*	31 *6%*	20 *4%*	8 *3%*	12 *2%*	4 *2%*	5 *2%*	5 *1%*

Finally, in Table 7, we analyzed the DSR publications by category label to explore the types of DSR work appearing in the SSB. We found that when DSR researchers were able to publish to the SSB, 51% of the articles were artifacts, 16% were methodology papers, 14% were design theory papers, 12% were design principles, and 7% were action design research.

Three of these categories, specifically artifacts, design principles, and action design research, represent work that describes an output of the DSR/ADR method, i.e., work that is outcome-oriented, and presents evidence of utility. This accounts for 70% of the DSR-related contributions published in the SSB. The remaining 30% are theory and methodology papers. We consider each of these categories in more detail next.

Table 7 – DSR publications by SSB Journals by label

Journal	Action Design Research	Artifact	Design Principles	Design Theory	Methodology
Management Information Systems Quarterly (MISQ)	2	22	2	1	4
Journal of the Association for Information Systems (JAIS)		14	3	8	3
Journal of Management Information Systems (JMIS)	1	12	2	2	3
European Journal for Information Systems (EJIS)		3	3	2	4
Information Systems Journal (ISJ)	4	2			2
Information Systems Research (ISR)		3	1	1	
Journal of Information Technology (JIT)			1	2	2
Journal for Strategic Information Systems (JSIS)	1	2	1		
Total	8	58	13	16	18
Percentage	*7%*	*51%*	*12%*	*14%*	*16%*

The set of theory papers (16 count, 14%), may indicate that the DSR community is introducing how theory works to form the grounding of DSR inquiry. There are several examples of papers that discuss the role of theory in DSR (R. L. Baskerville, Kaul, & Storey, 2015; Germonprez, Hovorka, & Collopy, 2007; Germonprez et al., 2016; Shirley Gregor, 2006; Shirley Gregor & Jones, 2007; B. Kuechler & Vaishnavi, 2008; W. Kuechler & Vaishnavi, 2012; Pries-Heje & Baskerville, 2008). At the present time, the role of theory in DSR work is an open question in the DSR community, and the subject of considerable internal debate. In our work here, we do not seek to contribute to the substantive discussion of theory in DSR; rather, we simply wish to consider whether the mechanism pressure from lists appears to have had any influence on this publication stream.

Table 8: Design theory publications in SSB journals

	2004	***2005***	***2006***	***2007***	***2008***	***2009***	***2010***	***2011***	***2012***	***2013***	***2014***	***2015***	***2016***	***2017***
EJIS					2									
ISJ														
ISR														1
JAIS		1	1	3		1		2						
JIT			1				1							
JMIS											1	1		
JSIS														
MISQ					1									
Total		1	2	3	3	1	1	2			1	1		1

Table 9 shows the distribution of methodology papers by journal and year. The set of methodology papers (18 count, 16%) direct attention to defining norms and methods for how to conduct DSR research in a manner that makes sense to the IS community. We believe that this research thread may indicate that the DSR community is organizing and suggesting ways to present DSR papers so they have a higher chance of being published in SSB journals and introducing DSR to the broader IS community with descriptions of what to expect from "good" DSR work. Most often, these papers take the form of identifying best practices for how to conduct DSR research. Not unlike research method papers on quantitative or qualitative approaches to research, these papers present prescriptive guidelines on how to incorporate theory or how to apply DSR methods rigorously in scholarly inquiry. Often, these papers present templates or scripts for how to demonstrate the research was conducted in a rigorous manner or to enfold theory. For example, several DSR papers (Andrade, Urquhart, & Arthanari, 2015; S. Gregor & Hevner, 2013; Iivari, 2015; Lee, Thomas, & Baskerville, 2015; Mandviwalla, 2015; Papas, O'Keefe, & Seltsikas, 2012; Peffers et al., 2007) describe methodologies to craft and position DSR.

Table 9 – DSR Methodology Publications in SSB Journals

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EJIS									1			1	2	
ISJ												2		
ISR														
JAIS									2			1		
JIT									1					1
JMIS				1								2		
JSIS														
MISQ	1							1		1		1		
Total	1			1				1	4	1		7	2	1

Interestingly, the first half of our analysis period (2004 to 2010) contains only two publications on the DSR method (one of which is the paper 2004 paper that presented the term “design science” to the IS community, though as we previously discussed, there is a rich tradition IS scholars conducting technical, design-focused research (Nunamaker Jr & Chen, 1990; Rossi, Henfridsson, Lyytinen, & Siau, 2013; Walls, Widmeyer, & El Sawy, 1992)). Almost all of the method papers appear in the SSB beginning in 2011. This timing is interesting when considered against the backdrop of the introduction of the SSB in 2007, and the (roughly) three-year peer review process for SSB journals – these method papers may be a direct response from the DSR community to the list mechanism’s pressure to publish to SSB journals.

To summarize, our analysis of DSR papers in the SSB revealed multiple interesting data points. We see confirmation of the original perceptions of the DSR community. They weren’t off in their perceptions – the numbers are indeed small, especially in the earlier years of our analysis. We found evidence of a slight increase in DSR publications in the SSB journals. We believe that these findings provide some support for our intuition that the lists have changed IS scholarship; after 2007, our evidence suggests that DSR researchers “adjusted expectations” and pursued publication in SSB journals, and some SSB journals have responded by demonstrating an increasing willingness to consider DSR work for publication. Finally, it appears that the DSR community responded to the pressure to publish in the SSB by producing a set of papers that help the broader community understand what to expect from DSR work, and to help the DSR community prepare their work toward these expectations. Time-wise, these method papers appear to be a possible direct result of list mechanism pressure.

6 Discussion

Our findings illustrate two notable arguments: DSR researchers reported changing their methods in order to publish to lists adopted by their institutions, and there has been a broadening of what is considered DSR in the IS community. For these researchers, the SSB list is being used to measure scholarly productivity, and there is evidence that this measurement is influencing behavior. Spitzer (2007) points out that there is a “dark side” to performance measurement: when the measurement is used to capture performance improvements, it can be highly valuable. However, when measures are directly linked with rewards or the threat of punishment (for example, promotion/tenure, teaching-load decisions) there is a tendency towards focusing on what is rewarded or punished. Gomez-Mejia and Balkin (1992) found that the primary determinant of faculty pay is the number of top-tier journal publications by a faculty member. Another study indicated that researchers should not be motivated only by career issues such as tenure and promotion, but also with finding research outlets which value their ideas and life's work (Tahai & Meyer, 1999). Researchers might try to optimize for both, which could elicit dysfunctional and unintended responses (or “gaming” the system) to find ways to align their research to match the incentives (Courty & Marschke, 2003, 2004). Again, this points to evidence of mechanism’s pressure to publish to SSB journals. Baskerville and Pries-Heje (2016) provide a warning for what they call “wrapping new science in old-science wrappers.” :

> *“As a community interested in developing design science research as a new method and with a philosophical lens, it is important to maintain the deep connections with new-science paradigm in which the research often resides. While wrapping design science research in old-science wrappers is useful at times, the distinctive*

> *characteristics of this research genre actually lie in its new-science attributes. Significant design science research should primarily be significant as new-science, and only incidentally significant as old-science."*

Our analysis of DSR publications in the SSB indicates that the DSR community has made significant improvements in presenting and publishing their research. This development reflects also the formation of a commonly accepted description of how DSR should be presented, in order to make inroads into one of the SSB journals. In recent work by Baskerville et al (2015), this phenomenon is described as "bounded creativity," which they define as a motivation and energizing force stimulating creativity rather than only inhibiting it.

We also found evidence of a broadening of themes in the literature within what was labeled DSR in SSB journals: artifacts, design principles, action design research, design theory and methodology. Methodology and design theory papers indicate that the community is rallying to establish norms that can lead to successful publication in the SSB journals. Further, it points toward signs of a cumulative culture in which researchers build upon prior research findings, thereby building an increasingly consistent body of knowledge that provides a valuable research facet to the broad profile of IS as a discipline. We consider this trend a promising change that will further strengthen IS in comparison to other disciplines at business schools. From an institutional point of view, it is a sign of a maturing community, which is good and a sign of progress and development.

We cannot, however, ignore the fact that there is a perception among the DSR community that the journal outlets that are receptive to their work do not match up with journal outlets that they perceive to be impactful from a career perspective. We note that the journals deemed receptive show strong representation from the computer science and software engineering fields, which are clear referent disciplines for the IS field.

DSR scholars are accurate in their perception of the receptivity of impactful journals. Our data from the content an analysis indicates that DSR scholars were correct in their perception that JAIS was the most accessible SSB journal. MISQ published 31 DSR papers, more than JAIS. Yet, this number is small relative to the total number of papers MISQ publishes. The same holds true for JMIS. The rest of the SSB journals also indicate some growth, albeit small, in the number of DSR papers published. Thus, the results are mixed.

In this research, we have examined how influential the SSB has been on the development of the DSR field. It is not a stretch to predict that we would find similar results if we were to seek other sub-communities, their perceptions of receptivity and impact, and their representation in top journals. For example, conceptual researchers (Hirschheim 2008), and grounded theory method researchers (Lehmann & Fernández 2007) have voiced similar concerns. It would be interesting to learn if these communities have had similar trajectories.

Our work has three important limitations. First, we did not capture how much DSR work was not conducted. Some DSR researchers, as indicated by our survey responses, have chosen a safer route and conducted more traditional research, in order to have a larger prospect of being published. Second, for our content analysis, we searched for our search terms in the title, abstract and keywords, and we might have missed some manuscripts (for example, one of the authors of this manuscript has a DSR paper in the SSB that did not make the analysis list).

Third, it would also be interesting to compare our content analysis results with publications in journals that our survey deemed most receptive to DSR (e.g., the ACM, IEEE journals). However, there are a number of practical challenges in performing an analysis that we would consider to be comparable to the analysis we currently include in the manuscript. Perhaps most significantly, we note that the term "design science" arose within the Information Systems community and has not (yet) spread beyond the IS domain. Our analysis relies on authors identifying their work as design-related, yet many of the authors in these journals come from other communities and would describe their methods using different terminology. As such, we cannot replicate the Web of Science query we used in our analysis in the IEEE/ACM domain. Further, we are concerned about the possibility of inserting subjectivity into the analysis since we would not know whether authors would have intended their work to be considered design science. These challenges make it difficult, if not impossible, to replicate the analysis in the IEEE/ACM domain.

It is important to point out that the goal of this manuscript is not to criticize the SSB, but rather to point out the unintended consequences of such lists. The committee of IS scholars who composed the SSB list clearly specified that "The College of Senior Scholars focused on behavioral, business-oriented IS research, which might reflect a majority, but is not a universal model that fits (or even should fit) all schools."[8] Furthermore, they indicate, "Augmenting the list can also be important in some research schools. For example, in schools with a highly technical focus, the adopted journal list should obviously include highly-rated and/or highly-cited technical journals." Clearly, the senior scholars intended that the SSB should be used to evaluate only behavioral research and that it should not be used to evaluate other sub-disciplines.

Two of the authors of this manuscript have served as department chairs, and we both have found that the SSB list has been an extremely helpful instrument enabling us to evaluate the research productivity of IS faculty, particularly in the face of scant representation of IS journals on two other lists: the FT list and the UT-Dallas research rankings. The SSB list has helped to define and communicate high-quality research within IS to outside institutions such as neighboring disciplines. In so doing, the SSB list can also be regarded as an instrument that gives standing and legitimacy to high quality IS research that can be presented to the outside world. However, similar to the maturing and growth of IS as discipline, with its changing shape and changing portfolio of research areas, we also need to acknowledge the merit of new approaches to stay an inclusive discipline.

In other words, defining too-narrow lists could create challenges for a discipline as heterogeneous as IS, as many IS researchers do not only publish in top IS journals but also in top journals of related and referent disciplines. This heterogeneity is a strength that provides us the ability to reinvent ourselves constantly, with stimuli coming from different directions and sub-communities.

It is fair to claim that those who actually published in DSR, and many have, actually identify and can be recognized as IS researchers doing DSR and that this finding is a positive development. The same can be said of other sub-disciplines. Today's important research questions are likely multi-disciplinary in nature and inevitably tied to practice. Thus, we constantly have to ask ourselves the questions, if we do constrain or perhaps even curtail innovation when we limit publication outlets and if we do explain the heterogeneity of the IS field to external communities to maximize our impact in the best possible way, in order to also encourage our young scholars toward impactful and meaningful work.

[8] All quotes from https://aisnet.org/?SeniorScholarBasket

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Appendix A: UT-Dallas List

1. Academy of Management Journal
2. Academy of Management Review
3. Administrative Science Quarterly
4. Information Systems Research
5. Journal of Accounting and Economics
6. Journal of Accounting Research
7. Journal of Consumer Research
8. Journal of Finance
9. Journal of Financial Economics
10. Journal of International Business Studies
11. Journal of Marketing
12. Journal of Marketing Research
13. Journal of Operations Management
14. Journal on Computing
15. Management Science
16. Manufacturing and Service Operations Management
17. Marketing Science
18. MIS Quarterly
19. Operations Research
20. Organization Science
21. Production and Operations Management
22. Strategic Management Journal
23. The Accounting Review
24. The Review of Financial Studies

Appendix B: Survey Methodology

Constructing a Journal List

We included journals representing the breadth of the Information Systems research area – behavioral, quantitative, and technical. For breadth across the field, we considered the list of MIS Journal Rankings. To select the most relevant journals from this list, we retained any journal that was ranked by more than 50% of the 9 rankings considered. In terms of technically-oriented journals, we included all of the journals listed in the "Design Science Research in Information Systems" page (DESRIST Wiki). The combination of these two sources yielded 60 journals. The following journals were included:

25. Academy of Management Journal
26. Academy of Management Review
27. ACM Computing Surveys
28. ACM Transactions on Computer-Human Interaction
29. ACM Transactions on Database Systems
30. ACM Transactions on Information and System Security
31. ACM Transactions on Information Systems
32. ACM Transactions on Internet Technology
33. ACM Transactions on Management Information Systems
34. ACM Transactions on Software Engineering and Methodology
35. AIEDAM: Artificial Intelligence for Engineering Design, Analysis and Manufacturing
36. Business and Information Systems Engineering
37. Communications of the ACM
38. Communications of the Association for Information Systems
39. Data & Knowledge Engineering
40. DATA BASE for Advances in Information Systems
41. Decision Sciences
42. Decision Support Systems
43. Electronic Markets – The International Journal on Networked Business
44. European Journal of Information Systems
45. Harvard Business Review

46. IEEE Transactions on Computers
47. IEEE Transactions on Knowledge and Data Engineering
48. IEEE Transactions on Mobile Computing
49. IEEE Transactions on Multimedia
50. IEEE Transactions on Pattern Analysis & Machine Intelligence
51. IEEE Transactions on Software Engineering
52. IEEE Transactions on Systems, Man, Cybernetics Part A: Systems and Humans
53. IEEE Transactions on Systems, Man, Cybernetics Part C: Applications and Reviews
54. IEEE Transactions on Visualizations and Computer Graphics
55. IEEE/ACM Transactions on Networking
56. Information & Management
57. Information Resources Management Journal
58. Information Sciences
59. Information Systems
60. Information Systems Frontiers
61. Information Systems Journal
62. Information Systems Research
63. Information Technology & Management
64. Information Technology and Systems eJournal
65. Informing Science: The International Journal of an Emerging Transdiscipline
66. INFORMS Journal on Computing
67. Interfaces
68. Journal of Computer Information Systems
69. Journal of Database Management
70. Journal of Electronic Commerce Research
71. Journal of Information Systems

72. Journal of Management Information Systems
73. Journal of Strategic Information Systems
74. Journal of Systems and Software
75. Journal of the ACM
76. Journal of the Association for Information Systems
77. Management Science
78. MIS Quarterly
79. OMEGA – The International Journal of Management Science
80. Organization Science
81. Requirements Engineering Journal
82. Sloan Management Review
83. The Journal of the American Society for Information Science and Technology
84. The VLDB Journal

Survey

We conducted a web survey to collect DSR scholars' perceptions of these 60 journals: awareness, receptivity, and impact (Le Rouge et al 2010). Awareness is a measure of perceived relevance, i.e., the extent to which respondents believe the journal is relevant to their research. Receptivity is a measure of perceived acceptance, i.e., the extent to which respondents believe that journals will consider/accept their manuscripts for publication. Impact is a measure of perceived relative reward, i.e., the extent to which respondents believe that publication in a journal will have a beneficial impact on their career progress.

We also asked several other questions, including (1) how the perceived receptivity of DSR by impactful journals had influenced their selection of topics and research methodology; (2) whether their department was receptive to design science research; and (3) whether their colleagues in their department conducted design science research. We also asked an open-ended question to solicit their comments on the subject of research publication outlets for DSR.

The survey was developed in Qualtrics and hosted on their servers. Qualtrics has the capability to post to social media sites such as LinkedIn or send invitations via email. It also tracks IP addresses, allowing respondents to begin a survey at the point they left off and disallowing multiple responses from one IP address. We piloted the survey with five design scientist volunteers to determine the clarity of the survey and the length of time needed to complete the survey. A few small refinements, primarily for clarity, were made after the pilot. Because our survey was posted on the Internet, we decided to create a relatively complex web address to minimize the number of responses from individuals outside of the targeted sample. Only those who received an invitation were provided with the web address. The survey was disabled immediately after the close date. For a period of three months, several methods were used to invite participation. We repeated the requests once every month. In a request specifically targeting design science researchers, we created a post to the AISWorld general mailing list with a link to the survey. Additionally, we posted a request and link to the survey to the LinkedIn Design Science Research in Information Systems and Technology (DESRIST) group. Finally, we obtained the mailing list for the program committees for WITS and DESRIST and created an e-mail list (after removing duplicate names). We e-mailed a request with the link to our survey.

The 60 journals were presented in groups of 15 journals at a time, on a total of four pages. Respondents were asked to consider awareness, receptivity, and impact for relevant journals. Journals were defined as relevant to the participants if they met one or more of these criteria: (1) the participant had published or aspired to publish in the journal. (2) The participant frequently read manuscripts published in the journal. (3) The participant frequently cited work published in the journal. (4) The participant's unit or department considered the journal important for tenure & promotion, and/or (5) the participant considered the journal important for job placement. Next, we asked the participants a series of questions about their choices in light of receptivity and impact and about how free they felt to engage in DSR research. Finally, at the end of the survey, we gathered the following demographic data for each respondent: academic rank, whether current position is tenure track, highest degree earned, discipline of terminal degree, discipline of employment/study, and country of employment/study. We did not collect gender or age information because it might be possible to use these data points in combination with the demographic data we do collect to identify individual respondents.

Appendix C: Survey Results

We received 138 responses to our survey. Not all responses contained sufficient data for inclusion in the analysis. We found that respondents generally fell into two categories; either he/she rated several journals and provided demographic data, or she provided few (if any) journal ratings and no demographic data. The responses in the latter category were not considered in our analysis. After removing non-complete responses, we had 57 responses suitable for inclusion in our analysis (41% completion rate). Profiles of the respondents by rank (Table C1), terminal degree (Table C2), degree type and position type (Table C4) and Location (Table C5) are provided below.

Table C1. Respondents by rank

Rank	
Professor	46%
Associate Professor	21%
Assistant Professor	29%
Instructor/Lecturer	1%
Doctoral Student/ABD	1%

Table C2. Respondents by degree

Type of Degree	
PhD	95%
Other	5%

Table C3. Respondents by position

Type of Position	
Tenure Track	87%
Non-Tenure Track	9%
Not Faculty	4%

Table C4. Respondents by degree type and position type

Area	**Terminal Degree**	**Area of Employment**
Computer Science / Electrical Engineering / Other Engineering	10%	2%
Management Information Systems	67%	82%
Management / Strategic Management	2%	
Operations Management / Industrial Engineering / Decision Sciences	3%	2%
Other	18%	14%

Table C5. Respondents by Location

Location	
Pacific/Asia	13%
Europe	30%
North America	58%

The survey allowed a respondent to choose to rate both receptivity and impact, receptivity alone, or impact alone for each journal. Thus, we have measures of awareness separately for both receptivity and impact. In practice, the difference between impact and receptivity awareness counts for any journal in our dataset was never greater than one; therefore, we report awareness as an average of these two counts. We report receptivity and impact as an average of the 5-point Likert scale ratings for each journal.

We show the top 25 journals that show the strongest indications of receptivity to design science research, as perceived by our respondents.

Table C6. Survey Journals ranked by mean receptivity

	Journal Name	Mean Receptivity	Awareness
1	ACM Transactions on Management Information Systems	4.44	56%
2	Decision Support Systems	4.28	75%
3	IEEE Transactions on Knowledge and Data Engineering	4.09	56%
4	ACM Transactions on Information Systems	4.06	56%
5a	Journal of Database Management	3.82	49%
5b	ACM Transactions on Database Systems	3.82	49%
7	IEEE Transactions on Software Engineering	3.81	56%
8	Data and Knowledge Engineering	3.74	60%
9	Communications of the ACM	3.69	84%
10a	IEEE Transactions on Systems, Man, and Cybernetics Part A: Systems and Humans	3.68	54%
10b	Journal of the Association for Information Systems	3.68	70%
12a	Business and Information System Engineering	3.60	53%
12b	IEEE Transactions on Computers	3.60	44%
14	ACM Transactions on Software Engineering and Methodology	3.59	47%
15	Communications of the Association of Information Systems	3.53	75%
16	ACM Transactions on Internet Technology	3.50	49%
17	IEEE Transactions on Systems, Man, and Cybernetics: Part C Applications and Reviews	3.48	47%
18	IEEE Transactions on Mobile Computing	3.45	39%
19	IEEE Transactions on Pattern Analysis and Machine Intelligence	3.43	37%
20	Information Systems	3.42	47%
21	ACM Transactions on Computer-Human Interaction	3.40	53%
22a	INFORMS Journal on Computing	3.37	47%
22b	ACM Computing Surveys	3.37	53%
24	ACM Transactions on Information and System Security	3.36	44%
25	IEEE/ACM Transactions on Networking	3.33	37%
26	DATA BASE for Advances in Information Systems	3.32	60%
27	IEEE Transactions on Multimedia	3.30	37%
28a	Information Systems Frontiers	3.29	54%
28b	The VLDB Journal	3.29	38%
30	Decision Sciences	3.26	60%
31a	IEEE Transactions on Visualizations and Computer Graphics	3.25	36%
31b	European Journal of Information Systems	3.25	82%
31c	Requirements Engineering Journal	3.25	43%
34	Journal of Systems and Software	3.14	38%
35	Journal of Management Information Systems	3.10	74%
36a	Journal of the ACM	3.09	39%
36b	Information Technology & Management	3.09	41%
38a	MIS Quarterly	3.00	93%
38b	Journal of Computer Information Systems	3.00	44%
40	Information Systems Research	2.95	75%
41	Information Sciences	2.80	35%
42	Journal of Information Systems	2.79	34%
43	AIEDAM	2.78	32%
44a	Interfaces	2.77	39%
44b	Information Systems Journal	2.77	47%
46	The Journal of the American Society for Information Science and Technology	2.64	39%
47	Management Science	2.59	59%
48a	Information Technology and Systems eJournal	2.56	30%
48b	Informing Science: The International Journal of an Emerging Transdiscipline	2.56	32%
50	Journal of Electronic Commerce Research	2.55	35%
51	Information Resources Management Journal	2.50	29%
52	Electronic Markets – The International Journal on Networked Business	2.33	44%
53	OMEGA – The International Journal of Management Science	2.32	39%
54	Information & Management	2.29	54%
55	Journal of Strategic Information Systems	2.15	46%
56	Organization Science	1.80	43%
57	Sloan Management Review	1.55	39%

58	Academy of Management Review	1.54	46%
59a	Academy of Management Journal	1.50	48%
59b	Harvard Business Review	1.50	53%

We show journals that showed the strongest indications of impact on our respondents' careers, as perceived by our survey respondents. We show the top 26 journals here for illustrative purposes.

Table C7. Survey Journals ranked by mean impact

	Journal Name	Mean Impact	Awareness
1	Information Systems Research	4.60	74%
2	MIS Quarterly	4.54	91%
3	Journal of Management Information Systems	4.38	74%
4	Management Science	4.24	58%
5	Journal of the Association of Information Systems	4.12	72%
6	Decision Support Systems	4.02	75%
7	European Journal of Information Systems	3.96	81%
8	Information Systems Journal	3.89	49%
9	Organization Science	3.83	42%
10a	Decision Sciences	3.82	60%
10b	Communications of the ACM	3.82	86%
12	IEEE Transactions on Software Engineering	3.79	58%
13	Harvard Business Review	3.73	53%
14	ACM Transactions on Database Systems	3.71	49%
15a	ACM Transactions on Management Information Systems	3.69	56%
15b	IEEE Transactions on Knowledge and Data Engineering	3.69	56%
17	ACM Transactions on Information Systems	3.64	58%
18	Journal of Strategic Information Systems	3.54	46%
19	Academy of Management Review	3.48	47%
20	Academy of Management Journal	3.44	47%
21a	IEEE Transactions on Computers	3.42	46%
21b	ACM Computing Surveys	3.42	54%
21c	IEEE Transactions on Systems, Man, and Cybernetics Part A: Systems and Humans	3.42	54%
21d	Information & Management	3.42	54%
25a	Sloan Management Review	3.41	39%
25b	ACM Transactions on Software Engineering and Methodology	3.41	47%
27	Journal of the ACM	3.35	39%
28	Information Systems	3.31	46%
29a	Communications of the Association of Information Systems	3.20	76%
29b	Journal of Database Management	3.20	51%
29c	ACM Transactions on Computer-Human Interaction	3.20	53%
32	ACM Transactions on Internet Technology	3.17	50%
33	IEEE Transactions on Systems, Man, and Cybernetics: Part C Applications and Reviews	3.14	48%
34a	ACM Transactions on Information and System Security	3.12	45%
34b	INFORMS Journal on Computing	3.12	46%
36	Data & Knowledge Engineering	3.11	61%
37a	IEEE Transactions on Pattern Analysis & Machine Intelligence	3.05	38%
37b	IEEE/ACM Transactions on Networking	3.05	38%
39	IEEE Transactions on Mobile Computing	3.04	39%
40	OMEGA – The International Journal of Management Science	3.00	39%
41	DATA BASE for Advances in Information Systems	2.97	60%
42	Interfaces	2.96	39%
43	The VLDB Journal	2.95	38%
44	IEEE Transactions on Visualizations and Computer Graphics	2.90	36%
45	The Journal of the American Society for Information Science and Technology	2.86	39%
46	IEEE Transactions on Multimedia	2.82	37%
47	Information Systems Frontiers	2.77	34%
48a	Journal of Information Systems	2.75	34%
48b	Information Technology & Management	2.75	41%
50	Information Sciences	2.70	35%
51	Requirements Engineering Journal	2.68	43%
52	Journal of Electronic Commerce Research	2.65	35%

53	Journal of Computer Information Systems	2.60	44%
54	Journal of Systems and Software	2.59	38%
55	Information Resources Management Journal	2.47	29%
56	Business and Information Systems Engineering	2.42	54%
57	AIEDAM	2.21	32%
58	Electronic Markets – The International Journal on Networked Business	2.19	44%
59	Information Technology and Systems eJournal	2.06	30%
60	Informing Science: The International Journal of an Emerging Transdiscipline	2.05	32%

Appendix D: List of Basket Journals Analyzed

Table D1 lists all the papers that were included in our content analysis, along with the label we assigned during the content analysis process.

Table D1: Papers included in content analysis, with labels

Aanestad, M., & Jensen, T. B. (2011). Building nation-wide information infrastructures in healthcare through modular implementation strategies. Journal of Strategic Information Systems, 20(2), 161-176. doi:10.1016/j.jsis.2011.03.006	Mentioned in Passing
Abbasi, A., Albrecht, C., Vance, A., & Hansen, J. (2012). Metafraud: a meta-learning framework for detecting financial fraud. Mis Quarterly, 36(4), 1293-1327.	Artifact
Abbasi, A., & Chen, H. C. (2008). Cybergate: a design framework and system for text analysis of computer-mediated communication. Mis Quarterly, 32(4), 811-837.	Artifact
Abbasi, A., Sarker, S., & Chiang, R. H. L. (2016). Big Data Research in Information Systems: Toward an Inclusive Research Agenda. Journal of the Association for Information Systems, 17(2), I-XXXII.	Editorial
Abbasi, A., Zahedi, F., Zeng, D., Chen, Y., Chen, H. C., & Nunamaker, J. F. (2015). Enhancing Predictive Analytics for Anti-Phishing by Exploiting Website Genre Information. Journal of Management Information Systems, 31(4), 109-157.	Artifact
Abbasi, A., Zhang, Z., Zimbra, D., Chen, H., & Nunamaker, J. F. (2010). Detecting fake websites: the contribution of statistical learning theory. Mis Quarterly, 34(3), 435-461.	Artifact
Adipat, B., Zhang, D. S., & Zhou, L. N. (2011). The effects of tree-view based presentation adaptation on mobile web browsing. *Mis Quarterly, 35*(1), 99-121.	Artifact
Adomavicius, G., Bockstedt, J. C., Gupta, A., & Kauffman, R. J. (2008). Making sense of technology trends in the information technology landscape: a design science approach. Mis Quarterly, 32(4), 779-809.	Artifact
Agerfalk, P. J. (2010). Getting pragmatic. European Journal of Information Systems, 19(3), 251-256. doi:10.1057/ejis.2010.22	Editorial
Agerfalk, P. J. (2013). Embracing diversity through mixed methods research. European Journal of Information Systems, 22(3), 251-256. doi:10.1057/ejis.2013.6	Editorial
Agerfalk, P. J. (2014). Insufficient theoretical contribution: a conclusive rationale for rejection? *European Journal of Information Systems, 23*(6), 593-599. doi:10.1057/ejis.2014.35	Editorial
Albert, T. C., Goes, P. B., & Gupta, A. (2004). GIST: A model for design and management of content and interactivity of customer-centric Web sites. Mis Quarterly, 28(2), 161-182.	Artifact
Alspaugh, T. A., Scacchi, W., & Asuncion, H. U. (2010). Software Licenses in Context: The Challenge of Heterogeneously-Licensed Systems. Journal of the Association for Information Systems, 11(11), 730-755.	Artifact
Alter, S. (2013). Work System Theory: Overview of Core Concepts, Extensions, and Challenges for the Future. Journal of the Association for Information Systems, 14(2), 72-121.	Research Commentary
Alter, S. (2015). Work System Theory as a Platform: Response to a Research Perspective Article by Niederman and March. Journal of the Association for Information Systems, 16(6), 485-514.	Mentioned in Passing
Andrade, A. D., Urquhart, C., & Arthanari, T. S. (2015). Seeing for Understanding: Unlocking the Potential of Visual Research in Information Systems. Journal of the Association for Information Systems, 16(8), 646-673.	Research Commentary
Arazy, O., Kumar, N., & Shapira, B. (2010). A Theory-Driven Design Framework for Social Recommender Systems. Journal of the Association for Information Systems, 11(9), 455-490.	Artifact
Arnott, D. (2006). Cognitive biases and decision support systems development: a design science approach. Information Systems Journal, 16(1), 55-78. doi:10.1111/j.1365-2575.2006.00208.x	Artifact
Arnott, D., & Pervan, G. (2005). A critical analysis of decision support systems research. Journal of Information Technology, 20(2), 67-87. doi:10.1057/palgrave.jit.2000035	Research Commentary
Arnott, D., & Pervan, G. (2012). Design Science in Decision Support Systems Research: An Assessment using the Hevner, March, Park, and Ram Guidelines. Journal of the Association for Information Systems, 13(11), 923-949.	Literature Review
Arnott, D., & Pervan, G. (2014). A critical analysis of decision support systems research revisited: the rise of design science. Journal of Information Technology, 29(4), 269-293. doi:10.1057/jit.2014.16	Methodology
Astor, P. J., Adam, M. T. P., Jercic, P., Schaaff, K., & Weinhardt, C. (2013). Integrating Biosignals into Information Systems: A NeuroIS Tool for Improving Emotion Regulation. Journal of Management Information Systems, 30(3), 247-277. doi:10.2753/mis0742-1222300309	Artifact
Bardhan, I. R., Demirkan, H., Kannan, P. K., Kauffman, R. J., & Sougstad, R. (2010). An Interdisciplinary Perspective on IT Services Management and Service Science. Journal of Management Information Systems, 26(4), 13-64. doi:10.2753/mis0742-1222260402	Mentioned in Passing
Baskerville, R. (2008). What design science is not. European Journal of Information Systems, 17(5), 441-443. doi:10.1057/ejis.2008.45	Editorial

Baskerville, R., Lyytinen, K., Sambamurthy, V., & Straub, D. (2011). A response to the design-oriented information systems research memorandum. European Journal of Information Systems, 20(1), 11-15. doi:10.1057/ejis.2010.56	Methodology
Baskerville, R. L., Kaul, M., & Storey, V. C. (2015). Genres of inquiry in design-science research: justification and evaluation of knowledge production. Mis Quarterly, 39(3), 541-+. doi:10.25300/misq/2015/39.3.02	Methodology
Baskerville, R. L., & Myers, M. D. (2015). Design ethnography in information systems. Information Systems Journal, 25(1), 23-46. doi:10.1111/isj.12055	Editorial
Beath, C., Berente, N., Gallivan, M. J., & Lyytinen, K. (2013). Expanding the Frontiers of Information Systems Research: Introduction to the Special Issue. Journal of the Association for Information Systems, 14(4), I-XVI.	Editorial
Benbasat, I., & Wang, W. (2005). Trust In and Adoption of Online Recommendation Agents. Journal of the Association for Information Systems, 6(3).	Mentioned in Passing
Bergman, M., Lyytinen, K., & Mark, G. (2007). Boundary objects in design: An ecological view of design artifacts. *Journal of the Association for Information Systems, 8*(11), 546-568.	Design Theory
Briggs, R. O., Nunamaker, J. F., & Sprague, R. H. (2004). Special issue: Information systems design - Theory and methodology. Journal of Management Information Systems, 20(4), 5-8.	Editorial
Buhl, H. U., Fridgen, G., Konig, W., Roglinger, M., & Wagner, C. (2012). Where's the competitive advantage in strategic information systems research? Making the case for boundary-spanning research based on the German business and information systems engineering tradition. Journal of Strategic Information Systems, 21(2), 172-178. doi:10.1016/j.jsis.2012.05.003	Mentioned in Passing
Buhl, H. U., Muller, G., Fridgen, G., & Roglinger, M. (2012). Business and Information Systems Engineering: A Complementary Approach to Information Systems - What We Can Learn from the Past and May Conclude from Present Reflection on the Future. Journal of the Association for Information Systems, 13(4), 236-253.	Mentioned in Passing
Busquets, J. (2015). Discovery paths: exploring emergence and IT evolutionary design in cross-border M&As. Analysing grupo Santander's acquisition of abbey (2004-2009). European Journal of Information Systems, 24(2), 178-201. doi:10.1057/ejis.2014.38	Design Principles
Butler, T., & Murphy, C. (2007). Understanding the design of information technologies for knowledge management in organizations: a pragmatic perspective. Information Systems Journal, 17(2), 143-163. doi:10.1111/j.1365-2575.2007.00237.x	Action Design Research
Chan, Y. E., & Greenaway, K. E. (2005). Theoretical Explanations for Firms' Information Privacy Behaviors. Journal of the Association for Information Systems, 6(6).	Mentioned in Passing
Chatterjee, S., Sarker, S., & Fuller, M. A. (2009). A Deontological Approach to Designing Ethical Collaboration. Journal of the Association for Information Systems, 10(3), 138-169.	Design Theory
Chaturvedi, A. R., Dolk, D. R., & Drnevich, P. L. (2011). Design principles for virtual worlds. *Mis Quarterly, 35*(3), 673-684	Design Principles
Chau, M., & Xu, J. (2012). Business intelligence in blogs: understanding consumer interactions and communities. Mis Quarterly, 36(4), 1189-1216.	Artifact
Chen, H. C., Chiang, R. H. L., & Storey, V. C. (2012). Business intelligence and analytics: from big data to big impact. Mis Quarterly, 36(4), 1165-1188.	Editorial
Chen, J. Q., Fan, M., & Li, M. Z. (2016). Advertising versus brokerage model for online trading platforms. Mis Quarterly, 40(3), 575-+. doi:10.25300/misq/2016/40.3.03	Mentioned in Passing
Chen, R., Sharman, R., Rao, H. R., & Upadhyaya, S. J. (2013). Data model development for fire related extreme events: an activity theory approach. Mis Quarterly, 37(1), 125-+.	Artifact
Cheng, X. S., Fu, S. X., & Druckenmiller, D. (2016). Trust Development in Globally Distributed Collaboration: A Case of US and Chinese Mixed Teams. Journal of Management Information Systems, 33(4), 978-1007. doi:10.1080/07421222.2016.1267521	Artifact
Choi, J., Nazareth, D. L., & Jain, H. K. (2010). Implementing Service-Oriented Architecture in Organizations. Journal of Management Information Systems, 26(4), 253-286. doi:10.2753/mis0742-1222260409	Artifact
Chou, C. H., Zahedi, F. M., & Zhao, H. M. (2014). Ontology-based evaluation of natural disaster management websites: a multistakeholder perspective. Mis Quarterly, 38(4), 997-+.	Artifact
Corbett, J. (2013). Designing and Using Carbon Management Systems to Promote Ecologically Responsible Behaviors. Journal of the Association for Information Systems, 14(7), 339-378.	Artifact
Currim, F., & Ram, S. (2012). Modeling Spatial and Temporal Set-Based Constraints During Conceptual Database Design. Information Systems Research, 23(1), 109-128. doi:10.1287/isre.1100.0306	Artifact
D'Aubeterre, F., Singh, R., & Iyer, L. (2008). A Semantic Approach to Secure Collaborative Inter-Organizational eBusiness Processes (SSCIOBP). Journal of the Association for Information Systems, 9(3-4), 231-266.	Artifact
Day, J. M., Junglas, I., & Silva, L. (2009). Information Flow Impediments in Disaster Relief Supply Chains. Journal of the Association for Information Systems, 10(8), 637-660.	Design Principles
Dimoka, A., Pavlou, P. A., & Davis, F. D. (2011). NeuroIS: The Potential of Cognitive	Mentioned in

Neuroscience for Information Systems Research. Information Systems Research, 22(4), 687-702. doi:10.1287/isre.1100.0284	Passing
Druckenmiller, D. A., & Acar, W. (2009). An Agent-Based Collaborative Approach to Graphing Causal Maps for Situation Formulation. Journal of the Association for Information Systems, 10(3), 221-251.	Artifact
Ebel, P., Bretschneider, U., & Leimeister, J. M. (2016). Leveraging virtual business model innovation: a framework for designing business model development tools. Information Systems Journal, 26(5), 519-550. doi:10.1111/isj.12103	Artifact
Eriksson, O., & Agerfalk, P. J. (2010). Rethinking the Meaning of Identifiers in Information Infrastructures. Journal of the Association for Information Systems, 11(8), 433-454.	Design Principles
Flath, C. M., Friesike, S., Wirth, M., & Thiesse, F. (2017). Copy, transform, combine: exploring the remix as a form of innovation. Journal of Information Technology, 32(4), 306-325. doi:10.1057/s41265-017-0043-9	Mentioned in Passing
Fridgen, G., Hafner, L., Konig, C., & Sachs, T. (2016). Providing Utility to Utilities: The Value of Information Systems Enabled Flexibility in Electricity Consumption. Journal of the Association for Information Systems, 17(8), 537-563.	Artifact
Gannon, B. (2013). Outsiders: an exploratory history of IS in corporations. Journal of Information Technology, 28(1), 50-62. doi:10.1057/jit.2013.2	Mentioned in Passing
Germonprez, M., Hovorka, D., & Collopy, F. (2007). A theory of tailorable technology design. Journal of the Association for Information Systems, 8(6), 351-367.	Mentioned in Passing
Germonprez, M., Hovorka, D., & Gal, U. (2011). Secondary Design: A Case of Behavioral Design Science Research. Journal of the Association for Information Systems, 12(10), 662-683.	Design Theory
Germonprez, M., & Hovorka, D. S. (2013). Member engagement within digitally enabled social network communities: new methodological considerations. Information Systems Journal, 23(6), 525-549. doi:10.1111/isj.12021	Design Theory
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About the Authors

First Name Last Name. After the references and the appendices, if there are any, come short biographical sketches of each author. The bios should be in normal text format, with a separate bio for each author. Put the author's name in bold at the start of the bio. Do not include titles such as "Dr." or "Professor". Italicize all journal titles in the biography. If referencing the *Communications of the Association for Information Systems,* spell out the entire name of the journal, just as in this sentence, rather than using the acronym for AIS. The maximum length of each biography should be approximately 150 words. Do not include email addresses.

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