

DECISION LINE

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PRESIDENT'S LETTER

Realizing the Promising Future



*Jatinder (Jeet) N. D. Gupta,
College of Business,
University of Alabama in Huntsville*

I am truly honored to be entrusted with the Presidency of DSI, following the excellent performance of its founder and all previous leaders. This is especially important as DSI embarks on the efforts to celebrate its golden jubilee in 2019 and 50 years of its existence. Over the past 48 years with a committed membership base, DSI has become a truly global society with a solid identity and has reached out to a bigger and wider set of professional communities. This is possible only because of the dedicated service of our past and present board members and because of the active participation of our members. In fact, collectively, we make our society what it is, and can assure that it will remain responsive to our needs and serves our profession by being a leader now and in the future. Therefore, I take this leadership role in DSI with a great sense of responsibility and I am excited to be a part of the team to drive DSI to its next level of evolution: a truly global society with an overarching impact on the future developments in decision sciences and its many disciplines.

In my first communication as DSI President, I would like to (1) describe our society's well-being including my visits to various DSI regional and annual conferences; (2) describe the current activities to enhance its service to its members and the profession around the globe in a framework of alignment, agility, accuracy, accessibility, and adaptability including an outline of some planned initiatives for its future growth like the strategic planning process; and (3) invite each of us to participate in ways that will serve our individual, personal and professional needs. In doing so, I will also share – rather sporadically -- my experiences of participating in various DSI conferences (regional and annual) during 2016-17.

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DECISION LINE

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Vision Statement

Decision Sciences Institute creates, develops, fosters, and disseminates knowledge to improve managerial decisions for global progress.

Mission Statement

Decision Sciences Institute develops scholars, who produce, use, and disseminate knowledge primarily within and across information systems, analytics, and supply chain management to improve decisions involving systems, technology, and processes.

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Maling Ebrahimpour

is the Dean and Professor of Supply Chain in the College of Business Administration at The University of Rhode Island. He is an active

researcher and has authored or coauthored over 100 articles that have been published in scientific journals and proceedings. Most of his work focuses on various issues of quality in both service and manufacturing companies. He received his PhD in business administration from University of Nebraska-Lincoln and has served on the editorial review board of several journals, including *Journal of Quality Management*, *Journal of Operations Management*, and *International Journal of Production Research*.

DSI has been changing itself during the last few years to meet the needs of its membership. In his first President's Letter, Jatinder (Jeet) Gupta, informs us that DSI is "alive and doing well" and explains in some detail various activities that are being undertaken by DSI and its regions around the globe to enhance services to members and create a framework that aligns with the DSI strategic plan. He ends his letter with an invitation to membership to participate and serve DSI in various capacities.

Vivian Landrum, DSI Executive Director, offers details about the upcoming DSI 48th Annual Meeting in Washington DC. She provides us with day-by-day highlights of activities, speakers, events, etc. It appears the conference organizers have planned several outstanding events and lined up interesting speakers that will be intellectually stimulating. Furthermore, Washington DC is a place that, in addition to being the nation's capital, is the home of many world-renowned museums, including the infamous Smithsonian's, the Holocaust museum, the Native American museum, the Black History museum and numerous exceptional art galleries.

In another section of this issue, Landrum provides us with a brief report on the April DSI board meeting, which provides a glance into the workings of DSI officers on behalf of the membership. I urge our readers to read this short piece as it provides a good window on the working of DSI Board.

Under the "ECOMMERCE" section, Dara G. Schniederjans and Douglas N. Hales, in their article titled "Supply chain economic and environmental balance: It's all in the cloud...Or is it?," discuss the use of cloud computing and their potential impact on Supply Chain. They advise supply chain

(SC) professionals not to assume that cloud computing leads to enhanced performance. Instead, the authors ask the SC professional to focus on finding cost effective IT

solutions that can balance various performance initiatives. Furthermore, they conclude that there is no agreement among researchers with regard to the role of cloud computing on savings. While some authors argue in support of energy savings from cloud computing, others argue that cloud computing will increase energy use.

Cheri Speier-Pero, editor of *Decision Sciences Journal (DSJ)*, provides us with a list of six articles along with their abstracts that will appear in the upcoming issue of *DSJ* V.48, No.2. These articles cover subjects related to Roth IRS, Supply Chain coordination, Decision Support System's role in Risk Assessment Performance, visualization of Innovation in Global Supply Chain Networks, Supplier benefits through Buyer-Enabled Knowledge Enrichment, and the Role of Uncertainty in IT Project Team.

If you are a junior faculty, please ask a colleague or your doctoral mentor to nominate you for the prestigious Carol Latta Memorial Award for Outstanding Early Career Scholarship. If you are a mentor or know young and upcoming scholars, please nominate them for this award. The section on Carol Latta Memorial Award for Outstanding Early Career Scholarship describes the process and deadline for applications and nominations to be sent to the DSI Home Office.

If you like to learn from history and the lives of accomplished people, I strongly encourage you to read the piece in Book Review that our colleague Kristen Rosacker has written for us. Her review is based on the book written by Ruth Bader Ginsburg and Mary Hartnett titled "My Own Words." I am sure you will find this book review a great teaser that will entice you to read the entire book from cover to cover.

The Information Technology features an article by Arben Asllani where he writes about "The Metamorphosis of Management Science." The author discusses the role of

Management Science (MS) and how introduction of big data has helped to reshape MS area. The author proposes SMART changes to MS where SMART refers to: Streaming data; The MAD approach; Automatic decision making processes; Real-time operational intelligence; and Traditional tools and techniques. He concludes that although SMART elements are necessary, they are not sufficient in the era of big data and suggests further empirical research to better understand the changes in Management Science.

I strongly encourage all PHD students to

Student Affairs section. Varun Grover provides guidelines for PHD students on whether or not to negotiate a job offer. He then offers great advice for students on how to negotiate. His conclusion is something that all doctoral students need to pay close attention: “.....when you receive an offer and you are not overly thrilled with it – do negotiate. This requires some self-assessment of what really matters to you, as well as a polite, positive, quid pro quo, honest, parallel, contextually aware and open approach to negotiation. In the end, however, the right job is more

important than all the things negotiated.”

Dear readers, please share your opinions, ideas with us by writing and sending it to me at mebrahimpour@uri.edu, or you may send it to the feature editors as shown in this section.

I am looking forward to reading your articles for inclusion in Decision Line.

Maling Ebrahimpour, PhD
Editor

President's Letter Continued

DSI is alive and well

Over the past 48 years, DSI has reached the age of maturity and has started to take on an increasing sense of purpose through its core values and achievements. It has solidified its position as a professional society and is considered to be a comprehensive professional society in decision sciences. As DSI President-Elect and President, I had the unique privilege to visit most of its regional conferences (and will visit the two remaining during May and July). Listening to many participants at these regional conferences as well as our annual conference in Austin, Texas in November 2016, I discovered an excitement and melding of the matured and young professionals. While we are always in midst of finding solutions to some thorny and complex problems, I found that DSI members are willing to share their concerns on one hand and to work on tackling these problems on the other. However, these concerns did not stop people, including many of our previous presidents, board members, leaders, and founding members, from being quite active participants in these conferences. Further, it was evident that the young professionals in Decision Sciences were equally excited to be at these

conferences and were willing to participate in various activities to help our society. Thanks to the dedication and hard work of our founding members and all the thought-provoking DSI leaders during the past 48 years, DSI is alive and well and on its way to be recognized as the society of choice for the academicians and professionals in decision sciences.

DSI Current efforts and activities

During my visits to various DSI regional conferences and participating in the DSI annual conference, my own belief about DSI being a service organization has been reinforced. For it to be successful, it needs to be aligned in its purpose and its offerings to its members and the decision sciences profession, be agile in making and implementing decisions, provide accurate and timely information to everyone, be accessible to everyone, and be adaptable to the changing times and needs of its members and profession. Since DSI is an eclectic organization, maximizing stakeholder satisfaction requires doing well several different activities simultaneously. Over the past two years, the DSI Board of Directors worked hard to develop plans to be responsive to the above needs.

Therefore, now is the time to implement many of these plans and to develop future strategic and tactical goals. With this as the overarching theme, our current efforts and activities are as follows:

- ***DSI is engaging in a strategic planning process:*** To be aligned and agile, DSI must continue its strategic planning process and identify its future needs and activities. To provide a consistent future direction for DSI and to ensure that we remain committed to the path outlined by these future directions, a strategic planning process is essential. Such a planning process would ensure that DSI remains responsive to the needs of its members. Therefore, with the help of an experienced strategic planning facilitator, the DSI Board of Directors will work to create a five year strategic plan for DSI. This strategic planning process will identify five-year specific goals, plans to achieve these goals, and the impact these efforts will have on the future growth of DSI. Once formulated, this plan will be periodically updated and used to develop operational activities that provide the most appropriate services to DSI stakeholders.

- **DSI is improving the quality and reputation of its publications:** To be adaptable and responsive to changing needs requires us to improve the quality and reputation of our flagship *Decision Sciences* journal and the *Decision Sciences Journal of Innovative Education*. As a first step, we need to make concerted efforts to develop a plan to list *Decision Sciences* in such indices as the Financial Times, Business Week and UT Dallas list. To accomplish this, the DSI Board of Directors (1) has appointed Professor Mark Ferguson of the University of South Carolina as co-editor-in-chief of *Decision Sciences* to work with our current editor-in-chief, Cheri Speier-Pero and (2) supplanting the efforts of the DSI Publications Committee by creating a Blue-Ribbon committee to develop and implement a three-year plan to accomplish *Decision Sciences* being listed in at least one of three indices: Financial Times, Business Week or UT Dallas list.
- **DSI is revising its constitution and bylaws:** To be aligned, agile, and adaptable requires a periodic review of the DSI governing documents. Therefore, currently, the DSI Board of Directors are in the process of reviewing and revising its constitution and bylaws to ensure that we are responsive to the emerging needs of our members and the profession while remaining true to DSI's core values. We intend to discuss the proposed revisions at the DSI Business meeting at the Annual Conference in November 2017 in Washington D.C. and submit for approval to DSI members early in 2018.
- **DSI is enhancing its focused footprint:** To be adaptable and accessible requires us to be focused while serving the diverse interests of our members and the profession. Therefore, during the last three years, the DSI Board of Directors approved the concept of DSI colleges. These colleges will provide focused networking opportunities within DSI and will enable an enhanced service agenda for DSI. In addition to providing a focused approach (like Wickham Skinner's concept of a focused factory within a factory), these colleges will complement the current services DSI provides its members and the decision sciences professionals. Currently, an ad-hoc committee is working to further define the concept of DSI colleges and to implement the creation of the first three colleges during 2017-18.
- **DSI is implementing appropriate information technology systems:** To serve its stakeholders and to provide accurate and timely information to everyone, DSI must implement new and appropriate information technology systems that will allow the integration of various functions and activities being undertaken at the DSI Home Office and its regions. This includes the following: integrate a new DSI membership system with a DSI conference management system which will host a conference registration system for all regional, national, and international conferences; execute new regional conference attendance policy regarding non-members and ensure appropriate guidelines and procedures are being followed; ensure that DSI and its divisions and subdivisions are responsive to membership needs, adequately represent the diverse interests of the membership, and enhance the transparency of DSI Board actions to the membership.
- **DSI is enhancing the integrative and symbiotic relationships with its regions:** To be accessible and adaptable requires DSI to promote its core values in a consistent manner, whether at the regional or global level. The parent DSI and DSI regions represent the same DSI organization where the DSI regions are the outreach arm of DSI and complement the services offered to DSI members and the decision sciences professionals. Therefore, the DSI Board of Directors has initiated efforts to ensure the integration of DSI regions with DSI in a symbiotic relationship that serves DSI members at all levels of the organization. To achieve this goal, we are working on enhancing the services the DSI Home Office provides the regions in terms of accounting and finance on one hand, and member and conference management on the other. This effort also involves revamping our information technology systems to serve the regional needs.
- **DSI is enhancing its global thinking and outreach:** To be accessible to everyone in the world, DSI has been a global society in thinking and outreach since its beginning (we called it international in those days). Over the years, the number of its non-US members has grown significantly. We have had international conferences in Asia, Australia, Europe, and Mexico. We have created DSI Divisions and regions outside USA. With this type of global outreach, it is important for us to expand our global reach by seeking and availing new global opportunities, especially in the emerging economies. In order to expand our global thinking and outreach, a previous DSI Board of Directors approved to hold international conferences each year organized by each of its three international regions in Asia-Pacific, Europe and Indian Subcontinent on a rotational basis. During the 2018-2020 calendar years, we intend to work with these regions to start offering international conferences on a regular basis. To further enhance the participation of academicians and professionals from the emerging economies, we are actively pursuing a global DSI membership drive on one hand and to understand the specific needs of decision sciences research and education on the other. In my role as DSI President-Elect until March 31st, I participated in the annual conference of the Indian Subcontinent DSI and now as DSI President am planning to participate in the annual conferences of the European DSI and the Asia-Pacific DSI. I intend to report the lessons learned from these visits in my next communication as DSI President.

- **DSI is fostering academic-industry partnerships:** Since its beginning, DSI has equally emphasized academic teaching and research on one side and training and practice on the other. However, over time, our publications and conferences do not seem to include much industry participation. Therefore, during the 2017 and 2018 annual conferences, we are making serious efforts to invite practitioners from the industry to participate in our conferences as keynote speakers, panelists, paper presenters or participants. In addition, we have initiated efforts to bring back our emphasis on activities that enhance teaching effectiveness and relevance to the practice of decision sciences.
- **DSI is clarifying its value proposition to its members:** During my visits to various conferences and discussions with many DSI members and conference participants, it became clear to me that we must articulate a defined DSI value proposition to its members. This is partially understandable because of the eclectic nature of our DSI membership and perhaps its

disciplines. Nevertheless, a clarification of DSI's value proposition to its members will be helpful in communicating the role DSI plays in career development and enhancement of its members. Therefore, the DSI Board of Directors has initiated a project to develop a flyer that clearly articulates the DSI value proposition to its members. Such a flyer will also be useful in attracting new members by highlighting the benefits of being part of the DSI family.

An invitation to participate in DSI

It is clear from the above description of activities that a lot of work is being done to maintain and enhance contributions that DSI makes to its members and profession. However, successful completion of these activities depends on the fullest extent of active participation in carrying out these works by its members. DSI is our professional home and society. It was created by us—for us, and hence, it is up to us to enable it to contribute to our professional growth and career enhancements. My visits to various DSI regional conferences affirms my belief in the value that DSI provides to its members

and the decision sciences profession.

In this regard, please permit me to share my own experience of participating in professional and academic societies. Over almost fifty years of my professional and academic career, I have participated and volunteered for various activities and offices (elected and appointed) in associations like DSI. Each time I have undertaken a volunteer task with various societies, I have created more value for myself than the effort I had spent in doing the task. In addition, in doing this volunteer work, we assure that our future is bright and full of excitement. With this experience, I invite each of our members to come and play with us in jointly completing various activities that will create value for each of us and will enhance our society and profession. As is evident from the above list of current efforts and activities, there is ample variety in the activities and each one of us can participate in doing whatever we like and value the most. Rest assured that the water is warm and the swim is enjoyable. Thus, this is our invitation for everyone to jump in and have a good time.

*Jatinder (Jeet) N. D. Gupta,
President, Decision Sciences Institute*

DSI 2017 Annual Meeting

BY VIVIAN LANDRUM, EXECUTIVE DIRECTOR, DECISION SCIENCES INSTITUTE

2017 Annual Meeting of the Decision Sciences Institute in Washington, D.C.

PROGRAM CHAIR: Kathryn Steckel,
University of Texas at Dallas
ASSOCIATE PROGRAM CHAIR and
PROCEEDINGS
COORDINATOR: Xuying Zhao,
University of Notre Dame

The 2017 Annual Meeting of the Decision Sciences Institute will take place November 18 – 20 at the Washington Hilton in Washington, D.C. The theme for this year's conference is ***Innovative Decision-Making: Research to Practice.***



The conference will focus on research and education and professional development.

With 32 research tracks, five teaching tracks, five competitions, four consortias and ten workshops planned, as well as

keynotes, awards, receptions, mealtimes and entertainment, it promises to be a jam-packed three days. This year there are several new research tracks, including *Decision Analytics in Public Management and Government* and *Public Policy*. Two workshops added this year are *Presenting Business Analytic Results to Senior Managers* and *Successful Strategies for Online Course Development in OM/SCM*.

New this year is the Project Management Institute Best Case in Project Management award. This award will focus on Project Management: The Soft Side and/or the

Technical Side. Cases must be complete, unpublished and include a full teaching note. Topical areas on the behavioral side include communication, leadership, stakeholder management, ethics, human resources issues, and more. Topical areas on the technical side include project management principles, processes, planning, resource management, cost estimating, scheduling, risk management, quality control and more. Cases can take a decision or analytical perspective and should be full length. Deadline for submission is May 30. For detailed information including eligibility, submission requirements, and judging criteria please go to the DSI conference website at dsi-annual-meeting.org.

SCHEDULE

Friday, November 17

Conference Registration opens at 12 noon. Make plans to check into the host hotel and then take advantage of the nearby activities and restaurants available. Placement services begin.

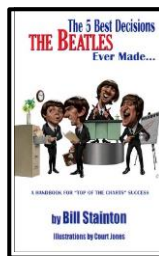
Saturday, November 18

The conference officially opens with sessions starting at 8:30 am and a variety of educational Exhibitors opening at 9 am. A New Member Welcome Reception will take place from 5 – 6 pm with hosted beverages and offers an intimate networking opportunity for new DSI members to meet and connect with contemporaries before the larger Welcome Reception.

Greet old colleagues and meet new ones while enjoying savory food and drink at the DSI Welcome Reception beginning at 6 pm. Enjoy the D.C. skyline as a glittering backdrop as the first day comes to a close.

Sunday, November 19

Another full day in store with the first speaker, Sridyar Tayur, offering his keynote *MI6: Math, Money, Merriment, Matching, Mortality and Moonshots* at 10:30 am. A seated luncheon, hosted by the DSI Fellows, will follow with motivational speaker/entertainer Bill Stainton. Stainton will expound on *The 5 Best Decisions the Beatles Ever Made . . . And Why You Should Make Them Too*. Evening is free to explore the sights, shops and restaurants of D.C.



Monday, November 20

Final day of sessions, exhibitors, meetings and interviews. Closing keynote speaker, Ralph Keeney, will offer *Value-Focused Decision-Making* at 10:30 am. The conference will close with the President's Reception and Awards Dinner starting at 6 pm. Enjoy sumptuous food and drink at this gala banquet which will recognize new award recipients and provide for final farewells to old acquaintances and new found friends.

For more information on the keynote speakers, visit page 8.

Hotel Reservations



The host hotel for the 48th Annual Meeting is the Washington Hilton, located at 1919 Connecticut Ave., NW. This Embassy Row Hotel puts you in the center of the most vibrant neighborhoods in DC, including Georgetown. Urban adventure awaits right outside the hotel lobby. The DSI contracted nightly room rate is \$189 per person. Reservations must be made by October 18 to receive the contracted rate. Visit the DSI website and make your reservations today.

DSI 2017 Registration Fees

Regular Domestic/International Member:

- Early (Sept. 15) - \$420
- Regular (Oct. 30) - \$520
- Late/Onsite (Nov. 1 – 30) - \$570

Emeritus Member:

- Early (Sept. 15) - \$200
- Regular (Oct. 30) - \$225
- Late/Onsite (Nov. 1 – 30) - \$250

Student Member:

- Early (Sept. 15) - \$125
- Regular (Oct. 30) - \$150
- Late/Onsite (Nov. 1 – 30) - \$175

Conference registration is scheduled to open online July 1. ***As a reminder, attendees of the DSI Annual Meeting are required to be Decision Sciences Institute members.*** For information to join or renew your DSI membership, please go to DSI.ORG.

We look forward to seeing you in Washington, D.C.

DSI Elevates November Conference in Washington, D.C. With Three Exceptional Speakers

The Decision Sciences Institute heads to the Nation's Capital for its 48th Annual Meeting, November 18 – 20, 2017. While networking and personal growth & development are the top reasons attendees flock to these conferences, this year two legendary keynotes and one entertaining/motivational speaker will offer attendees even more bang for their buck.



Ford Distinguished Research Chair and Professor of Operations Management at the Tepper School of Business at Carnegie Mellon University, the first keynote

speaker, **Sridyar Tayur**, is a noted entrepreneur and 'management thinker.' Recently elected to the National Academy of Engineering, he was recognized "for developing and commercializing innovative methods to optimize supply chain systems." Known for his work in Inventory Theory, Supply Chain Management, Lean Manufacturing, Operations Strategy and Healthcare Management, Tayur brings to the conference a wealth of knowledge from both research and teaching perspectives.

As a serial entrepreneur, Tayur founded the software company, SmartOps Corporation in 2000, providing enterprise-class supply chain optimization software solutions. He served as CEO for 12 years, and now serves as Founder and Advisor to the Board as SmartOps was later acquired by SAP AG. In 2011 Tayur launched OrganJet Corporation, a patient advisory and transportation service company for those in need of organ transplants.

Tayur offers the following as a prelude to his keynote for the DSI conference, titled "**MI6: Math, Money, Merriment, Matching, Mortality and Moonshots**"

Many of us aspire to simultaneously pursue these four goals in our professional lives: (1) publish innovative research (2) develop useful teaching materials (3) create economic value in a capitalist system and (4) improve social welfare in our society. I would like to take the occasion of this keynote to celebrate our vibrant and versatile field by discussing six of my interests ("MI6") and by highlighting seven startups.

1. **Math:** From Algebraic Geometry to Queuing Games, from Rapidly Mixing Markov Chains to Infinitesimal Perturbation Analysis, from Computational Mathematical Programming to Machine Learning, and more, from our quantitative arsenal ("Q-Branch").
2. **Money:** Software entrepreneurship in the 21st century has offered us — algorithmic experts — an unprecedented path to prosperity. I will briefly discuss my software company SmartOps (acquired by SAP).
3. **Merriment:** What's the point of doing math, making money, improving and saving lives, etc. if you cannot also be cheerful? I will discuss two startups, one in video game advertising (Massive Incorporated, acquired by Microsoft) and one in on-line fashion rental (Rent-the-Runway).
4. **Matching:** Continuing on our merry path, I will discuss more 2-sided platforms, one that matches Yoga (and Spinning etc.) studios with consumers (Zenrez). Turning a bit serious, I will discuss VocalID that is bringing voice to the voiceless.
5. **Mortality:** Stepping up on being serious. Using OrganJet, my social enterprise, as an anchor I will discuss how to make organ transplantation in the U.S. more fairly accessible while also increasing supply of organs and reducing waste.
6. **Moonshots:** Everyone should have at least one to contribute towards. I will discuss a

startup (MITRA Biotech) in the area of personalized cancer therapy.



The 2nd keynote speaker, **Ralph Keeney**, is an internationally recognized thought leader, consultant, researcher and educator. Research Professor Emeritus

of Business Administration, Duke University, and Professor Emeritus of Industrial and Systems Engineering, University of Southern California, Keeney specializes in the development, use and dissemination of decision-making concepts and techniques that help policy makers, governments, businesses and individuals facing important decisions structure their decisions in a logical manner that will promote better decision-making. He is an award winning author, with books and journals in more than 20 languages. A member of the National Academy of Engineering, Keeney has received numerous honors and awards for quality research and applications in the fields of decision analysis, risk analysis, operations research and systems engineering.

Keeney has made significant contributions to the fields of decision analysis and value-focused thinking. He applies precepts from operations research, management science and the decision sciences to important and challenging decision problems. His work includes: theoretical, methodological, and procedural contributions to decision analysis, risk analysis, and value-focused thinking and their applications. He promotes the decision sciences through education, speaking, and service.

Keeney's keynote is entitled: "**Value-Focused Decision-Making.**" He shares the following as an overture:

The only purposeful way you can influence anything in your life is by your decisions. Everything else just happens beyond your control, due to others' decisions and happenstance. Thus, your decision-making is important. Your decisions empower you to make contributions at work in businesses, organizations, and government and to enhance the quality of your life and those of your family and friends.

Quality decision-making is based on your decision-making skills, and we all can improve our decision-making skills. As with any skill, improvement requires understanding how one should do something well and then practicing the techniques to do it well. This presentation discusses procedures to enhance your skills and apply them to address five key issues in decision-making: understanding why you care and what you hope to achieve by making a decision, creating alternatives better than those readily available, creating win-win alternatives that will allow an authorized decision-maker (e.g. one's boss) to support the alternative you desire, proactively identifying decision opportunities that you could choose to face that offer significant benefits including preempting the occurrence of some future decision problems, and developing the strategic

objectives of the decision-maker (an individual or an organization) to provide guidance and consistency for all of the decision-makers decisions. Each of the procedures are practical to use and rely on common sense and focused effort.



The last, however certainly not least, featured speaker is **Bill Stainton**. Stainton is a multiple Emmy Award-winning TV producer, writer, and performer; an author; a business

humorist; and an internationally-recognized Beatles expert. He blends the business smarts he acquired from twenty years in corporate management with the show biz sparks he garnered from working with people like Jerry Seinfeld, Ellen DeGeneres, and Bill Nye the Science guy to create entertaining and enlightening presentations enjoyed by audiences around the world.

As the executive producer of Seattle's legendary comedy TV show *Almost Live!*, Stainton led a talented and highly creative team to unparalleled success: a #1 rating

for ten straight years, and over 100 Emmy Awards (29 of which went to Stainton). At the same time, he also owned his own corporate training company, authoring nine training programs in subjects ranging from Office Politics to Customer Service to Team Motivation. He's been quoted in *The Wall Street Journal* and *Forbes*, and is a regular columnist for *Seattle Business* magazine. From Maine to Malaysia, Stainton is committed to helping his audiences achieve their highest potential — while maintaining a sense of fun along the way.

Stainton's keynote, titled **"The 5 Best Decisions the Beatles Ever Made . . . And Why You Should Make Them Too!"** will prove that success in life is not a result of luck, a fluke or a break, but rather the result of specific decisions made. Stainton combines music, video and audience interaction for an entertaining, energizing and enlightening keynote.

These three speakers will offer various perspectives and insight on decision processes across disciplines. They are not to be missed. Make plans now to attend the DSI 2017 Annual Meeting November 18 – 20 in Washington, D.C.!

Attend the 2017 DSI Conference – And Enjoy Washington, D.C.!

In our March issue of *Decision Line*, we suggested you take a few extra days to enjoy the local sights in the "Capital City." With so much to see and do, it can be overwhelming to decide what to visit. To assist you in your choices, we shared information on The National Zoo, the Smithsonian Museums, The Capitol, The White House and The Philips Collection.

In this issue we will highlight world-renowned art galleries and museums you may enjoy visiting during your stay in D.C. Each gallery listed below is free of charge with the exception of the National Museum of Women in the Arts.



Leonardo da Vinci's Ginevra de' Benci.

National Gallery of Art

The National Gallery of Art was conceived and given to the people of the United States by Andrew W. Mellon (1855–1937).

Mellon was a financier and art collector from Pittsburgh who came to Washington in 1921 to serve as secretary of the treasury. During his years of public service he came to believe that the United States should have a national art museum equal to those of other great nations. Recognizing the importance of natural light to illuminate and unite the exhibition spaces, skylights cover virtually the entire three-acre roof. Because Mellon believed that visitors should learn from as well as enjoy the art in the collection, works are exhibited by period and national origin in appropriately decorated galleries. Found in this gallery is

the only painting by Leonardo da Vinci in the Americas, *Ginevra de' Benci*.

Smithsonian American Art Museum and Renwick Gallery

The Smithsonian American Art Museum, the nation's first collection of American art, is an unparalleled record of the American experience. The collection captures the aspirations, character, and imagination of the American people throughout three centuries. The museum is the home to one of the largest and most inclusive collections of American art in the world. Its artworks reveal key aspects of America's rich artistic and cultural history from the colonial period to today.



The Renwick Gallery

The Renwick Gallery is home to the Smithsonian American Art Museum's collection of contemporary craft and decorative art. The museum's home is a National Historic Landmark, the first built expressly as an art museum in the United States. The Renwick exhibits the most exciting works by artists exploring traditional and innovative approaches to making, emphasizing craft as an approach to living differently in the modern world.

Freer Gallery of Art and Arthur M Sackler Gallery

The Smithsonian Institution has two museums of Asian art: the Freer Gallery of Art and the Arthur M. Sackler Gallery. Both are physically connected by an underground passageway and ideologically linked through the study, exhibition, and sheer love of Asian art. In addition, the Freer Gallery contains an important collection of nineteenth century American art punctuated by James McNeill Whistler's Peacock Room, perhaps one of the earliest (and certainly one of the most controversial) art installations on record.

Each building has its own aesthetic. The Freer is designed in a classical style whose architectural nexus is a courtyard that used to house live peacocks in the museum's early days. The Sackler takes you on an underground journey and is home to Dr. Arthur Sackler's incomparable collection of art, including some of the most important ancient Chinese jades and bronzes in the world. In addition, the Sackler Gallery contains works that have been acquired in the last twenty years and also features the Perspectives series of contemporary art that greets and often surprises visitors when they first enter the Gallery.



Jahangir Preferring a Sufi Shaikh to Kings from the St. Petersburg Album

National Portrait Gallery

The National Portrait Gallery was authorized and founded by Congress in 1962 with the mission to acquire and display portraits of "men and women who have made significant contributions to the history, development, and culture of the people of the United States."



John F. Kennedy painting by William F. Draper

Today, the Smithsonian's National Portrait Gallery continues to narrate the multi-faceted and ever-changing story of America through the individuals who have shaped its culture. Through the visual arts, performing arts, and new media, the Portrait Gallery presents poets and presidents, visionaries and villains, actors and activists whose lives form our national identity.

The National Portrait Gallery contains an extensive collection of *Time* Magazine cover art, Presidential portraits, daguerreotypes, the nation's first ladies, artists and politicians, inventors and activists, actors and scientists.

Hirshhorn Museum & Sculpture Garden

The Hirshhorn features international modern and contemporary art in the celebrated Gordon Bunshaft designed cylindrical building, adjoining plaza, and sunken sculpture garden. The museum is a leading voice for contemporary art and culture and provides a national platform for the art and artists of our time.



The Hirshhorn Museum and Sculpture Garden

Highlights include an in-depth collection of modern masters and emerging artists; cutting-edge films; outdoor sculptures by Auguste Rodin, Alberto Giacometti, Barbara Hepworth, Henry Moore, Beverly Pepper, Jeff Koons, and Yoko Ono; temporary exhibitions highlighting major artists, important trends, and historical developments; ARTLAB+ in the Sculpture Garden, a radically inclusive digital media studio.

National Museum of Women in the Arts

Founded in 1987, NMWA is the only major museum in the world solely dedicated to recognizing women's creative contributions.

By bringing to light remarkable women artists of the past while also promoting the best women artists working today, the museum directly addresses the gender imbalance in the presentation of art in the

U.S. and abroad, thus assuring great women artists a place of honor now and into the future. There is an admission price of \$10 for adults and \$8 for students. Tickets can be purchased online.



National Museum of Women in the Arts

In our next issue of Decision Line, we will focus on cool and unusual things to do in Washington, D.C. – places for you to explore before and after the DSI Annual Meeting.

Carol Latta Memorial Award for Outstanding Early Career Scholarship

Deadline: October 3, 2017

Award Information

The Carol Latta Memorial Award for Outstanding Early Career Scholarship recognizes a scholar in the early stages of his or her career in the field of Decision Sciences and who has contributed to the Institute and its goals over the recent past. The award is presented at the Annual Meeting of the Decision Sciences Institute each November. The awardee receives a plaque and a \$500.00 honorarium.

Eligibility

To be eligible:

- A candidate being nominated must be a current member of the Institute in good standing who received his or her terminal

degree (e.g., Ph.D., DBA, etc.) within the past five (5) years.

- The nomination should come from a faculty member or academic administrator who is also a member of the Institute in good standing (no self-nominations).
- The nomination must include a recommendation letter on official university letterhead and a current curriculum vita (CV) of the candidate.
- The recommendation letter (no more than five pages) should explain why the candidate deserves to be recognized in terms of (a) impact of scholarship on the field of Decision Sciences, (b) excellence in teaching in the field of Decisions Sciences, and/or (b) contributions and service to the Institute.

Submissions

The nomination letter and candidate CV should be emailed to info@decisionssciences.org with *Carol Latta Memorial Award for Outstanding Early Career*

Scholarship in the subject line. Once received, a confirmation email will be sent to both the nominator and the candidate to acknowledge receipt.

Deadline

All nominations must be received by October 3, 2017.

Selection Committee

The Selection Committee includes the:

- Immediate Past President (Selection Committee Chair)
- VP for Member Services
- VP for Professional Development
- VP for Global Activities
- Recipient of the previous year's award

The Carol Latta Memorial Award for Outstanding Early Career Scholarship Committee and the DSI Home Office look forward to receiving qualified candidates for this prestigious award.

Supply chain economic and environmental balance: It's all in the cloud...Or is it?

by Dara G. Schniederjans, Douglas N. Hales, College of Business Administration, University of Rhode Island



Dara Schniederjans is an Assistant Professor of Supply Chain Management at the University of Rhode Island, College of Business

Administration. Dara has authored and co-authored research papers focused on theoretical elaboration and subsequent testing of models related to the interface of technology innovation and supply chain management. Her focus is on the ethical and societal adoption factors and implications. She has also co-authored text books and served as a guest co-editor for a special issue on "Business ethics in Social Sciences" in the International Journal of Society Systems Science. She has also served as an ethics track chair, website coordinator and new faculty development consortium co-coordinator for Decision Sciences Institute.



Douglas N. Hales is Area Coordinator and Professor of Supply Chain Management at the University of Rhode Island. He earned his PhD in 2005 from Clemson

University. His primary teaching expertise is Global Supply Chain Management and Lean Six Sigma. He has over 30 referred publications in journals such as the European Journal of Operational Research, International Journal of Production Economics, Journal of Business Research, Transportation Journal, among others. He has 40 international conference papers with presentations in eight countries.

Feature Editor's Note: Decision Line published a cloud computing article example in 2012 (see the references).

Anderson, J., 2012. Corporate culture and employee knowledge can positively influence the adoption of software as a service (SaaS). Decision Line. March.

Five years later, we're starting to see the impacts of cloud computing and the variables that can enhance or limit these impacts. The authors do a great job in explaining this in the style we like to use at Decision Line. It's say it is a worthy contribution.

Increasing supply chain network complexity has made it more difficult for supply chain managers to maintain efficiency in service levels while minimizing the carbon footprint of the network. Fortunately various technological innovations in information systems and the forthcoming digitization of the supply chain have provided an environment conducive for furthering economic competitiveness while at the same time promoting an environmentally sustainable network. Cloud computing is one information technology that has enhanced supply chain network collaboration while also balancing both economic and environmental facets of the supply chain network. This month's intriguing article examines the advantages of cloud computing, but then questions whether increased cost and energy use are affecting the economic advantages and the environmental impact. You will need to read the article to learn whether collaboration through cloud computing may deliver all the promised environmental benefits.

Kenneth E. Kendall Feature Editor

External regulatory and stakeholder pressure for organizations to become more environmentally sustainable is transforming the way supply chain managers are managing their network. Cloud computing is one technology that is becoming a key enabler for supply chain sustainable connectivity. With recent literature indicating substantial benefits in reducing energy and carbon emissions in comparison to on-premise IT infrastructures (Sloane, 2015), more supply chain networks are utilizing this technology to balance economic and environmental objectives.

Cloud Computing Can Benefit Supply Chains

Cloud computing is a virtualized IT resource that can be scaled based on service, payment, and privatization. Considered to be a "technology brokering" innovation (see Heriot and Kulkarni, 2001), cloud computing, provides the benefits of traditional in-house IT and web-based IT while adding benefits including: massively scalable services, capital saving, and rapid deployment of information.

Some common examples of cloud computing service scalability include user choice of three service options: software-as-a-service (SaaS), platform-as-a-service (PaaS), and infrastructure as a service (IaaS) (Doelitzscher, et al 2011). Payment scalability is provided through the elastic pay-per-minute or fixed/subscription based pricing models. Privatization is also available. Cost efficiency is perhaps the more notable benefit of cloud computing. Substantial cost savings have come from reduced support infrastructure needs as

well as through rapid processing and deployment of large data sharing capabilities (Jhang-Li and Chiang, 2015; Wu et al., 2013; Zorrilla and Garcia-Saiz, 2013). Traditionally separate data centers were maintained in-house with each supply chain entity utilizing capital expenditures for the maintenance and upkeep of each center. With advent of cloud computing, this is no longer the case, as energy expenditures and capital costs have greatly decreased (Pierce, 2011).

Cloud computing's ability to rapidly deploy information through real-time information sharing has also decreased transaction processing costs while reducing energy expenditures through the processing of large data in a smaller period of time.

Impacts of Cloud Computing on Economic and Environmental Performance

The increasing complexity of the supply chain network coupled with growing stakeholder pressure to decrease corporate environmental footprints has pressured organizations to seek out new opportunities to sustain a collaborative environment while balancing economic and environmental strategic priorities. The utilization of cloud computing in facilitating a collaborative supply network environment provides a unique contribution by leveraging the need to analyze vast amount of data with minimal time constraints. Our results (see Schniederjans and Hales, 2016 for the study on which this article is based) found that cloud computing not only positively impacts collaboration among supply chain partners, but also directly positively impacts a firm's economic and environmental performance directly. Surprisingly, the findings also suggest the collaborative environment provided by cloud computing use in the supply chain only partially enhances the economic performance of the firm and does not impact environmental performance. These results are in contrast to previous work which suggests traditional collaboration has both economic and environmental benefits (Thomas et al., 2011; Simpson and

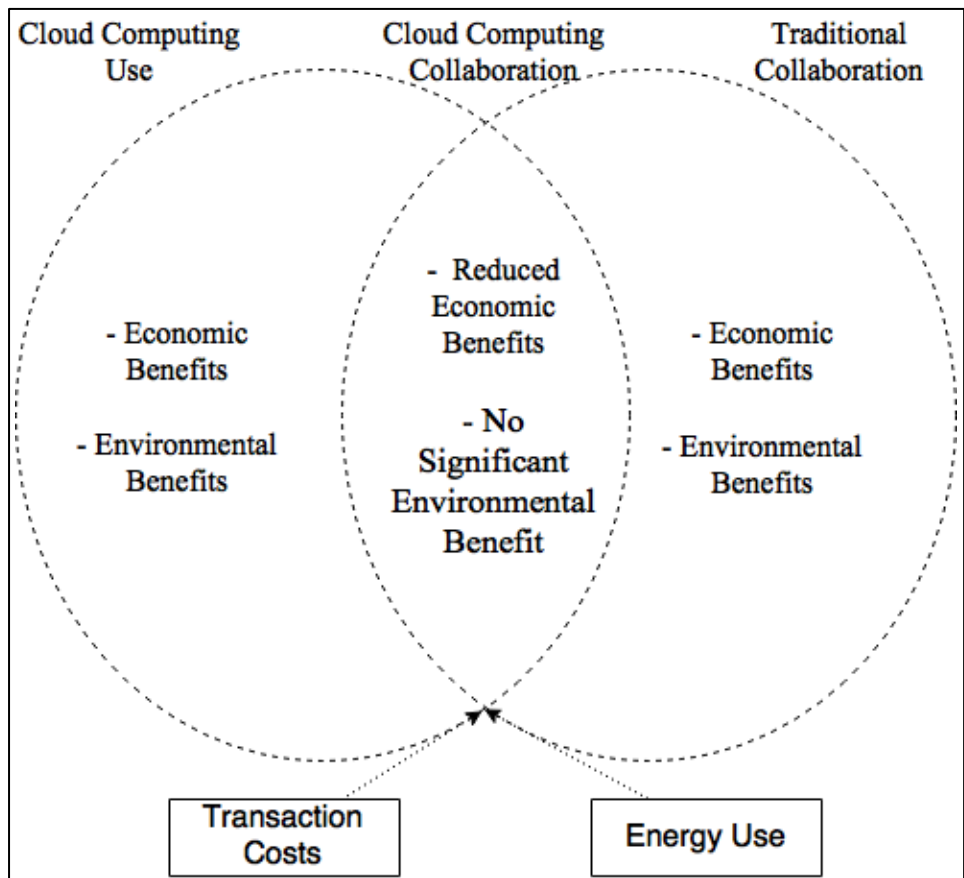
Power, 2005). We suspect there are a couple of reasons why these results occurred. One reason maybe that the collaborative environment fostered through cloud computing (or collaborative cloud computing use) may actually increase the amount of frequent two-way collaboration in a supply chain network. Evidently, this will increase energy use as well as some transaction costs even above traditional IT collaborative environments. Another reason might be with increased collaboration, organizational use of other less energy efficient information technology will likely impact the relationship between collaboration and environmental performance. The resulting increased transaction costs and energy use will have played a role in minimizing the positive impact on economic performance and negating the environmental benefits.

Figure 1. Collaborative cloud computing use Searching for Potential Economic and Environmental Advantages

Determining the reason why collaboration through cloud computing does not necessarily impact environmental performance and has minimized economic benefits is the next foreseeable step. Future research can incorporate case study and controlled experiments to determine potential reasons.

It is also important to consider the various functions and ways to utilize cloud computing which will impact the results of the model presented in Figure 1. For example, Anderson (2012) identifies one case study identifying how SaaS is implemented and utilized to create a collaborative corporate culture. Other studies have found the use of cloud computing with other IT creates inter-operability issues. Based on these findings, future researchers are encouraged to assess how cloud computing services can be combined to manage corporate competitive advantage from both an economic and environmental perspective.

Further, while the use of cloud computing appears to provide collaborative



performance benefits, the amount of data available to organizations is growing rapidly. Unfortunately, this has caused complexities with the both structured and unstructured data being shared (Delen et al., 2013). Proper cleansing of unstructured data can take an organization months. As such, future research should also assess efficient and effective cleansing of data in order to enhance its usability.

Advice to Supply Chain Professionals about Cloud Computing

So what can our findings teach supply chain professionals about the utilization of cloud computing? First, supply chain professionals should not assume cloud computing collaboration will ultimately lead to enhanced performance. The importance of understanding the ways in which collaboration and cost reduction are fostered through IT is fundamental in adoption decisions. Supply chain professionals should focus their efforts on finding cost effective IT platforms that are able to balance varied performance initiatives.

Second, there is a lot of questioning regarding the environmental impact of cloud computing. While conceptual literature has specified potential energy

savings (Marston et al., 2011; Iyer and Henderson, 2010), other literature suggests cloud computing may increase energy use (McKendrick, 2011). Our results provide evidence that although cloud computing directly impacts environmental performance through reduction of solid waste, consumption of toxic materials, resource consumption, and environmental reputation, collaboration through cloud computing may not.

References

- Anderson, J., 2012. Corporate culture and employee knowledge can positively influence the adoption of software as a service (SaaS). *Decision Line*. March.
- Delen, D., Demirkan, H., Data, H. 2013. Information and analytics as services. *Decis. Supp. Syst.* 55, 359-363.
- Doelitzscher, F., Sulistio, A., Reich, C., Kuji, H., Wolf, D., 2011. Private cloud for collaboration and e-learning services: from IaaS to SaaS. *Computer*. 91, 23-42.
- Heriot, K.C., Kulkarni, S.P., 2001. The use of intermediate sourcing strategies. *J. Suppl. Chain Manag.* 37, 18-26.
- Jhang-Li, J.H., Chiang, I.R., 2015. Resource allocation and revenue optimization for cloud service providers. *Decis. Supp. Syst.* 77, 55-66.
- Marston, S., Li, Z., Bandyopadhyay, S., Zhang, J., Ghalsasi, A., 2011. Cloud computing—The business perspective. *Decis. Supp. Syst.* 51, 176-189.
- McKendrick, J., 2011. Cloud computing's hidden 'green' benefits. *Forbes*. <http://www.forbes.com/sites/joemckendrick/2011/10/03/cloud-computings-hidden-green-benefits/>.
- Pierce, F., 2011. Study shows cloud procurement cuts carbon emissions. *Suppl. Chain Dig.* <http://www.supplychaindigital.com/procurement/study-shows-cloud-procurement-cuts-carbon-emissions>.
- Schniederjans, D. G., Hales, D. N., 2016. Cloud computing and its impact on economic and environmental performance: A transaction cost economics perspective. *Decis. Supp. Syst.* 86, 73-82.
- Simpson, D.F., Power, D.J., 2005. Use the supply relationship to develop lean and green suppliers. *Suppl. Chain Manag. Int. J.* 10, 60-68.
- Thomas, R.W., Fugate, B.S., Koukova, N.T., 2011. Coping with time pressure and knowledge sharing in buyer-supplier relationships. *J. Suppl. Chain Manag.* 47, 22-42.
- Wu, Y., Cegielski, C.G., Hazen, B.T., Hall, D.J., 2013. Cloud computing in support of supply chain information system infrastructure: Understanding when to go to the cloud. *J. Suppl. Chain Manag.* 49, 25-41.

CHERI SPEIER PERO, FEATURE EDITOR, Michigan State University

Articles in the current issue (Vol. 48, No. 2) of Decision Sciences Journal

The role of task uncertainty in it project team advice networks Mark Keith, Haluk Demirkan, and Michael Goul

Advice seeking is often the most critical success factor in today's IT project teams. To understand how advice seekers are motivated, we integrate the antecedents of advice seeking—as defined by network theory (Granovetter, 1983)—into a cost/benefit model based on expectancy theory (Vroom, 1964). To contribute to the research on advice network formation, we integrate the role of task uncertainty—one of the defining characteristics of IT projects—into that research (Wallace & Keil, 2004). Based on a controlled quasi-experiment, this study demonstrates that when task uncertainty is low, individuals with attractive personalities and similar demographics will be sought out for advice more frequently, regardless of their knowledge and resources (i.e., the benefits to the advice seekers). However, when task uncertainty is high, individuals with greater knowledge and access to resources are sought out more often in an advice network. These results provide clarity to prior research that has found mixed results concerning the effectiveness of the traditional antecedents to advice seeking (e.g., knowledge, power, and transactive memory) (e.g., Xu, Kim, & Kankanhalli, 2010a). In addition, project managers may choose to alter their team structure in order to optimize the advice network based on the anticipated level of IT project risk or task uncertainty.

Generating supplier benefits through buyer-enabled knowledge enrichment: a social capital perspective

David S. Preston, Daniel Q. Chen, Morgan Swink, and Laura Meade

In accordance with the tenets of social capital theory, the knowledge-based view

of the firm, and absorptive capacity theory we provide an integrative research model that sheds light on how suppliers can derive benefits from a strong relationship with key buyers. In particular, we examine three research questions that address: (i) the interrelationships among the three dimensions of buyer-supplier social capital (structural, cognitive, relational); (ii) the mechanism through which buyer-supplier social capital can influence supplier performance; and (iii) the contingency factors that influence the key relationships in the main model. We empirically validate the research model using data collected from a North America-based major electronic components distributor (i.e., the buyer) and 166 of its suppliers. The findings of our data analysis indicate that structural and cognitive social capital influence relational social capital. The findings also support that relational social capital allows for the transfer of knowledge from the buyer to the supplier, which in turn leads to greater supplier cost efficiency and innovation. However, the influence of buyer-supplier relational social capital appears to be less important in lengthier buyer-supplier relationships. The analysis also indicates that the benefits derived from a supplier's knowledge enrichment are significantly greater when the supplier possesses greater exploitative capacity. These findings provide important extensions to theory describing buyer-supplier relationships, as well as providing clear prescriptions for suppliers and relationship managers.

Visualization of innovation in global supply chain networks

Rahul C. Basole, Marcus A. Bellamy, and Hyunwoo Park



Dr. Cheri Speier-Pero is Professor of Information Systems and currently serves and the faculty director for MSU's Masters in

Business Analytics program. She has also served as the Associate Dean for MBA and MS Programs at The Eli Broad College of Business, Michigan State University. Dr. Speier-Pero received her Ph.D. in Management Information Systems from Indiana University in 1996.

This methodological note identifies and describes a data-driven visualization approach to study innovations in supply chain networks (ISCN). We demonstrate its value and applicability with illustrative examples to pertinent structure-related ISCN research questions in the global electronics industry. Our visualization approach can be used to reveal and understand important clusters, patterns, trends, and outliers of ISCN not necessarily identified with traditional methods. The broader aim of this note is to demonstrate the complementary value of emerging visual analytic approaches in managerial decision-making contexts and describe how actionable insights can be achieved.

The efficacy of a decision support system in enhancing risk assessment performance

Qian Song, Siew H. Chan, and Arnold M. Wright

A pervasive challenge for decision-makers is evaluating data of varying form (e.g., quantitative vs. qualitative) and credibility in arriving at an overall risk assessment judgment. The current study tests the efficacy of a Decision Support System (DSS) for facilitating auditors' evaluation and assimilation of financial and nonfinancial information in accurately assessing the risk of material misstatements (RMM) in financial information. Utilizing the proximity compatibility principle, the DSS manipulates the display of cues either in an integral (where pieces of information are displayed on one computer screen) or separable (where pieces of information are displayed on different computer screens) format. Based on cognitive fit theory, we expect that the integral (separable) display best supports financial (nonfinancial)

information processing, leading to enhanced risk assessment performance. In addition, we predict that consistent DSS display of financial and nonfinancial information facilitates risk assessment performance. Further, this study accentuates the importance of auditors' preference for presentation of financial and nonfinancial information and consistent presentation of all the information in strengthening the effect of DSS display format on risk assessment performance. We design a case which includes a seeded high fraud risk. A total of 112 audit seniors participated in the experiment where the DSS display format was manipulated and the auditors' RMM assessments and display preferences were measured. The results support the hypotheses and highlight the value of the DSS in enhancing risk assessment performance.

Coordinating a supply chain when facing strategic consumers

Tian Li and Man Yu

This article examines the impact of strategic consumers on the efficiency and coordination of a supply chain. We consider a supply chain consisting of a manufacturer and a newsvendor retailer selling a seasonal product to strategic consumers, who may choose to wait for clearance sales to maximize their intertemporal utility. Under a prenegotiated supply contract, the retailer chooses retail price and ordering quantity simultaneously. After that, the strategic consumers, who may be heterogeneous in their patience levels, make purchasing decisions. We find that strategic consumer behavior can hurt the supply chain efficiency due to severe double marginalization, and that a simple buyback contract can coordinate the supply chain.

Nevertheless, we show that the supply chain does become more difficult to coordinate when strategic consumers are present: the set of buyback contractual terms that coordinate the chain shrinks as consumers are more willing to wait, and the chain profit cannot be arbitrarily allocated between the firms. Contrary to popular intuition, this result implies that the retailer may enjoy some benefit from consumers' strategic waiting. In addition, we find that the retailer's gain is the highest when impatient and patient consumers are comparably mixed in the population.

Optimal strategies for traditional vs. Roth ira/401(k) consumption during retirement

James A. DiLellio and Daniel N. Ostrov

We establish an algorithm that produces an optimal strategy for retirees to withdraw funds between their tax-deferred accounts (TDAs), like traditional IRA/401(k) accounts, and their Roth IRA/401(k) accounts, in the context of a financial model based on American tax law. This optimal strategy follows a geometrically simple, intuitive approach that can be used to maximize the size of a retiree's bequest to an heir or, alternatively, to maximize a retiree's portfolio longevity. We give examples where retirees following the approach currently implemented by major investment firms, like Fidelity and Vanguard, will reduce their bequests by approximately 10% or lose 18 months of portfolio longevity compared to our optimal approach. Further, our strategy and algorithm can be extended to many cases where the retiree has additional, known yearly sources of money, such as income from part-time work, taxable investment accounts, and Social Security.

Report from the Northeast Decision Sciences Institute 2017 Annual Conference

The Northeast Decision Sciences Institute (NEDSI) 2017 Conference took place in Springfield, Massachusetts, March 22-25. The conference was held in the memory of our colleague and friend, Dr. Richard Briotta from Bay Path University, who was to be the NEDSI Program Chair for 2017. The NEDSI Board has established an award under Dr. Briotta's name for the best paper in the field of Knowledge Management and Strategy with a personal sponsorship from Dr. Carol Leary, the President of Bay Path University, as well as the NEDSI Board.



(Pictured from left to right) Dr. Joy Field, Mrs Briotta, Dr. Minoo Tehrani and Richard Briotta Best Paper Award Winner Dr. Wang

The NEDSI 2017 Conference included 175

accepted submissions by 298 authors from 127 different universities and organizations and 16 countries. The conference had thirty tracks and fifty-nine track chairs from nine countries.

The honor guest speaker was Dr. Charles Manz, a prominent scholar in the field of leadership and a bestselling author of over 200 articles and scholarly papers and more than 20 books. Dr. Manz is the Nirenberg Chaired Professor of Leadership in the Isenberg School of Management at the University of Massachusetts Amherst. Dr. Manz's speech was based upon his forthcoming book "Twisted Leadership: How to Engage the Full Talents of Everyone in Your Organization". The Meet the Editor Session was hosted by Dr. Robert Lussier, Springfield College; Dr. John Malindretos, William Patterson University; Dr. Matthew Drake, Duquesne University; Dr. Theologos Homer Bonitsis, New Jersey Institute of Technology; and Dr. Luis Eduardo Rivera-Solis.

Minoo Tehrani, NEDSI 2017 Conference Program Chair

Winners of Richard Briotta Best Paper Award in Knowledge Management/Strategy

The Social Dimension of Knowledge Management: A Qualitative Analysis of Multiple Cases of Social-Media-Based Knowledge Sharing

Shouhong Wang, University of Massachusetts Dartmouth

Hai Wang, Saint Mary's University

Winners of the Best Presentation Award, Undergraduate Student Category

Winners of the first and the second place for the best presentation at the Undergraduate Student Category



(Pictured from left to right) Emily Blackburn, Meredith Bryden, Alison Page, Francesca Montemarano, Jillian Katz, Roger Williams University

Message from the SWDSI 2017 President

With the support from DSI, Southwest Decision Sciences Institute (SWDSI) held a successful conference in Little Rock, Arkansas! On behalf of the 2017 SWDSI Conference Team, We appreciate your participation in this conference.

Please join me in thanking Dr. Jatinder (Jeet) Gupta, our DSI President for his remarks at the SWDSI Executive Officers' Meeting and Business Meeting.



SWDSI Conference Team with DSI President Jatinder (Jeet) Gupta (center).

This year, the SWDSI team received an impressive number of over 150 submissions across twenty-two different

tracks. These results were due the efforts of Program Chair Dr. Mark McMurtrey who put the SWDSI program together. The work performed by the track chairs, committees, panelists, reviewers, organizers, and board members is greatly appreciated.

In addition to these paper presentations, there were special sessions including workshops, panels, and consortiums as follows:

- Introduction to Predictive Analytics Using SAS Enterprise Miner
- Journal Editors Panel
- The Explosion of Analytics in Health Care
- Big Data and Special Topics
- Doctoral Consortium

At the SWDSI business meeting, we will recognize the recipients of the SWDSI Distinguished Service Award and the best paper awards. Please come and join us in congratulating these award recipients for their achievements.

- Recipient of the SWDSI 2017 Distinguished Service Award
Dr. John Seydel, Arkansas State University

Recipient of the 217 Federation of Business Discipline Distinguished Paper Award
"Corporate Lobbying and Labor Relations

Evidence From Employee Level Litigations"
Omer Unsal, University of New Orleans
M. Kabir Hassan, University of New Orleans
Duygu Zirek, University of New Orleans

Recipients of the 2017 Best Student Paper Awards

"Does Corporate Social Responsibility Influence Consumer Mindset? "
Ahasan Harun, University of North Texas

"Investigating Trust in Information and Impression Management of Students on Facebook"
Guruprasad Gadgil, University of North Texas

"Cloud Computing Services Acceptance: The Effect of Security and Privacy"
Duha Al Smadi, University of North Texas

Thanks are due to the delegates of SWDSI 2017 for making the SWDSI association event a success again this year. I would like to specially thank the following committee members.

Nomination Committee: Peggy Lane (Chair), June Lu, Victor Prybutok

Distinguished Service Committee: Robert Pavur (Chair), Paul Cronan, Binshan Lin, James Parrish, Eugenie Ardoin



Dr. John Seydel, receiving the SWDSI 2017 Distinguished Service Award from Robert Pavur.

Outstanding Educator Committee: Kai Koong (Chair), David Douglas, Michael Hanna, Brandon Phillips, Ramakrishnan Thiagarajan

Strategic Planning Committee: Peggy Lane (Chair), Paul Cronan, Binshan Lin, Robert Pavur, Michael Hanna

The SWDSI association had several major accomplishments this year. These accomplishments were made by an excellent team who worked very diligently. I would like to thank all the current SWDSI officers and members from the bottom of my heart.

Thank you everyone for your help and support to me and SWDSI. I hope we see all of you in Albuquerque, New Mexico in March 2018!

With warm regards,

Hong
Dr. Hong Qin
2016-2017 President, Decision Sciences Institute, Southwest Region

More photos from the SWDSI 2017 Conference



KIRSTEN M. ROSACKER, FEATURE EDITOR, Minnesota State University Mankato

Book Review: My Own Words by Ruth Bader Ginsburg with Mary Hartnett and Wendy W. Williams



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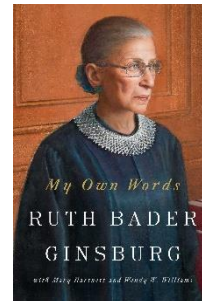
Joan Ruth Bader was born on March 15, 1933 in Brooklyn New York. Jewish traditions were part of her youth. As Bader's Brooklyn public school kindergarten class had several students named Joan, she became known as Ruth Bader. Ruth excelled in her education and graduated at the top of her high school class. She attended Cornell University on a full scholarship majoring in government. She met Marty Ginsburg during her freshman year at Cornell. They bonded over their "shared intellectual interests and abilities" as well as their mutual love of opera (p. 26). Shortly after Ruth's graduation from Cornell in 1954, she and Marty were married. On her wedding day her mother-in-law offered Ruth advice which she followed not only in her marriage but in each work environment she encountered. "In every good marriage it helps sometimes to be a little deaf (p. xv)." Ginsburg credits much of her success to Marty, life partner and husband of 56 years.

Ginsburg tied for first in her class when she graduated from Columbia Law School in 1959, yet struggled to find employment within the legal profession which was male dominated at the time. She served as a law clerk for Judge Edmund Palmieri, U.S. Court for the

Southern District of New York and then turned to academia where she worked on the Columbia Law School Project on International Procedure. In 1963 when Ginsburg joined the Rutgers Law School faculty, she was one of less than 20 tenure track females at AALS schools. She earned tenure at Rutgers Law School in 1969.

Once tenured her focus moved from principles governing court procedures in the United States and abroad to gender equality (p.113). In a single month, Ginsburg read every federal decision published involving women's legal status as well as every law review article on the subject. Ginsburg noted "this was no grand feat. There were not many decisions, and not much in the way of commentary" (p. 114). In 1972 Ginsburg became the first tenured female law professor at Columbia University Law School. During her time in academia Professor Ginsburg published many articles addressing the developing law of gender equality. Additionally, working with the American Civil Liberties Union (ACLU), she submitted briefs in 24 Supreme Court cases. The book describes a fair number of these articles and cases.

President Carter appointed 40 women to lifetime federal judgeships, including, Ginsburg to the U.S. Court of Appeals for the D.C. Circuit. During her time in this position, Ginsburg was known as "progressive in outlook, wise in judgement, balanced and fair in her opinions (p. 173). In 1993 President Clinton nominated Judge Ginsburg to the Supreme Court. Her nomination was confirmed by the Senate in a vote of 96-3.



Justice Ginsburg describes the work of the Justices on the U.S. Supreme Court as "ever challenging, enormously time consuming and tremendously satisfying" (p. 59).

The courts responsibility is to repair "fractures in the federal law, to step in when other courts have disagreed on what the relevant federal law requires (p. xvii)." While the Justices clearly disagree on certain topics, customs are maintained to promote collegiality among the nine Justices (p. 56). For example, the Justices shake hand before entering the Court. Many of the Justices eat lunch together at which time they discuss cases, current cultural events, and their families. Justice Scalia once stated "I attack ideas. I don't attack people. Some very good people have some very bad ideas. And if you can't separate the two, you gotta get another day job" (p. 41).

The book contains Justice Ginsburg's life story and a collection of her speeches and writings, which allows the reader to gain a glimpse into the workings of the Judicial system. I look forward to reading her biography when it is written and published at a future date.

The book (ISBN-978-1-5011-4524-7) is published by Simon & Schuster (October 4, 2016), contains 401 pages and costs approximately \$18.00

The Metamorphosis of Management Science

by Arben Asllani, University of Tennessee at Chattanooga



Arben Asllani is a Marvin E. White Professor of Business Analytics and Information Systems at the University of Tennessee at Chattanooga with over twenty years in research, teaching, and university service. He is a recognized author, scholar, teacher, and consultant in the areas of business analytics, cybersecurity, information systems, and management science. His is author of book on business analytics and has more than 70 papers in peer reviewed journals and proceedings, including journals, such as *Omega*, *Transfusion*, *European Journal of Operational Research*, *Knowledge Management*, and *Computers & Industrial Engineering*. As a post-doctoral Fellow of Cybersecurity, Dr. Asllani serves as consultant and trainer to a variety of business and government agencies.



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In keeping with the convention that the purpose of any science is to produce useful models for analysis of reality, management science (MSc) seeks to design, develop, and implement optimization and heuristic models of real-life scenarios to achieve specific managerial goals under given constraints. Since the early twentieth century, when the principles of scientific management took shape, MSc has evolved in an attempt to offer solutions to lasting problems and, in turn, developed innovative understandings of new changes in the business world. Recently, the business world of MSc has experienced significant transformations as the realities of business have come to require the use of big data. In response to those changes, this paper examines the shifting nature of business models and their implications for the methods, methodologies, and tools of MSc. A better understanding of the MSc metamorphosis can help operations researchers in developing new models and identifying future areas of research, as well as benefit practitioners and decision makers in the face of new challenges. By extension, curriculum designers can also use our suggestions in incorporating MSc topics into new business analytics programs.

The business of any science is to develop new understandings of past, persisting, or newly identified natural phenomena (Jackson, 1996). In the case of MSc, those phenomena have dramatically changed as business organizations have entered the era of big data. Every hour, Wal-Mart, for example, handles more than a million customer transactions and generates over 2.5 petabytes of data. That amount of data and information is continuously placed in digital storage, which has become less and less expensive, as predicted by Moore's law. Like Wal-Mart, successful organizations evaluate vast amounts of data and convert them into business

insights for better decision making. For instance, some web statistics suggest that by better integrating big data, healthcare organizations could together save as much as \$300 billion per year (Wikibon, 2012), which equals reducing annual costs by USD \$1,000 for every man, woman, and child in the US. For a typical Fortune 1000 company, a mere 10% increase in data accessibility can result in more than \$65 million in additional net income (McCafferty, 2014). Unsurprisingly, MSc techniques have thus become the weapon of choice for successful managers, all of whom need to be able to work with that sort of data and make sense of all of that information.

Davenport (2013) coined the term *prescriptive analytics* to describe models that "involve large-scale testing and optimization and are a means of embedding analytics into key processes and employee behaviors" (Davenport, 2013, p. 70). The 44th Annual Decision Sciences Institute Meeting in 2013 recognized changes introduced in the business world by big data and challenged its members to rediscover their decision analytics roots. With big data, innovation, and new technologies in the spotlight, traditional MSc models have become more complex and come to exhibit new characteristics, which in turn has forced scholars and practitioners to develop better techniques and acquire new problem-solving tools.

Consider the classic traveling salesman problem (TSP), a true representative of traditional MSc and how it has evolved into its modern version. TSP was first identified by mathematicians Hamilton and Kirkman in the 1800s (Biggs et al., 1986) and later formulated in 1930 by Lawler et al. (1991). Ever since, TSP has

been one of the most intensively studied problems in MSc and computational mathematics. In the problem, which presents a list of cities and the distances between each pair of adjacent cities, the goal is to find the shortest possible route that stops at each city exactly once and ultimately returns to the origin. The problem is a very complex, NP-hard one, especially when the number of cities is large. TSP can be presented graphically, with edges and vertexes, and Hamiltonian circles can be used to generate all possible solutions. A linear programming (LP) model can also be used to find the optimal solution when the number of cities or destinations is small. As in many other MSc techniques, when the number of decision variables increases, the decision maker confronted with TSP can employ alternative techniques. In that case, the brute force attack and nearest neighbor algorithms can be used; whereas the brute force attack is an inefficient algorithm that generates an optimal solution, the nearest neighbor algorithm is efficient but does not yield an optimal solution.

A modern version of TSP arguably confronts the unmanned aerial vehicle (UAV), an aircraft without a human pilot on board. The problem for any UAV is similar: to fly over several destinations and return to home via the shortest possible flying distance. However, that modern version of TSP presents new challenges. The traditional TSP assumes that the decision maker knows in advance the number of cities to visit and the distance between each pair of adjacent cities. Although that requirement might be true for UAVs, more often than not, the information is constantly updated via human remote controller or sensors. At any time, position, and movement, sensors give information about the state of the vehicle. As such, using LP and the brute force attack algorithm becomes impractical for UAVs' scheduling problems, and the nearest neighbor algorithm becomes the method of choice instead.

A comparison of the TSP and UAV problem can provide an intuitive explanation of changes in the world of analytics in general and MSc in particular, in which sensors and other components of the Internet of Things (IoT) produce data and information in high volumes, at high speeds, and in great variety. In this paper, we will further investigate the impact of big data on MSc in today's dynamic business environment, as well as describe several challenges faced by decision makers when implementing MSc techniques.

The Impact of Big Data on MSc

By definition, *big data* refers to a combination of structured, in-house operational databases with external databases, containing automatically captured and often unstructured data from social media networks, web server logs, banking transactions, webpage content, and financial market data, among many other sources. To characterize big data in this paper, we consider three Vs: volume, velocity, and variety (Laney, 2001; Dumbill, 2012)¹.

Volume

Today, organizations use internal and external databases to generate and store large amounts of transactional data, from a high volume of transactions captured in structured and unstructured records. Those sources are then combined into denormalized data warehouses. Since denormalized data are intentionally redundant, they yield a high volume of data, which should generally improve the accuracy of the input variables in MSc models. Statistically speaking, the more data points that exist for input variables, the more reliable the variables are. To automatically capture and process those input variables, good MSc models can use known extract-transform-load (ETL) processes, which allow the live stream of input data by querying transactional records. The automatic capturing and processing of input data allow practitioners to design optimization

models embedded within business processes (LaValle et al., 2011) and to periodically adjust input parameters as a means to produce dynamic optimal solutions.

Variety

Variety refers to the mix of different data formats that derive from different sources. Variety is an important dimension of big data that is usually considered to be a limitation or additional challenge when implementing optimization models. Since MSc models require the input data to be uniform, adding the ETL layer between the data sources and optimization models can mitigate variety-related issues. The transform component of the ETL layer can then be used to convert data in the format required by the optimization models.

Velocity

Velocity refers to ever changing nature of input data. Today, data and information are generated and flow into optimization models at a far greater rate. Trends such as mobile computing, online sales, and the use of smartphones and social media networks produce new data far more often than in the past. For example, digital smart meters, which continue to replace traditional meters in households, allow electric power companies to read usage every 15 minutes instead of once a month. Such fast-moving data offer new opportunities for real-time business intelligence.

The recommended approach for accommodating the three Vs of big data involves implementing a process-driven model for data processing in the so-called magnetism, agility, and depth (MAD) approach (Cohen et al., 2009). Building a magnetic system can attract not only good data, but all data, including outliers, missing values, and unstructured data. The MAD approach allows data scientists to better represent the state of the system, since building an agile system enables the collection and adaptation of data from heterogeneous sources. Agile models allow decision makers to manage heterogeneous

¹ There are other sources that recommend four or five Vs to describe big data.

However, we believe that volume, variety, and velocity are true characteristics of big

data. Other Vs simply describe data in general.

data sources, replace missing values, and perform data imputations, if needed. Lastly, a deep optimization model assumes the direct connection of optimization packages with operational databases, as well as supports not only complex statistical analysis, but also machine learning and other optimization models (Cohen et al., 2009).

The availability of more data allows organizations to explore, formulate, and solve previously unsolvable problems. However, the successful implementation of optimization models in the era of big data requires decision scientists not only to be able to store and process large amounts of data and information, but also to modify their problem-solving methods to better accommodate big data. Today, technologies such as cloud computing and distributed file systems have dramatically increased the ability of businesses to store and process information. Those technologies also offer large, dynamic distributed platforms for organizations to process input parameters and solve large-scale models. However, current big data algorithms (e.g., MapReduce), which run in distributed files systems (e.g., Hadoop) are embarrassingly parallel. This is a term used in computer programming to describe problems that can be divided into a large number of parallel tasks with little effort. As such, big data platforms, which engage multiple clusters, are not suited to run advanced MSc models. For example, an LP model traditionally requires decision makers to optimize a given goal under a predefined set of constraints. Finding a feasible solution within that construct requires input variables to be located in a single cluster. Accordingly, in the era of big data, genetic and other evolutionary algorithms can be used far more successfully to solve LP models than the traditional simplex methods.

The implementation of MSc models requires data scientists to consider a trade-off between less-than-optimal, but nevertheless practical solutions and optimal, but nevertheless complex and often delayed solutions. In sum, an approximate answer to the right problem is worth a good deal more than an exact

answer to an approximate problem (Sashihara, 2012).

Conclusions

Changes in the real-life problems that MSc seeks to solve necessarily mean that MSc is changing. Accordingly, information has become the key raw material for optimization processes, which, in the era of big data, can be called big optimizations (Sashihara, 2012). Successful companies such as Amazon and Google are at the forefront of incorporating big data for big optimizations. While Amazon consistently strives to reduce the delivery times of their orders (Levy, 2011), Google has paved the way for big data optimization strategies, with search engine optimization that captures, processes, and produces insights from large datasets (Sashihara, 2012).

However, as business analytics models continue to be widely implemented in the business world, the challenge of converting big data into optimal decisions and actions remains. To meet that challenge, practitioners and scholars of MSc need to not only revisit their roots and better understand and implement traditional MSc tools and techniques, but also modify their approaches to better accommodate new business models affected by high volume, wide variety, and high velocity of data. Some of the changes in MSc are summarized below, using the acronym SMART because these changes can create smart MSc models that better accommodate big data.

SMART changes of MSc refer to:

- Streaming data;
- The MAD approach;
- Automatic decision making processes;
- Real-time operational intelligence; and
- Traditional tools and techniques.

SMART MSc models need to be prepared to process streaming data as business transactions generate them in high volumes. To that end, the MAD approach allows the models to attract all data from multiple and heterogeneous sources while replacing missing values. At the same time,

smart MSc models are also directly connected with operational databases and can moreover enable decision support systems to dynamically respond to ever-changing data input and provide automatic solutions, free of human interaction with the system. In that sense, generating real-time actionable operational business intelligence is the new goal of MSc models. We are confident that modern MSc will never fully replace or contradict the traditional values of the field. On the contrary, the new models always need to be rooted in the tools and techniques developed during the last century. Although the mentioned SMART elements are necessary, they do not mark sufficient changes in MSc in the era of big data. Further empirical research is needed to better understand the metamorphosis of MSc.

References

- Biggs, N. L., Lloyd, E. K., & Wilson, R. J. (1986). *Graph Theory 1736-1936*. Oxford: Clarendon Press.
- Cohen, J., Dolan, B., Dunlap, M., Hellerstein, J. M., & Welton, C. (2009). MAD skills: New analysis practices for Big Data. *Proceedings of the VLDB Endowment*, 2 (2), 1481-1492.
- Davenport, T. H. (2013, December). Analytics 3.0. *Harvard Business Review*, 65-72.
- Dumbill, E. (2012, January 11). *What is big data?* (O'Reilly Data) Retrieved May 14, 2014, from <http://strata.oreilly.com/2012/01/what-is-big-data.html>
- Jackson, E. A. (1996). *The Second Metamorphosis of Science A Second View*. Retrieved March 12, 2017, from Santa Fe: <http://samo.santafe.edu/media/workingpapers/96-06-039.pdf>
- Laney, D. (2001, February 6). 3D data management: Controlling data volume, velocity, and variety. *Application Delivery Strategies*.

LaValle, S., Lesser, E., Shockley, R., Hopkins, M. S., & Kruschwitz, N. (2011, September 8). *Big data, analytics and the path from insights to value*. Retrieved May 19, 2014, from INFORM: <http://www.analytics-magazine.org/special-reports/260-big-data-analytics-and-the-path-from-insights-to-value.pdf>

Lawler, E. L., Lenstra, J. K., Kan, A. R., & Shmoys, D. B. (1991). *The Traveling Salesman Problem: A Guided Tour of Combinatorial Optimization*. John Wiley & Sons Inc.

Levy, S. (2011, 11 13). *Jeff Bezos owns the Web in more ways than you think*. Retrieved May 28, 2014, from Wired Magazine: http://www.wired.com/2011/11/ff_bezos/al1/1

McCafferty, D. (2014, February 2). *Analytics/Big Data*. Retrieved March 20, 2017, from Surprising Statistics About Big Data: <http://www.baselinemag.com/analytics-big-data/slideshows/surprising-statistics-about-big-data.html>

Sashihara, S. (2012, April 17). From Big Data to Big Optimization: What every executive needs to know. *The European Financial Review*, Online.

Taylor, F. W. (1919). *The Principles of Management Science*. New York and London: Harper and Brothers Publishers.

Wikibon. (2012, August 1). Retrieved March 15, 2017, from A Comprehensive list of Big Data statistics: <http://wikibon.org/blog/big-data-statistics/>

Should You Negotiate the Job Offer? Guidelines for a PhD Student

by Varun Grover, University of Arkansas

You just received the phone call with an offer. This was the one you wanted. You are excited. The many years of hard work, late nights, criticism, and challenges that you faced through the doctoral program are finally (and literally) paying off. You still have that nagging dissertation pending, but at least you know that it all ends well – and you will soon be in a tenure track position in a place you want to be.

Your initial inclination is to quickly accept the offer and be done with the whole process. By doing this, you can cancel the pending campus visit (which you feel exhausted just thinking about) and focus on your dissertation. But then a thought occurs to you. **Should I negotiate the offer?** Mulling over this issue you wonder (1) why the offer is not as good as some of the others in your peer group have received based on what you have heard, (2) whether this offer is just a starting point and negotiation is expected...in not negotiating would you not be doing what is expected, (3) if getting the most you can upfront is important – especially since you know that once you are in the academic system salary compression is inevitable (4) if negotiating would “turn off” your potential employer, and start you off on the wrong foot and (5) if you would be any good at negotiating ...after all you have largely been conditioned in the PhD program to not make too many “waves.”

These issues could all have some validity. In my 30 odd years of experience working with doctoral students, they often come to me delighted with their offers and some trepidation about negotiation. My advice is simple. *If the student has some apprehension about the offer they should negotiate.* Even in cases where the offer was given as “the best they can do” or in markets with high supply and low

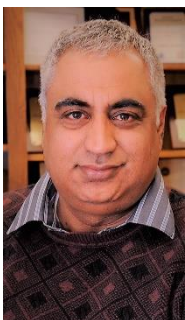
demand, there might still be room for negotiation. I tell them – what is the worst that can happen? The school might say no. I have never heard of a case where an offer is rescinded because the student negotiated. I also advise them to not think of negotiation as a particularly unique skill and it does not need to be (and should not be) confrontational. They can do it. After all, the very fact that they have received an offer indicates that there is some level of mutual interest and commitment between the two parties.

So, what are the guidelines for negotiation? While any good book on negotiation might answer this question, I offer some guidelines and tips below, based on my experience with doctoral students in the academic job market. Some of these guidelines are just common sense, while others are takeaways from cases with which I have been directly or indirectly involved in. I divide this into the what of negotiation and the how of negotiation.

The What (Parameters of Negotiation)

First, you determine the parameters of negotiation. This is for you to do some introspection about the offer. What are the components of the offer, and what can be negotiated? Typically, in academia (tenure track offers) the following can be subject to negotiation:

- Salary (amount over the academic year)
- Teaching load (usually can be reduced in early years, although permanent reduction is tough since it is fixed by the institution)
- Summer support (number of summers, amount received as research money each summer, teaching options for pay in summer)



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extensively in the information systems field, with over 220 publications in major refereed journals. Over ten recent articles have ranked him among the top four researchers based on number of publications in the top Information Systems journals, as well as citation impact. He is Senior Editor for MISQ Executive, Section Editor of JAIS, and Senior Editor (Emeritus) for MIS Quarterly, the Journal of the AIS and Database. Dr. Grover is recipient of numerous awards from USC, Clemson, AIS, DSI, Anbar, PriceWaterhouse, etc. for his research and teaching. He is a Fellow of the Association for Information Systems.

- Tenure (earliest point at which you can go up for tenure, although this is often fixed by the institution for fresh PhDs)
- Research Budget (amount of startup funds)
- Conference Support (number of conferences and/or dollar amount)
- Support: (graduate assistant hours, startup computer budget)
- Expenses (moving expenses)
- Time to accept (latest point at which you must accept the offer)

Of these, you should determine which ones are very important to you and which ones are not as important. Correspondingly, identify the ones that are acceptable to you based on the current offer, and which ones are not. By dividing the parameters of negotiation into this 2X2, you can get a good sense of where you should spend your negotiation energy. Items that are important to you and are unacceptable are the ones you should target. All the others (not-important/acceptable; not-important/unacceptable; important/acceptable) should not be the primary focus of negotiation.

The How (Approach to Negotiation)

In general, a key aspect of negotiation is establishing a *quid-pro-quo*. Therefore, a statement like: I want \$X or I will not accept anything less than N summers of support are generally terrible negotiating tactics. This is because they sound more like one way ultimatums – give me this or else. They also sound like demands where you are taking but you are not giving anything back. A better negotiating tactic is where you provide a clear rationale for your request (I did not say demand). This could be based on the market (i.e., other offers you have or have knowledge of) or better still based on what you bring to the table (e.g., express your willingness to teach the courses they need taught at the highest level and also your broad repertoire of teaching skills). Artfully, conveying what you bring to the table (without bragging), reinforces what they are getting and puts your request in a reasonable light. Of course, to do this

well, you need to have some sense of what they value – something you should have been able to assess through the preliminary interview and campus visit. Another important aspect of negotiation is to be polite and not come across as being petty. This requires a sensitivity to the person and their context. For instance, if you are going to a school that is well resourced for research, and you push hard for a few hundred dollars in research or computer budget, it could come across as petty. You should have a general sense from conversations on your campus visit that the department has significant resource flexibility. So, while persistence could be good in negotiation, it should not get to the point of being viewed as an annoyance. Remember, the person at the other end will do more for you if you are likable – and they really want you as a colleague.

Related to this issue is the broad understanding of the situation. This requires some information you have, as well as some “feeling out” of the situation based on your conversation. You may have some idea that there are a few other acceptable candidates. This may affect the mindset of the person you are negotiating with. Perhaps you were not his/her first choice. In such a case, they may not be willing to negotiate too hard, recognizing that if you turn them down, there is a “better” candidate in the wings. So, the negotiation discussion should strongly focus on the value (and collegiality) you bring to the institution. Similarly, awareness of the constraints faced by the institution. Perhaps things that may be simple in some schools (e.g., reduced teaching load) might require the department chair to get special permission from the dean (or has no precedent) in others. So, just because your peer received it – does not mean that your institution can readily do it. You can feel out the hard constraints and back off on those during negotiation.

Another important aspect of negotiation is to have a positive attitude. Be upbeat, and not come across as a constant complainer about the offer. Reiterate

your strong interest in the job, so that the person you are talking to (typically the department chair or dean) does not feel that they are wasting their time getting things approved – and you will end up not taking the offer.

If you have multiple requests (in the “what” of negotiation), then try to put them all on the table together. It could be frustrating if you make a request that requires hurdles to approve and after all that you come up with yet another one. Requests in parallel rather than series, can frame the negotiation early – providing the basis for a conversation on positions, flexibilities and constraints. In these discussions, be willing to drop some items (particularly ones that are not that important to you) – as it clearly gives a sense of *quid pro quo*, as well as reasonableness and flexibility.

Similarly, you might be put in a position to reveal information – like – do you have other offers? What schools? How much are they offering? What is the likelihood of accepting ours? In responding, try to understand the intent of the question. Perhaps the reason they want to know is that they are genuinely concerned that you will not accept the offer. Your response can then focus on providing assurance that you are very serious. Honesty is generally a good idea.

Finally, if there are issues that meet you half way (e.g., you wanted research support for 4 summers, but they offered two and agreed to extend it to 3) you still have the luxury of “talking to family” so that you can mull over the compromise. Also, once changes are made to the offer, make sure it is included in writing (in the offer letter). Administrators change, and verbal promises are often rendered worthless.

So, in conclusion, when you receive an offer and you are not overly thrilled with it – do negotiate. This requires some self-assessment of “what” really matters to you, as well as a polite, positive, *quid pro quo*, honest, parallel, contextually aware and open approach to negotiation. In the end, however, the right job is more important than all the things negotiated.

New DSI Board Holds First Meeting

The 2017 – 2018 Board of Decision Sciences Institute (DSI) met for their first official meeting April 22nd and 23rd in Houston, Texas. Key items on the agenda included Board orientation, committee charges, and approval of the fiscal year 2017-2018 budget.

Executive Director, Vivian Landrum opened the meeting with an overview of non-profit Board member roles and highlighted fiduciary responsibilities members of a Board must observe. In essence a Board member must always act in good faith; stay informed and involved; make decisions in the best interests of DSI and not for personal benefit; and abide by the Constitution, Bylaws, Policies and Procedures and tax-exempt status of DSI. Landrum stressed Board members act as trustees of the organization's assets and must exercise due diligence to ensure DSI is well-managed and financially sound.

DSI Board President Jatinder (Jeet) Gupta then shared his vision for the coming year, highlighting accomplishments of Immediate Past President Funda Sahin, as he thanked her for her service to the Institute. Many of Sahin's goals and objectives will be carried forward, as Gupta stressed the importance of continuity and stability for DSI. Gupta stated he is committed to the message he shared in his vision statement during his campaign for office – that of furthering DSI's core values and achieving its vision in a collaborative, inclusive, global and service-oriented manner. Please read Gupta's "President's Letter" in this issue



2017-2018 DSI Board of Directors from left to right: Anand Nair, Natalie Simpson, Kathy Zuckweiler, Vijay Kannan, Funda Sahin, Jatinder (Jeet) Gupta, Joy Field, Johnny Rungtusanatham, Eldon Li, Markku Kuula, Soumen Ghosh, Sri Talluri. Not pictured: Jennifer Blackhurst and Ravi Kumar Jain.

of Decision Line for his message to the DSI membership.

Board and Committee Charges were the mainstay of the meeting. President Gupta presented the group with the over-arching purpose for the charges – to project DSI as a welcoming, responsive, dynamic and service oriented organization. Then each DSI constitutionally mandated, standing, and ad hoc committee was evaluated, reviewed and discussed. Charges for each were outlined, edited and then finalized as priorities, measurements and timelines were decided. Each committee will receive their final charges and immediately begin work to accomplish the goals outlined. Final Committee Charges will be posted on the DSI website.

A draft budget for fiscal year 2017-2018 was presented by DSI Treasurer Joy Field

and Executive Director Landrum. Included in the approved budget are expenditures for a new website overhaul, member management system and conference management system capable of handling national as well as regional conferences. Once the final audit is completed for FY 2015-2016, those final numbers, along with FY 2016-2017, will be moved to a new accounting system for a more efficient and precise representation of DSI's finances.

The tone of the 2017-2018 DSI Board was one of optimism and revitalization. Positive changes and long-awaited resolutions are in place and ready for implementation, or in the process of completion. The Home Office eagerly anticipates the new member management system, website and accounting program. All energies will lead to a stronger, more cohesive and vibrant organization.

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Program Chair Kathryn Stecke, KStecke@utdallas.edu.

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