ALTERNATIVE GENRES OF IS RESEARCH: LOOKING FOR GREAT LEAPS FORWARD

PANEL

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Abstract

The potential value of alternative genres in IS research is the core question that drives this panel discussion. The term “Alternative Genres” refers to unconventional forms of thinking, doing, and communicating scholarship and practice. It relates to innovation with respect to epistemological perspectives, research methods, semantic framing, literary styles, and media of expression. Overall, the application of alternative genres is considered to be a generative act that provides an opportunity to take a fresh look and to gain deeper understanding of the subject matter. Nonetheless, paradoxically the prevailing genres have much inertia, in spite of the inherent boundary spanning nature of alternative genres. Building on their own recent empirical research, the panelists will debate the potential value of alternative genres as unconventional modality of IS scholarship and how alternative genres might be utilized to support the discipline’s the next leap forward.

Keywords: IS research genre, IS research issue, IS research frameworks, Creativity, Innovation

Introduction

Genres are at the heart of the scholarly discourse and a critical element of its infrastructure. A genre is “a distinctive type of communicative action, characterized by a socially recognized communicative purpose and common aspects of form” (Orlikowski and Yates 1994, p. 543). In other words, given a socially recognized need to communicate (i.e., a purpose, Bitzer 1968), individuals typically express similar social motives, themes and topics in a communication with similar physical and linguistic characteristics (i.e., form), that is, they will communicate in a recognized genre. For example, this document is an example of a conference panel. It has a form familiar to many conference attendees: a title, authors and affiliations, an abstract, sections for each of the presenters. Perhaps unexpectedly to those unfamiliar with ICIS, panels are expected to adopt the genre of a debate, with opposing perspectives on the issues.
The scientific enterprise advances through a balanced act of faithful adherence to codified practices and reinventing them in the Kuhnian spirit of rejuvenation and discovery. Anchored in the latter, the term “Alternative Genres” refers to new or unconventional forms of thinking, doing, and communicating scholarship and practice. It relates to innovation with respect to epistemological perspectives (Boland and Collopy 2004; Orlikowski and Scott 2008), research methods (Beath and Orlikowski 1994; Schultze 2000), discovery modes (Fischer and Gregor 2011), semantic framing (Bateson 1972; Weick 1979), literary styles (Avital and Vandenbosch 2000; Mathiassen et al. 2012), and media of expression (Tufte 1983.) What is the potential value of alternative genres in IS research? This is the core question that drives this panel discussion.

Overall, the application of alternative genres is considered to be a generative act of reframing that provides one with an opportunity to take a fresh look, to evoke new insights, and to gain deeper understanding of the subject matter. It is argued that unconventional forms of thinking, doing and communicating research represent a new modality of inquiry that serves as a source of inspiration, innovation and novel insights that have the potential to reshape our world, that is, the social, physical, semiotic and technological environments we live in.

 Nonetheless, in spite of the inherent boundary spanning nature of alternative genres and the consensus regarding the value of groundbreaking research, paradoxically it seems harder to publish anything that is presented off the conforming genre. Indeed, the application of alternative genres in research defies the gravity of the beaten track, but it also runs the risk of clouding the substantive contribution with method-related paraphernalia. Moreover, in the conservative scientific enterprise, the novel features of avant-garde work may be perceived wrongly as smoke and mirrors.

The debate about the value of alternative genres in research is similar to controversy about the relationship between *form* and *function* which was stirred by the American architect Louis Sullivan who made the modernist assertion that “form ever follows function” (Sullivan 1896). The arguments regarding whether form follows function, or the other way around, resemble the old dilemma about which came first, the chicken or the egg. However, in spite of the evident complementary and circular nature of the relationship between form and function, or genre and research outcome, we often tend to adopt a certain cause-effect perspective on the process. This particular cause-effect perspective has a detrimental moderating effect on the underlying process. For example, we can build tools to meet certain desired requirements, or we can define the requirements according to the available tools. This is a design choice of any artisan. In our case, as scholars, we can use alternative genres to study new aspects of a phenomenon of interest, or we can limit the scope of our inquiry to the capabilities of the prevailing genres. The choice is not clear and one may come with good arguments to justify either way.

**Positions and Exploration**

In this panel, we will explore and debate the potential value of alternative genres as unconventional modality that expands or challenges the prevailing modus operandi of IS scholarship and practice. We will explore and challenge the potential value of contributions that step outside the conventional boundaries of IS research to generate novel insights and refine our understanding of IS phenomena in general.

Building on a theme that is attributed to the mathematician G. H. Hardy (Wilson 2002, p. 168), we will assess the potential value of alternative genres for IS research based on the following four criteria:

- **Novelty:** Is a genre conducive to new knowledge development?
- **Validity:** Is a genre appropriate for credible knowledge development?
- **Relevance:** Does the genre help to spark an interest and treat core issues?
- **Stewardship:** Does the genre contribute to the development of the discipline?

The panelists will point to specific alternative genres and explore why the IS field does not pay more attention to them. Further, they will question which aspects of alternative genres require more concerted attention and have the potential to yield the next leap forward. The following positions are designed in a sequence that allows each panelist to use the preceding positions as a point of departure and to argue why his or her perspective can yield the next leap forward.
The Inadequacy of the Prevailing Theory Testing Genre (Shirley Gregor)

We begin with a critique of the prevailing theory testing genre. Ironically, the “scientific method” in its fullness can currently be regarded as an alternative genre in IS, given the status quo in research activity and publications. The scientific method in an idealized form has two parts: a context of discovery and a context of justification. The context of discovery involves the generation of conjectures through creativity, with abductive, inductive and deductive reasoning. The context of justification is one in which hypotheses are deduced from the conjectures and tested empirically. The ideas of Karl Popper have had an enormous influence on scientific practice for many years. But Popper famously had little interest in where conjectures came from, saying that this issue was irrelevant to scientific knowledge! Popper’s ideas have had well-deserved attention, in that he emphasized the need for careful testing and justification of knowledge claims. However, Popper ignored half the story – the theory building context of discovery. Others, both pre- and post-Popper have shown how important it is to pay attention to theory building as well as theory testing. This message does not appear to have been passed on fully in IS. Examination of publication patterns shows that currently the most common genre in IS seeks to emulate Popperian theory testing, where a theoretical model is derived by a simulated deductive process from existing theory. It is the context of justification rather than the context of discovery – the first half of the scientific method is largely ignored. Theory development in this theory testing genre is likely to fail the criteria for research value, because: (1) A deductive process cannot lead to new knowledge; (2) There is a limited range of sources of evidence so that credibility is strained; (3) The emphasis is on sophistication in quantitative methods, not on interesting problems that are of interest to practice; and (4) A lack of grounding in observed artifactual-related phenomena threatens a cumulative research tradition. We would do better to forget about Popperian hangovers, the science wars and the sociologists’ interpretations of science in the latter part of the twentieth century, and see how important advances in knowledge actually come about. Theory testing alone is not the way to go!

Alternative Theory Building Genres for the Digital World (Omar A. El Sawy)

The next panelist agrees that primarily spending an inordinate amount of attention focusing on theory testing brings many inadequacies, and that the “discovery” half of the story is under-represented in IS research. Yes, we do need more emphasis on discovery and theory building, but that is not sufficient – discovery can be much better enhanced and enabled with new and diverse theory building structures and genres. We need to expand and multiply the theory building genres that we use in IS research to suit and take advantage of our dynamic digital context! Better understanding and articulation of alternative genres in theory building is a crucial competitive advantage for creating the next leaps in IS research – and not just a nice-to-have sideline activity. In an area where digital technologies and their fusion with social and organizational phenomena have given rise to new complex interactions and where traditional assumptions have been broken, there is an opportunity for both new structures for building theories and consequently new ways of testing them. Thus, there are new alternatives in this different environment that will yield novelty, validity, and relevance. For example, using the context of digital ecodynamics, we can illustrate how configurational theories can yield different types of insights than would variance or process theories, and examine what baggage (often unstated) and liberation (also often unstated) each type of theory structure brings with it. Second, we can argue that with the advent of digital platforms, there are novel forms of theory structures still waiting to be developed that bring advantages to both theory development and better practice, and which may have different ways of dialoging theory with data. For example, experimental-analytical theory form, design theory, and holonomics can be used to illustrate emerging theory building genre opportunities that may require different ways of thinking and structuring theory, but that may generate the next leap in knowledge in a messy digital world. In a dynamic digital world, the “edge” in alternative genres of theory building will be critical to energizing and enriching what purists in the IS field have implicitly regarded as the traditional “core.” We need to enrich and enable many new alternative genres of theory building in IS research that suit this messy dynamic digital environment! That is where the next leap forward will come from; not just more theory building but using appropriate perspectives and forms that are suitable to the times. Only then will there be quantum leaps in the development of the discipline. It will require much more imagination than forgetting about Popperian hangovers that the first panelist talks about! And, imagination is also much more important than examining endless data at this junction!
Communal Data Sharing as an Emerging Genre (Kevin Crowston)

Scientific knowledge has been traditionally shared in the form of articles and monographs, in the various genres described by the other speakers. However, these products are but a distillation of the main products of scientific research: data. In many fields data themselves are increasingly seen as valuable and to be shared as a research product, e.g., through an increasing variety of data repositories (Avital et al. 2007). In other words, an increasingly important genre of scientific publication is a dataset. Sharing data has several important benefits. Most basically, sharing data avoids wasteful duplication of effort collecting the same data over and over, e.g., multiple open source researchers individually spidering SourceForge for data about projects or surveying Wikipedians about their motivations. Sharing data also enables checking and replication of findings, which are basic steps in the validation of research results. Furthermore, science is increasingly data-intensive, collaborative and computational at a large scale. Shared data support comparative research or synthesis across multiple studies. For example, individual researchers face limits on the range in which they can collect data; shared data enable broader conclusions. Data sharing is not just nice to do. Funding agencies increasingly require projects to share data, which increases the value of the data and the agency’s return on investment (Jacoby 2010). Some journals similarly require that data supporting a published paper be deposited in a repository, e.g., journals associated with the Dryad repository or gene sequence data in GenBank. However, the practice of sharing of data is still very unevenly distributed. Data sharing is highly developed in some fields, such as genetics or ecology but practically absent in other fields, such as information systems. Issues include appropriate technology and standards, norms and reward structures.

A Design Approach to Alternative Genre in IS Research (Lars Mathiassen)

Building on the previous argument for exploring alternative genre in our field, the final panelist offers a practical approach that can help researchers consider how to express the novelty, validity and relevance of their research in specific publications. Specifically, the approach builds on the notion of style (or genre) composition and it allows each researcher to engage in reflections over the available options for designing publications from their respective research projects. In this view, each publication represents a particular way in which authors select, emphasize, and present the elements of their research to establish premises, develop inferences, and present contributions in publications. In considering which publication(s) to develop from a particular research project, researchers analyze the key elements of their research and options for combining them into publications. On one hand, researchers may consider the planned elements of their research including the practical problem setting, the research question, the area of concern in the literature, the theoretical framing, and the adopted research methodology. On the other hand, researchers may consider different options for structuring these elements into robust arguments for contribution to research and practice. These options include: premise options related to practical or theoretical positioning of the argument; inference options combining insights from practice and theory through inductive or deductive reasoning; and, contribution options focusing on different types of contributions—experience report, field study, theoretical development, problem-solving method, and research method. Approaching research publication as a design practice with multiple alternatives supports stewardship within our discipline in several ways: it allows for early consideration of how the planned research elements can lead to appropriate contributions; it brings attention to which publications may result from the research; and, it invites for consideration of alternative genre for effectively communicating research outcomes to target audiences.

Discussion Format

The panel is designed to touch upon our core values and to focus on the state of the arts of IS scholarship. To ensure an engaging panel that not only appeals to a broad audience but also provides practical insights and lively debate, we have assembled a team of panelists who have vast experience in publishing and conducting research on the edge of knowledge. All panelists will provide illustrations of their respective positions on alternative genres and draw insights from their own recent empirical research as follows:

Michel Avital will moderate the discussion and lay the foundations for the debate about the value and implications of alternative genres to the IS discipline as a driver of boundary spanning and new insights.
Shirley Gregor will contend and argue that the prevailing theory-testing genre for research articles cannot deliver the expected scientific breakthroughs and that more attention should be paid to modes of discovery for theory building.

Omar A. El Sawy will argue that we need to enrich and enable alternative genres of theory building that are suited to the context of a dynamic digital world

Kevin Crowston will turn the discussion to the potential value of open data repositories and data sharing modalities as an emerging alternative genre.

Lars Mathiassen will explore how researchers can analyze and design the particular genre or style they want to adopt for publishing research and discuss how such style composition may encourage consideration of alternative genres in IS research.

Overall, the panel will be structured so that a third of the panel time will remain for the audience’s participation in questions and debate. In addition to Q&A time, we will engage the audience by asking them to identify their pet peeves and stumbling blocks in using alternative genres through a discussion of their experience and wishes.

In summary, we seek to evoke provocative ideas, generative thinking, and compelling initiatives that can contribute to the discourse on research methods in the IS discipline. We aim to inspire and spark senior and junior members in pursuit of alternative genres, and at minimum, we hope that the panel will stimulate new insights about the modus operandi of IS research and the necessary steps to take it to the next level.

Participants

Michel Avital is Microsoft Chair and Professor of IT Management in Copenhagen Business School. Design and innovation are the leitmotif of Michel's work. Building on alternative genres and especially positive modalities of inquiry, his research focuses on information and organization with an emphasis on the social aspects of information technologies. He has published articles on topics such as generative systems design, creativity, innovation, collaboration and competition, green IT and sustainable value. He is an editorial board member of seven leading IS journals and serves in various organizing capacities in ICIS, AOM, ECIS and other topical conferences. Michel is an advocate of openness and an avid proponent of cross-boundaries exchange and collaboration. Further information at http://avital.net

Lars Mathiassen is currently GRA Eminent Scholar and professor in Department of Computer Information Systems and co-founder of Center for Process Innovation at Georgia State University. His research interests are within information systems, health informatics and software engineering with a particular emphasis on process innovation. He is coauthor of several books, including Computers in Context (Blackwell 1993), Object Oriented Analysis & Design (Marko Publishing, 2000), and Improving Software Organizations (Addison-Wesley, 2002). He has served as senior editor for MIS Quarterly and is currently senior editor for Information & Organization and Journal of Information Technology. His research is published in journals like Information Systems Research, MIS Quarterly, IEEE Transactions on Software Engineering, IEEE Transactions on Engineering Management, Information Systems Journal, European Journal of Information Systems, and IEEE Software.

Kevin Crowston joined the School of Information Studies at Syracuse University in 1996. He received his Ph.D. in Information Technologies from the Sloan School of Management, Massachusetts Institute of Technology (MIT) in 1991. His research examines new ways of organizing made possible by the extensive use of information and communication technologies. Specific topics of interest include free/libre open source software development, e-science and citizen science. He is currently secretary of the International Federation for Information Processing (IFIP) Working Group 8.2 on Information Systems and Organizations and Program Chair for Academy of Management Organizational Communications and Information Systems Division.

Omar A. El Sawy is Professor of Information Systems at the Marshall School of Business at the University of Southern California since 1983. His interests center on digital business strategy in turbulent environments. From 2001-2007, he served as Director of Research at the Institute for Communication Technologies Management at USC. He holds a Ph.D. from Stanford Business School, an MBA from the
American University in Cairo, and a BSEE from Cairo University. El Sawy is the author or co-author of over 100 papers, and currently serves on several journal editorial boards – including Senior Editor at MIS Quarterly Executive and Guest Editor at MIS Quarterly. He is a six-time winner of SIM’s Paper Awards Competition. He has carried out research projects sponsored by the RosettaNet Consortium, SIM Advanced Practices Council, Alfred Sloan Foundation, and the CIGREF Foundation. In 2008, he was inducted as a Fellow of the Association of Information Systems.

**Shirley Gregor** is the foundation Professor of Information Systems at the Australian National University, Canberra, where she is a Director of the National Centre for Information Systems Research. Professor Gregor’s current research interests include the adoption and strategic use of information and communications technologies, human-computer interface issues and the philosophy of technology. Professor Gregor spent a number of years in the computing industry in Australia and the United Kingdom before beginning an academic career. Dr Gregor’s publications include 4 edited books, 15 book chapters and over 100 papers in conferences and journals such as MIS Quarterly, Journal of the Association of Information Systems, International Journal of Electronic Commerce, International Journal of Human Computer Studies, European Journal of Information Systems and Information Technology & People. She was a Senior Editor for MIS Quarterly 2008-2010 and is now Editor-in-Chief of the Journal of the Association for Information Systems. Professor Gregor was made an Officer of the Order of Australia in the Queen’s Birthday Honour’s list in June 2005 for services as an educator and researcher in the field of information systems and in the development of applications for electronic commerce in the agribusiness sector. In 2005 she was elected as a Fellow of the Australian Computer Society and in 2010 she became a Fellow of the Association for Information Systems.

**References**


