Discipline: Business Information Systems & Engineering

1   Title

Theory and Theorizing in Information Systems Research

2   Language

English: This course and all of the readings and materials used in the course will be in English. Also, students are expected to complete all assignments and pre-class preparation in English, too.

3   Lecturer

Prof. Dr. Benjamin Mueller

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Prof. Dr. **Benjamin Mueller** is an Associate Professor for Digital Innovation and Design Science at the University of Lausanne, Switzerland, and an Associate Researcher at the Karlsruhe Institute of Technology, Germany. He received his PhD from the EBS Business School in 2010 and holds master degrees in Business and Information Systems from EBS Business School (Oestrich-Winkel, Germany) and Georgia State University (Atlanta, GA, USA). His research focuses on how advanced information and communication technologies transform organizations. He pays particular attention to mechanisms through which individuals use technology to innovate in their work and the corresponding organizational benefits. Form his work, he has published over 60 peer-reviewed papers in various outlets such as, for example, the Journal of Management Information Systems, the Journal of the Association for Information Systems, or Information & Management and the IS communities various conferences.

In relation to theory and theorizing, Benjamin is a current member of the Journal of the Association for Information Systems' editorial board and a mini-track co-chair for "Theory, Meta-analysis and Review" at HICSS. In the recent past, Benjamin served as a co-chair of the "Foundations of IS Research: Theory, Methods, and Philosophy" track at ICIS 2017 and as a co-chair of the "Advancing Theories and Theorizing in IS Research" track at ECIS (2014-2016).

4   Date and Location

July 16-19, 2019

Hamburg, Germany @ Kühne Logistics University
(Großer Grasbrook 17, room GF Lecture 1; the-klu.org)

5   Course Description

5.1   Abstract and Learning Objectives

The generation of knowledge is often seen as one of the key contributions of any science. Consequently, many scholars emphasize the centrality of theories for any scientific endeavor – a thought widely reflected in many disciplines from the natural to the social sciences. While a corresponding attention to theoretical work has been at the heart of the Information Systems (IS) discipline for a long time, the focus on theoretical debates and genuine conceptual contributions has been picking up recently. This is reflected by a number of journal sections and conference tracks dedicated to advancing theory and theorizing in IS research just as much as in many authors' experiences during the reviews of their work.

The course "Theory and Theorizing in Information Systems Research" invites participants to join the ongoing discourse on theories and theorizing in the Business and Information Systems Engineering (BISE) and Information Systems (IS) research communities. It is designed to help participants build and extend their understanding of the nature and role of theory in BISE and IS research. Through discussions and analyses of current theoretical developments in the BISE and IS discipline, and some of its main reference disciplines, participants will engage with theory and advance their skills of building their own theoretical contributions.

The course aims to achieve the following high-level learning objectives:

(1)   Build a foundational understanding of what theory is and what role it plays in research

(2)   Develop basic theorizing skills and be familiar with extant theorizing strategies

(3)   Understand strategies to develop and publish own theoretical contributions

Overall, the course is designed to help students advance their understanding of theory and theorizing in the BISE / IS discipline and enhance their theorizing skills related to their own research and thesis work.

In terms of teaching formats, the course will be using a mixture of formats and approaches – from traditional lectures to interactive seminar sessions. To make this work, participants' preparation before class is essential. Most of this preparation will involve reading a set of papers assigned to each participant that need to be prepared before class. Through this preparation, a large portion of the workload for the course will occur in the weeks before the actual course

date. Participants will also be asked to prepare other things as well, such as short handouts or small presentations and a poster. Details on how to prepare are sketched out below and more specific instructions for all of the preparation necessary will be distributed in time before class.

Be advised that the course is not intended to be a comprehensive or normative prescription of how to engage with theory and theorizing in research. It is rather aimed at encouraging and empowering young scholars to carefully pay attention to their own theoretical contribution and their engagement with the extant knowledge in the field. To do so, the course introduces and reviews the necessary foundations as well as current trends in the extant literature. This explicitly includes a critical reflection on the current state of theory in the IS and BISE field in order to help advance the current debates on the nature and role of theory and theorizing.

5.2   Contents

The course "Theory and Theorizing in Information Systems Research" is organized around three main modules. The first module introduces participants to the foundations of theory by reflecting on and discussing some of the key sources in this context – from within the BISE/IS discipline as well as some of the discipline's reference fields. The class will also look at different forms and principles of theory. Module two focuses on the process of theorizing by contrasting different approaches to working with theory. The third module offers students insights into a number of current debases on theory and theorizing in the IS discipline by analyzing current debates. This offers participants an opportunity to better understand theoretical discourses and sensitizes them towards opportunities for and approaches to crafting their own theoretical contributions. The third module also reflects on developing, conducting, writing up, and reviewing theory to complement and round off the course.

Please be advised: While the workload required to prepare for class is relatively high, students are not expected to have read all of the materials listed below prior to class. Only the foundational readings printed in blue are mandatory literature for everyone. Please make sure that you allow yourselves enough time to prepare these readings. The work to be done on the papers printed in red will be distributed before class to reduce everyone's workload. Be advised that how much we will take away from each of the red papers assigned to you will depend in large parts on your preparation of the paper. Papers printed in black are examples / illustrations only and need not be prepared before class. Across all modules, each student will thus have to read about 32 papers (see detailed instructions in 6.2 below). Also be advised that some of the papers are rather short editorials only and should be easy enough to read.

Module 1 - *the WHAT of theories*

Content	Readings
1.1 Constituents and forms	• Bacharach (1989) • Bichler et al. (2016) • DiMaggio (1995) • Lee (2014) • Shapira (2011) • Suddaby (2010) • Sutton and Staw (1995) • Weber (2003b) • Whetten (1989)
1.2 Refined perspectives	• Burton-Jones et al. (2015) • Gregor (2006) Multi-level theorizing • Bélanger et al. (2014) • Klein et al. (1994) • Zhang and Gable (2017)

(Left vertical label: Module 1 – the WHAT of theories)

Module 2 - The HOW of theorizing

Content	Readings
2.1 Introduction to theorizing	• Colquitt and Zapata-Phelan (2007) • Cornelissen and Durand (2014) • Gioia and Pitre (1990) • Steinfield and Fulk (1990) • Weber (2012) Alternative perspectives: • Rivard (2014) (esp. pp. v-xii) • Weick (1995)
2.2 General aspects of theorizing	• Causality (Markus and Rowe 2018) • Concepts (Osigweh 1989) • Hypotheses (Lundberg 1976) • Products (Hassan 2014) • Reasoning (Ochara 2013)

(Left vertical label: Module 2 – The HOW of theorizing)

Module 2 - The HOW of theorizing (cont.)

	Content	Readings
Module 2 – The HOW of theorizing	**2.3 Exemplary strategies for theorizing** (poster session)	• Blending (Oswick et al. 2011) • Borrowing (Whetten et al. 2009); (Truex et al. 2006) • Context (Hong et al. 2014) • Contrasting (Tsang and Ellsaesser 2011) • Imagination (Weick 1989) • Multi-paradigm (Lewis and Grimes 1999); (Mueller and Raeth 2012) • Paradox (Poole and van de Ven 1989) • Process data (Langley 1999) • Testing (Gregor and Klein 2014) Alternatives: • Typological theorizing (Delbridge and Fiss 2013) • Inductive top-down theorizing (Shepherd and Sutcliffe 2011) • Mystery (Alvesson and Kärreman 2007) • Counterfactual reasoning (Durand and Vaara 2009) • Simulations (Davis et al. 2007)
	2.4 Development of novel theories	• Suddaby et al. (2011) Inductive(ish) theory building • Eisenhardt (1989) • Locke (2007) "Pure" theory manuscripts • Markus and Saunders (2007) • Zmud (1998) Examples for "pure" theory papers: • Burton-Jones and Grange (2013) • Carter and Grover (2015) • Nevo et al. (2016)
	2.5 Theorizing and design	• Gregor and Jones (2007) • Hovorka and Gregor (2012) • Kuechler and Vaishnavi (2012) • Lee et al. (2011) • Mueller and Olbrich (2011)

Module 2 - The HOW of theorizing (cont.)

	Content	Readings
Module 2 – The HOW of theorizing	**2.6 Literature reviews**	• Boell and Cecez-Kecmanovic (2015) • LePine and Wilcox-King (2010) • Rowe (2014) • Schryen (2015) • Webster and Watson (2002) Examples: • Besson and Rowe (2012) • Ebner et al. (2016) • Leidner and Kayworth (2006) • Schryen (2010)

Module 3 - Strategies for contribution

	Content	Readings
Module 3 – Strategies for contribution	**3.1 Making contributions** (mind map)	• Ågerfalk (2014) • Barrett and Walsham (2004) • Bartunek et al. (2006) • Bergh (2003) • Boxenbaum and Rouleau (2011) • Chatterjee (2015) • Corley and Gioia (2011) • Davis (1986) • Feldman (2004b) • Locke and Golden-Biddle (1997) • Rai (2017) • Rindova (2011) • Rynes (2002) • Shapira (2011) • Weber (2003a) • Weber (2012) (esp. §§ 4-7) and Weber (2003b) (esp. pp. vi-xi) • Weick (1995) • Whetten (1989)

Module 3 - Strategies for contribution (cont.)

	Content	Readings

Module 3 – Strategies for contribution	**3.2 Current issues in theory and theorizing**	Current Developments
		• Native IS theory (Straub 2012)
		• Scripts (Grover and Lyytinen 2015)
		
		The "Is Theory King?" debate
		• Avison and Malaurent (2014)
		   o Gregor (2014)
		   o Markus (2014)
		   o Silverman (2014)
		
		Cultural issues in theory and theorizing
		• Barkema et al. (2015)
		
		Theory as blinders
		• Discourse (Holmström and Truex 2011)
		• Self-fulfilling (Ferraro et al. 2005)

	3.3 Writing up theory	• Barley (2006) • Feldman (2004a) • Pollock and Bono (2013) • Rai (2018) • Rindova (2008) • Straub (2009)

5.3   Tentative Schedule

The course's three content modules are tentatively allocated across the four course days as follows. Adjustments in the allocation of these modules across the days might be necessary depending on group interests, speed, and level of interaction.

	Day 1	*Day 2*	*Day 3*	*Day 4*
Morning session 1	Opening session and introductions	Module 2.1 Introduction to theorizing	Module 2.5 Theorizing and design	Module 3.1 Strategies for contribution
Morning session 2	Module 1.1 Constituents and forms of theory	Module 2.2 General theorizing	Module 2.6 Literature reviews	Module 3.2 Current issues
Lunch break				
Afternoon session 1	Module 1.1 Constituents and forms of theory	Module 2.3 Exemplary strategies	Presentation of your own research and plenary discussions	Module 3.3 Working with theory
Afternoon session 2	Module 1.2 Refined perspectives	2.4 Novel theorizing	"Key note"	Closing session and reflection of learning
End of class				
Evening	Informal get-together (optional)		Course dinner (optional)	

5.4   Course format and assessment

Across the course, participants will be actively involved through presenting a small number of seminal papers from the list of readings as well as the results of small in-class exercises. Presentation formats and roles students are asked to play during discussion might differ to allow for variation in the teaching and interaction formats. This will help to foster critical engagement with theory and advance an understanding of how to craft and evaluate theoretical contributions.

Participants will also be given an opportunity to reflect on the theoretical setup of their own research during the course and to actively involve others into the discourse that is essential to the art and craft of making theoretical contributions.

Assessment is based on presentations of the red papers prepared before class and general class participation. Students who are required by their doctoral programs to obtain a grade (i.e., "Leistungsnachweis") will also be given the opportunity to participate in a take-home assignment after class. All students will be presented with a certificate of participation (i.e., "Teilnahmebescheinigung"). Both certificates show the credits obtained in the class.

6   Preparation and Literature

6.1   Prerequisites

The course does not come with any specific prerequisites, but a basic understanding of the research process in business or the social sciences is helpful.

The course welcomes doctoral students at all levels of their research and thesis projects and is open to students from any subject area or discipline. While many readings and discussions focus on the business and information systems engineering discipline as a subject area, this provides only an exemplary context. The course's core tenets can principally be translated to any discipline of business research and a good portion of the readings originate from disciplines such as management or organization studies.

All participants are expected to read and prepare the assigned materials before class and participate in the course's in-class discussions actively.

6.2   Essential Reading Materials

The list of modules presented in 5.2 above indicates the required readings that are regarded as essential for each of the modules. Full bibliographic details on the respective articles are provided at the end of this syllabus. For copyright reasons, students must obtain copies of these articles through their home institutions' database or journal subscriptions or through the general Internet. In case any article is not available that way, please contact the lecturer in due time so that alternative solutions can be found.

Given the breadth of the reading materials, **students are not expected to read all the papers listed in 5.2**. Please read the following instructions carefully in order to prepare for class:

The readings listed in section 5.2 fall into thee categories: mandatory literature for all participants (printed in blue), articles that will be distributed across participants (printed in red), and additional examples or background that must not explicitly be prepared before class (printed in black). While everyone is expected to read all of the blue papers (27 in total), each student will have to prepare no more than 6 of the red papers (53 in total) to present in class (depending on overall number of students registered / participating). The corresponding presentations are supposed to introduce the key issues from the readings to the rest of the class. In the subsequent discussions, students are expected to act as 'subject matter experts' on those readings they prepared to help highlight how each reading advances theory and theorizing and to lead and facilitate the discussion on what their specific paper contributes to the respective module.

Based on feedback from previous years, students are expected to develop a one-page handout for each of the red readings assigned to them (with the exception of those in modules 2.3 and 3.1 where other formats of presentation and discussion will be used; instructions to be distributed before class). These handouts should provide other course participants with a brief summary and overview of the paper as well as the key lesson learned in terms of theory and theorizing. The handouts' design should also make it possible to use them as a support for students' presentation of the materials in class and help facilitate the discussion of these materials. Handouts for all the papers assigned to a student must be submitted to the lecturer on the Friday before class (i.e., July 12, 2019).

Paper assignments and more detailed instructions will be distributed to participants vie e-mail in time before class. Before the red papers are assigned, students are asked to start preparing the blue papers.

On an encouraging note: Due to the explicit focus on theory and theorizing, both aspects often treated rather implicitly in many scholarly papers, some of the assigned readings will be a bit difficult to read at first. Please do not be discouraged by this. During a previous year, one of the participants observed:

> "*The reading beforehand was quite difficult for me; it often felt like I was watching a Chinese movie* [the student in question not speaking any Chinese]. […] *Now that we are done* [i.e., on the last day of the course], *I feel as if I have been handed the subtitles to that movie to help me make sense of the language and plot*."

Accordingly, engage with every paper to the best of your ability and feel free to bring open issues and struggles to class – chances are that these will form an excellent basis for our discussion.

Of course, students are encouraged to look at all the papers before class, but a deeper engagement and preparation is only required as per the instructions above.

To prepare for class, participants are also encouraged to read **Mueller and Urbach (2017)** in order to get a basic overview of the ideas this course is based on.

6.3   Additional Reading Material

During the course, students will be provided with additional recommendations on relevant literature that will help them advance and deepen their understanding of theory and theorizing in the business and information systems engineering discipline and beyond. Students are not required to work with these additional materials as part of this class.

Similarly, the following textbooks are recommended to students to help them in their work. Some aspects of these books will be presented by the lecturer in class, but neither reading nor preparation is required.

- General introduction to philosophy of science: Godfrey-Smith (2003)

- Exemplary theories and their evolution: Smith and Hitt (2009)

- Overview of prominent IS theories: Dwivedi et al. (2011)

- Theory construction and model building: Jaccard and Jacoby (2010)

- Basic tools for conceptual reasoning: Baggini and Fosl (2010)

- Academic writing and publishing: Huff (1999)

- Advise on writing convincing arguments: Weston (2009)

- General writing advice: Strunk and White (1999)

7 Administration

7.1 Maximum number of participants

18

7.2 Assignments

Across the course, students are expected to conduct in-class presentations of the mandatory readings assigned to them. Presentation formats may vary, detailed instructions will be provided in time before the course takes place. Students are required to prepare 1-page summaries of the red readings assigned to them to be distributed in class.

On top of this, students will engage in small in-class exercises and present the results to the class. For instance, students might be asked to draw out the most important theoretical schools / streams of theoretical discourse in their research's domain and present the result to the class.

Those students who wish to present their own work, have it discussed, and receive feedback will also be given an opportunity to present their own theoretical underpinning and how they plan to make a contribution to theory in their work. Exact formats and number of presentation slots will be determined based on interest (i.e., how many students intend to present).

7.3   Exam (if required)

After class, students who must obtain a grade (i.e., "Leistungsnachweis") will be assigned a take-home assignment to be completed within four weeks of the last day of the course. The exact format and content of this assignment will be revealed to students who have to obtain a grade on the last day of the course.

For example, students may be assigned a select theory manuscript and need to write a review for that manuscript. In this, students are asked to apply what they have learned from the course to the manuscript, assess the manuscript's theoretical contribution, analyze how well the original authors pursue their theorizing, and suggest constructive ways forward to help develop the paper.

As discussed previously, this examination is only required if students must obtain a grade for the course ("Leistungsnachweis"). In cases where doctoral programs do not require a grade, students can also opt to obtain a certificate for participation ("Teilnahmebescheinigung"). Given the substantial workload for the course, any documentation will always identify the ECTS credits the course is worth.

7.4   Credits

6 ECTS

7.5   Allocation of Working Hours

Activities	Hours
Reading and preparation of assigned literature	**120**
Preparation of handouts, presentations, and posters	**32**
Active participation on the days of the seminar	**24**
Presentation of papers (based on handouts and posters)	**4**
Total	**180**

8   Detailed Bibliography

Ågerfalk, P.J. 2014. "Insufficient Theoretical Contribution: A Conclusive Rationale for Rejection?," *European Journal of Information Systems* (23:6), pp. 593-599.

Alvesson, M., and Kärreman, D. 2007. "Constructing Mystery: Empirical Matters in Theory Development," *Academy of Management Review* (32:4), pp. 1265-1281.

Avison, D., and Malaurent, J. 2014. "Is Theory King? Questioning the Theory Fetish in Information Systems," *Journal of Information Technology* (29:4), pp. 327-336.

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Boell, S.K., and Cecez-Kecmanovic, D. 2015. "On Being 'Systematic' in Literature Reviews in Is," *Journal of Information Technology* (30:2), pp. 161-173.

Boxenbaum, E., and Rouleau, L. 2011. "New Knowledge Products as Bricolage: Metaphors and Scripts in Organizational Theory," *Academy of Management Review* (36:2), pp. 272-296.

Burton-Jones, A., and Grange, C. 2013. "From Use to Effective Use: A Representation Theory Perspective," *Information Systems Research* (24:3), pp. 632-658.

Burton-Jones, A., McLean, E.R., and Monod, E. 2015. "Theoretical Perspectives in Is Research: From Variance and Process to Conceptual Latitude and Conceptual Fit," *European Journal of Information Systems* (24:6), pp. 664-679.

Carter, M., and Grover, V. 2015. "Me, My Self, and I(T): Conceptualizing Information Technology Identity and Its Implications," *MIS Quarterly* (39:4), pp. 931-957.

Chatterjee, S. 2015. "Writing My Next Design Science Research Masterpiece: But How Do I Make a Theoretical Contribution to Dsr?," *23. European Conference on Information Systems (ECIS 2015)*, Muenster.Germany.

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