

## Dr. Georg Holtz

### Wissenschaftliche Publikationen / Scientific Publications Stand / Date August 2019

#### 1. Bücher / Books

##### 1.1 Monographien / Monographs

- Bierwirth, A.; Augenstein, K.; Baur, S.; Bettin J.; Buhl, J.; Friege, J.; **Holtz, G.**; Jensen, T.; Kaselofsky, J.; Liedtke, C.; Palzkill-Vorbeck, A.; Saurat, M.; Schneidewind, U.; Schönborn, S.; Schweiger, S.; Viebahn, P.; Vondung, F. (2017): Knowledge as transformative energy : on linking models and experiments in the energy transition in buildings. München: Oekom-Verlag.
- Bierwirth, A.; Augenstein, K.; Baur, S.; Bettin J.; Buhl, J.; Friege, J.; **Holtz, G.**; Jensen, T.; Kaselofsky, J.; Liedtke, C.; Palzkill-Vorbeck, A.; Saurat, M.; Schneidewind, U.; Schönborn, S.; Schweiger, S.; Viebahn, P.; Vondung, F. (2016): Wissen als transformative Energie: zur Verknüpfung von Modellen und Experimenten in der Gebäude-Energiewende. München: Oekom-Verlag.
- Holtz, G.** (2010) Modelling system innovations in coupled human-technology-environment systems, Dissertation, Institut für Umweltsystemforschung, Universität Osnabrück (2010), urn:nbn:de:gbv:700-201006116333.
- Holtz, G.** (2003) Ein agentenbasiertes Modell zur Diffusion von Technologien, Diplomarbeit, Institut für Umweltsystemforschung, Universität Osnabrück

#### 2. Beiträge/Articles

##### 2.1 Referierte Beiträge / Refereed Journal Articles

- Köhler, J., Geels, F. W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A., ..., **Holtz, G.**, ... Boons, F. (2019). An agenda for sustainability transitions research: State of the art and future directions. *Environmental Innovation and Societal Transitions*, 31, 1–32.
- Holtz, G.**, Xia-Bauer, C., Roelfes, M., Schüle, R., Vallentin, D., & Martens, L. (2018). Competences of local and regional urban governance actors to support low-carbon transitions: Development of a framework and its application to a case-study. *Journal of Cleaner Production*, 177, 846–856.  
<https://doi.org/10.1016/j.jclepro.2017.12.137>
- Köhler, J., de Haan, F., **Holtz, G.**, Kubeczko, K., Moallemi, E., Papachristos, G., & Chappin, E. (2018). Modelling Sustainability Transitions: An Assessment of Approaches and Challenges. *Journal of Artificial Societies and Social Simulation*, 21(1), 8.  
<https://doi.org/10.18564/jasss.3629>
- Friege, J., **Holtz, G.**, Chapin, É.J.L. (2016) Exploring Homeowners' Insulation Activity. *Journal of Artificial Societies and Social Simulation* 19 (1) 4.  
<http://jasss.soc.surrey.ac.uk/19/1/4.htm>

- Jensen, T., **Holtz, G.**, Baedeker, C., Chapin, É.J.L. (2016) Energy-efficiency impacts of an air-quality feedback device in residential buildings: An agent-based modeling assessment. *Energy and Buildings* 116. DOI: 10.1016/j.enbuild.2015.11.067
- Jensen, T., **Holtz, G.**, Chapin, É.J.L. (2015) Agent-based assessment framework for behavior-changing feedback devices: Spreading of devices and heating behavior. *Technological Forecasting and Social Change* 98, p. 105-119. DOI: 10.1016/j.techfore.2015.06.006
- Holtz, G.**, Alkemade, F., de Haan, F. Köhler, J., Trutnevyte, E., Luthe, T., Halbe, J., Papachristos, G., Chappin, É.J.L., Kwakkel, J. H., Ruutu, S. (2015) Prospects of modelling societal transitions - Position paper of an emerging community. *Environmental Innovation and Societal Transitions* 17, p. 41-58. DOI: 10.1016/j.eist.2015.05.006
- Halbe, J., Reusser, D., **Holtz, G.**, Haasnot, M., Stosius, A., Avenhaus, W., Kwakkel, J. H. (2015) Lessons for model use in transition research: A survey and comparison with other research areas. *Environmental Innovation and Societal Transitions* 15, 194-210. DOI: 10.1016/j.eist.2014.10.001
- Holtz, G.** (2014) Generating social practices. *Journal of Artificial Societies and Social Simulation* 17 (1) 17. <http://jasss.soc.surrey.ac.uk/17/1/17.html>
- Holtz, G.** (2012) The PSM approach to transitions: bridging the gap between abstract frameworks and tangible entities. *Technological Forecasting and Social Change* 79 p. 734-743
- Holtz, G.**, Pahl-Wostl, C. (2012) Using an agent-based model to analyse the role of farmers' characteristics for land-use change and for related groundwater over-exploitation in the Upper Guadiana, Spain. *Regional Environmental Change* 12:1
- Holtz, G.** (2011) Modelling transitions: An appraisal of experiences and suggestions for research. *Environmental Innovation and Societal Transitions* 1 p. 167-186
- Knieper, C., **G. Holtz**, B. Kastens und C. Pahl-Wostl (2010) Analysing water governance in heterogeneous case studies - Experiences with a database approach. *Environmental Science and Policy* 13 (7), p. 592-603
- Pahl-Wostl, C., **G. Holtz**, B. Kastens und C. Knieper (2010) Analysing complex water governance regimes: The Management and Transition Framework. *Environmental Science and Policy* 13 (7), p. 571-581
- Holtz, G.**, M. Brugnach und C. Pahl-Wostl (2008) Specifying 'Regime' - A Framework for Defining and Describing Regimes in Transition Research. *Technological Forecasting & Social Change* 75, p. 623-643

## 2.2 Beiträge in Fachzeitschriften (nicht-referiert) / Non-refereed Journal Articles

- Holtz, G.**, Jeddi, S., Fleer, J., Birk, S., Schönfisch, M., Lindenberger, D., & Schneiders, T. (2019). Geschäftsmodelle zur Einbindung dezentraler Anlagen auf Haushaltsebene in Virtuelle Kraftwerke. *Et - Energiewirtschaftliche Tagesfragen*, 69(3), 33-36.

## 2.2 Beiträge in Sammelwerken (Buchbeiträge) / Book Chapters

- Arnold, K., & **Holtz, G.** (2018) Methodisches Vorgehen und Voruntersuchungen zu Flexibilitätspotenzialen (Abschnitt 1.2). In: F. Ausfelder, A. Seitz, & S. von Roon (Hrsg.), *Flexibilitätsoptionen in der Grundstoffindustrie – Methodik | Potenziale | Hemmnisse*. Frankfurt am Main.

- Holtz, G.** & Arnold, K. (2019) Hemmnisse einer Flexibilisierung der Bereitstellung von Prozesswärme in den energieintensiven Industrien durch Hybridisierung, synthetische Gase und thermische Speicher. In: F. Ausfelder, A. Seitz, & S. von Roon (Hrsg.) Bericht des AP V.6 „Flexibilitätsoptionen und Perspektiven in der Grundstoffindustrie“ im Kopernikus-Projekt „SynErgie – Synchronisierte und energieadaptive Produktionstechnik zur flexiblen Ausrichtung von Industrieprozessen auf eine fluktuierende Energieversorgung“, gefördert durch das Bundesministerium für Bildung und Forschung.
- Brugnach, M., C. Pahl-Wostl, K.E. Lindenschmidt, J.A.E.B. Janssen, T. Filatova, A. Mouton, **G. Holtz**, P. van der Keur und N. Gaber (2008) Complexity and Uncertainty: Rethinking the Modelling Activity, in: Jakeman, A.J., A.A. Voinov, A.E. Rizzoli und S.H. Chen (eds.) Developments in Integrated Environmental Assessment, vol. 3. Elsevier, Amsterdam
- Pahl-Wostl, C., J. Möltgen, E. Ebenhoeh, und **G. Holtz** (2007) The NeWater Management and Transition Framework – state and development process, in: Pahl-Wostl, C., P. Kabat und J. Möltgen (eds.) Adaptive & Integrated Water Management: Coping with complexity and uncertainty. Springer Verlag (2007)

### 2.3 Diskussionsbeiträge / Discussion Paper

- Holtz, G.** (2013) Coherence of social practices: the case of meat consumption. University of Osnabrueck, Institute of Environmental Systems Research.  
[http://www.usf.uni-osnabrueck.de/fileadmin/DE/Institut/Publikationen/Forschungsgruppen/REM/Holtz2013\\_CoherenceOfSocialPractices\\_WorkingPaper.pdf](http://www.usf.uni-osnabrueck.de/fileadmin/DE/Institut/Publikationen/Forschungsgruppen/REM/Holtz2013_CoherenceOfSocialPractices_WorkingPaper.pdf)

### 2.4 Konferenzbeiträge / Conference Papers and Posters

- Holtz, G.**, Xia-Bauer, C. Vallentin, D., Schüle, R., Lucas, R. (2016) Supporting transitions to green growth from the urban level – a conceptual framework. International Sustainability Transitions Conference 2016, Wuppertal, Germany.
- Holtz, G.** und Fink, T. (2015) Analysing the transition of Jordan’s electricity system: Underpinning transition pathways with mechanisms. International Sustainability Transitions Conference 2015, Brighton, UK.
- Holtz, G.** und Nebel M. (2013) Actor rationality as source for uncertainty in models of socio-ecological systems: a comparison of two agent-based models of agricultural land-use change, in: Kamiński, B. und Koloch G. (eds.), Advances in Social Simulation - Proceedings of the 9th Conference of the European Social Simulation Association. Springer
- J. Halbe, D. Reusser, **G. Holtz**, M. Haasnoot, A. Stosius, W. Avenhaus, J. Kwakkel (2013) The role of transition models: a classification scheme and lessons from related fields. 3rd International Conference Sustainability Transitions, Zürich
- Holtz, G.** (2012) An agent-based model of social practices. Proceedings of the 8th Conference of the European Social Simulation Association, Salzburg
- Holtz, G.** (2011) An abstract agent-based model of practice theory. 2nd International Conference Sustainability Transitions, Lund
- Holtz, G.** (2011) The PSM approach for tackling the complexity of transitions – bridging the gap between high-level frameworks and micro-level entities. 2nd International Conference Sustainability Transitions, Lund

- Holtz, G.** (2010) Modelling societal transitions – an appraisal of first experiences and propositions for future exercises. 3rd World Congress on Social Simulation, Kassel
- Holtz, G.** (2009) A Transition without a Regime? The case of Irrigated Agriculture in the Upper Guadiana, Spain. Knowledge network for System Innovations and Transitions (KSI) conference, Amsterdam
- Holtz, G.** (2008) Modeling transitions from the bottom-up: The case of the Upper Guadiana, Spain. Fifth conference of the European Social Simulation Association, Brescia
- Holtz, G.** (2007) A model to explore multi-dimensional change in an unsustainable farming system. Fourth conference of the European Social Simulation Association, Toulouse
- Holtz, G.** und C. Pahl-Wostl (2006) An evolutionary model of radical socio-technical change. Workshop Emergence, Evolution, Generation (EEG), European Conference on Complex Systems, Oxford
- Holtz, G.** und C. Pahl-Wostl (2004) Models of socio-technical transitions - Considerations on their role and structure (Poster). Open Meeting of the International Human Dimensions Programme on Global Environmental Change
- Holtz, G.** und C. Pahl-Wostl (2003) Modelling lock-in effects in socio-technical systems, First conference of the European Social Simulation Association, Groningen

### 3 Eingeladene Vorträge / Invited presentations

- Holtz, G.** (2017) Modellierung in der Transformationsforschung. Expertenworkshop D3-Modell, ausgerichtet von Umweltbundesamt und Consideo. Berlin.
- Holtz, G.** (2016) A socio-technical perspective on energy modelling. WholeSEM annual conference 2016: Energy Modelling Insights for Iterative Decision Making, The Møller Centre, Cambridge
- Holtz, G.** (2016) Modellierung von Transitionsprozessen. Aktuelle Debatten der Soziologie, TU Dortmund.
- Holtz, G.** (2013) Using simulation models to explore changes in social practices. ESRC Seminar Series Modelling on the Move, Seminar 4 – Social Theory, Transport and Energy Modelling. Westminster University, London
- Holtz, G.** (2010) Systeminnovationen in Mensch-Technik-Umwelt Systemen – was können Simulationsmodelle zum besseren Verständnis beitragen? CESR Forschungs-Kolloquium, Universität Kassel
- Holtz, G.** (2007) Challenges and Choices in Transition modelling. Vortrag am CIRUS, Eawag Zürich
- Holtz, G.** (2004) A model-based approach to technological succession. Vortrag in der Abteilung Evolutionsökonomik, Max-Planck Institut für Ökonomik, Jena