

## Current Interest in the Theory of Path Dependence – A Short Update\*

Jörg Sydow, Department of Management, Freie Universität Berlin, Germany.

There is an increased interest in the field of *technology and innovation management* in studies that are informed by path concepts (e.g. Ansari and Garud, 2009; Valorinta, Schildt, and Lamberg, 2011; Dobusch and Schüßler, 2013; Kay, 2013; Bergek and Onufrey, 2014; Greve and Seidel, 2015; Singh, Mathiassen and Mishra, 2015; Berggren, Sydow and Tell, 2017; Nilson, 2017; Wessel, Gersch and Harloff, 2017; Dosi, Moneta and Stepanova 2019; Fürstenau, 2019). The same also holds true for the fields of *strategic management*, including research on interorganizational alliances/networks (e.g. Koch, 2011; Müller-Seitz and Sydow 2011; Sydow, Windeler, Schubert, and Sydow, 2012; Burger and Sydow, 2014; Rothmann and Koch, 2014; Schmidt and Braun, 2015; Sydow, 2015; Wenzel, 2015; Ding, Kininmonth and McKinstry, 2016; Laudien and Daxböck, 2016; Wenzel et al. 2017), as well as for *organization research* (e.g. Sydow, Schreyögg and Koch 2009; Schreyögg, Sydow and Holtmann, 2011; Kremser and Schreyögg, 2016; Bothello and Salles-Djelic, 2018). Even the fields of *project management, international management and business logistics* have shown a first interest in the study of organizational path dependencies (e.g. Hutzschenreuther, Pedersen and Volberda, 2007; Sydow, 2009; Manning and Sydow, 2011; Pajunen and Fang, 2013; Truschkin, Elbert and Günter, 2014; Alscher and Brauer, 2015; Aaltonen, Ahola and Artto, 2017). Finally, the numerous studies from *economic geography* deserve to be mentioned (e.g. Martin and Simmie, 2008; Simmie, 2012; Dawley, 2014; Dawley, MacKinnon, Cumbers and Pike, 2015; Isaksen, 2015; Binz, Truffer, and Cohen, 2016; Jing and Benner, 2016; Simmie, Sternberg and Carpenter, 2014; Hu, 2017; Isaksen and Trippel, 2017; Chlebna and Simmie, 2018; Steen and Hansen, 2018; MacKinnon et al., 2019). Interestingly, even scholars interested identifying and solving unfamiliar problems ad hoc (Ritala, Heiman and Hurmelinna-Laukkanen, 2016), refer extensively to path-dependent properties (in this case: of dynamic capabilities; see also Verge and Durand, 2011), in order to clarify the non-path-dependent character of such processes. Last but not least, and long overdue, *economics* has restarted reflecting its status as a path-dependent discipline (Yalcintas, 2016).

This type of research, even if applied to business and management, can be traced back to David's (1985) and Arthur's (1989) conception of technological path dependence, which emphasizes the importance of self-reinforcing processes that are triggered by (small) events

leading to a (potential) lock-in and occurring mainly behind the backs of agents. In contrast, the more recent approach of Garud and Karnøe (2001) calls for a more explicit conceptualization of (multiple) actor(s) who are thought of as intentionally influencing the path's trajectory (see also Bothello and Salles-Djelic, 2018). Though both approaches are obviously related to one another, they are usually dealt with separately. What is more, previous studies, that tried to integrate these different views at least to some extent, have turned to the organizational realm (e.g., Sydow et al., 2009, 2012) and thus improved our understanding of paths in settings other than the technological.

Unsurprisingly, an increased number of studies turn towards the question of how and under which conditions a technological, institutional or organizational can be broken (e.g. Sydow and Koll, 2017; Law, 2018).

## References

- Aaltonen, Kirsi, Tuomas Ahola and Karlos Artto (2017). Something old, something new: Path dependence and path creation during the early stage of a project. *International Journal of Project Management*, 35: 749-762.
- Alscher, Alexander, and Matthias Brauer (2015). Path dependence in the evolution of business portfolio configuration of large multi-business firms. *International Studies of Management & Organization*, 45(4): 287-318.
- Ansari, Shahzad, and Raghu Garud (2009). Inter-generational Transitions in Socio-technical Systems: The Case of Mobile Communications. *Research Policy*, 38 (2): 382-392.
- Bergek, Anna, and Ksenia Onufrey (2014). Is one path enough? Multiple paths and path interaction as an extension of path dependency theory. *Industrial and Corporate Change*, 23 (5): 1261-1297.
- Berggren, Christian, Jörg Sydow and Fredrik Tell (2017). Relating knowledge integration and absorptive capacity: Knowledge boundaries and reflective agency in path-dependent processes. In: Fredrik Tell, Christian Berggren, Stefano Brusoni and Andrew H. Van de Ven (Eds.). *Managing Knowledge Integration across Boundaries*. Oxford: Oxford University Press, 57-71.
- Binz, Christian, Bernhard Truffer and Lars Coenen (2016). Path creation as a process of resource alignment and anchoring: Industry formation for on-site water recycling in Beijing. *Economic Geography*, 92(2): 172-200.
- Blagoev, Blagoy V., and Georg Schreyögg (2015). Locked-in working time regimes: Exploring barriers to change in a management consulting firm. *Academy of Management Proceedings*, Vancouver, Canada.

- Bothello, Joel, and Marie-Laure Salles-Djelic (2018). Evolving conceptualizations of organizational environmentalism: A path generation account. *Organization Studies*, 39(1): 93-119.
- Burger, Markus, and Jörg Sydow (2014). How inter-organizational networks can become path-dependent: Bargaining practices in the photonics industry. *Schmalenbach Business Review*, 66(1): 73-99.
- Chlebna, Camilla, and James Simmie (2018). New technological path creation and the role of institutions in different geo-political spaces. *European Planning Studies*, 26(5): 969-987.
- Dawley, Stewart (2014). Creating new paths? Offshore wind, policy activism, and peripheral region development. *Economic Geography*, 90(1): 91-112.
- Dawley, Stewart, Danny MacKinnon, Andrew Cumbers and Andy Pike (2015). Policy activism and regional path creation: the promotion of offshore wind in North East England and Scotland. *Cambridge Journal of Regions, Economy and Society*, 8(2): 257-272,
- Ding, Ying Yong, Kirsten Kininmonth and Sam McKinstry (2017). Cocooned: path dependence and the demise of Anderson & Robertson Ltd., Scotland's last silk throwsters. *Business History*, 59 (in print).
- Dobusch, Leonhard, and Elke Schüßler (2013). Theorizing path dependence: A review of positive feedback mechanisms in prominent cases. *Industrial and Corporate Change*, 22 (3): 617-647.
- Dosi, Giovanni, Alessio Moneta and Elena Stepanova (2019). Dynamic increasing returns and innovation diffusion: bringing Polya Urn processes to empirical data. *Industry and Innovation*, 26(4): 461-478.
- Fürstenau, Daniel (2019). A dynamic model of embeddedness in digital infrastructures. *Information Systems Research*, 30 (in print).
- Garud, Raghu, and Peter Karnøe (2001). Path Creation as a Process of Mindful Deviation, in: Raghu Garud and Peter Karnøe (Eds.). *Path Dependence and Creation*, Mahwah: Earlbaum, 1-38.
- Greve, Henrich R., and Marc-David L. Seidel (2015). The thin red line between success and failure: Path dependence in the diffusion of innovative production technologies. *Strategic Management Journal*, 36(4): 475-496.
- Hu, Xiaohou (2017). From coal mining to coal chemicals? Unpacking new path creation in an old industrial region of transitional China. *Growth and Change*, 48(2): 233-245.
- Hutzschenreuther, Thomas, Torben Pedersen and Henk, W Volberda (2007). The role of path dependency and managerial intentionality: A perspective on international business research. *Journal of International Business Studies*, 38(7): 1055-1068.
- Isaksen, Arne (2015). Industrial development in thin regions: trapped in path extension? *Journal of Economic Geography*, 15(3): 585-600.
- Isaksen, Arne, and Michaela Trippel (2017). Exogenously led and policy-supported new path development in peripheral regions: Analytical and synthetic routes. *Economic Geography*, 93(5): 436-457.
- Jing, Runtian, and Mary Benner (2016). Institutional regime, opportunity space and

- organizational path constitution: Case studies of the conversion of military firms in China. *Journal of Management Studies*, 53(4): 552–579.
- Kasabov, Edward, and Usha Sundaram (2016). Conceptualizing clusters as dynamic and path-dependent pools of skills. *Regional Studies*, 50(9): 1520–1536,
- Kay, Neil M. (2013). Rerun the tape of history and QWERTY always wins. *Research Policy*, 40: 1175-1185.
- Koch, Jochen (2011). Inscribed Strategies: Exploring the Organizational Nature of Strategic Lock-in, *Organization Studies*, 32 (3): 337-363.
- Kremser, Waldemar, and Georg Schreyögg (2016). The dynamics of interrelated routines: Introducing the cluster level. *Organization Science*, 27(3), 698-721.
- Laudien, S.M., and Birgit Daxböck (2016). Path dependence as a barrier to business model change in manufacturing firms: insights from a multiple-case study. *Journal of Business Economics*, 86: 611-645.
- Law, Florence (2018). Breaking the outsourcing path: Backsourcing process and outsourcing lock-in. *European Management Journal*, 36(3): 341-352.
- MacKinnon, Danny, Stuart Dawley, Andy Pike and Andrew Cumbers (2019). Rethinking path creation: A geographical political economy approach. *Economic Geography*, 95(2): 113-135.
- Manning, Stephan, and Jörg Sydow (2011). Projects, paths, practices: Sustaining and leveraging project-based relationships. *Industrial & Corporate Change*, 20 (5): 1369-1402.
- Martin, Ron, and James Simmie (2008). Path dependence and local innovation systems in city-regions. *Innovation: Management, Policy & Practice*, 10: 183-196.
- Nilson, Trond (2017). Innovation from the inside out: Contrasting fossil and renewable energy pathways at Statoil. *Energy Research & Social Science*, 28: 50-57.
- Pajunen, Kalle, and Liang Fang (2013). Dialectical tensions and path dependence in international joint venture evolution and termination. *Asia Pacific Journal of Management*, 30: 577-600.
- Petermann, Arne, Georg Schreyögg and Daniel Fürstenau (2019). Can hierarchy hold back the dynamics of self-reinforcing processes? A simulation study on path dependence in hierarchies. *Business Research*, 12 (in print).
- Ritala, Paavo, Bruce Heiman and Pia Hurmelinna-Laukkanen (2016). The need for speed – unfamiliar problems, capability rigidity, and ad hoc processes in organizations. *Industrial and Corporate Change*, 25(5): 757-777.
- Rothmann, Wasko, and Jochen Koch (2014). The newspaper industry and the digital revolution. *Technological Forecasting & Social Change*, 83: 66-83.
- Schmidt, Thomas, and Timo Braun (2015). When cospecialization leads to rigidity: Path dependence in successful strategic networks. *Schmalenbach Business Review*, 67: 489-515.
- Schreyögg, Georg, Jörg Sydow and Philip Holtmann (2011). How history matters in organizations – The case of path dependence. *Management & Organizational History*,

6(1): 81-100.

- Simmie, James (2012). Path dependence and new path creation in renewable energy technologies. *European Planning Studies*, 20(5): 729-731.
- Simmie, James, Rolf Sternberg, and Juliet Carpenter (2014). New technological path creation: evidence from the British and German wind energy industries. *Journal of Evolutionary Economics*, 24: 875-904.
- Singh, Rajendra, Lars Mathiassen and Abday Mishra (2015). Organizational path constitution in technological innovation: Evidence from rural telehealth. *MIS Quarterly*, 39(3): 643-665.
- Steen, Markus, and Gard Hopsdal Hansen (2018). Barriers to path creation: The case of offshore wind power in Norway. *Economic Geography*, 94(2): 188-210.
- Sydow, Jörg (2015). Networks, persistence and change – A path dependence üerspective. In: Horst Albach, Heribert Meffert, Andreas Pinkwart and Rolf Reichwald (Eds.). *Management of Permanent Change*. Berlin: Springer, 89-101.
- Sydow, Jörg, and Friedmann Koll (2017). Platforming for path-breaking? The case of regional electromobility initiatives. In: Johannes Glückler, Emmanuel Lazega and Ingmar Hammer (Eds.). *Knowledge and Networks*. Berlin: Springer, 191-219.
- Sydow, Jörg, Georg Schreyögg and Jochen Koch (2009). Organizational Path Dependence: Opening the Black Box, *Academy of Management Review*, 34(4): 689-709.
- Sydow, Jörg, Arnold Windeler, Cornelius Schubert and Guido Möllering (2012). Organizing R&D Consortia for Path Creation and Extension: The Case of Semiconductor Manufacturing Technologies, *Organization Studies*, 33(7): 907-936.
- Truschkin, Eugen, Ralf Elbert and Armin Günter (2014). Is transport subcontracting a barrier to model shift? Empirical evidence from Germany in the context of horizontal transshipment technologies. *Business Research*, 7: 77-103.
- Valorinta, Mikko, Henri Schildt and Juha-Antti Lamberg (2011). Path dependence of power relations, path-breaking change and technological adaptation. *Industry and Innovation*, 18(8): 765-790.
- Vergne, Jean-Philippe, and Rudolph Durand (2011). The path of most persistence: an evolutionary perspective on path dependence and dynamic capabilities. *Organization Studies*, 32(3): 365-382.
- Wenzel, Matthias (2015). Path dependence and the stabilization of strategic premises: how the funeral industry buries itself. *Business Research*, 8(2): 265-299.
- Wenzel, Matthias, Heinz-Theo Wagner and Jochen Koch (2017). The funeral industry and the internet: On the historical emergence and destabilization of strategic paths. *European Journal of Information Systems*, 26(4): 361-378.
- Wessel Lauri, Martin Gersch and E. Harloff (2017). Talking past each other: A discursive approach to the formation of societal-level information pathologies in the context of the electronic health card in Germany. *Business & Information Systems Engineering*, 59 (1): 23-40.
- Yalcintas, Altug (2016). *Intellectual path dependence in economics*. London: Routledge.

\* As of June 2019. See for more complete information the Path Community Newsletters at

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