

Sub-theme 06: (SWG) Routines, Transfer and Transformation

Towards Artifacts Assemblage In Routine Dynamics: The Exploratory Case Of Nurses' Handoff In A Neonatal Unit

ABSTRACT

Savéria Cecchi

Université Côte d'Azur, CNRS, GREDEG, FRANCE
250, rue Albert Einstein- Sophia Antipolis 06050 Valbonne, FRANCE
E-mail: saveria.cecchi@unice.fr

Evelyne Rouby

Université Côte d'Azur, CNRS, GREDEG, FRANCE
250, rue Albert Einstein- Sophia Antipolis 06050 Valbonne, FRANCE
E-mail: evelyne.rouby@unice.fr

Our study addresses a main topic of interest in routine theory: how do artifacts matter in the production and/or re-production of routines? The purpose is to further current understanding of how artifacts matter in routines' dynamics (D'Adderio, 2008, 2011, 2014; Bapuji et al., 2012; Cacciatori, 2012; Turner & Rindova, 2012). Throughout the paper, we stick to Feldman and Pentland's definition of routines as "repetitive, recognizable patterns of interdependent actions, carried out by multiple actors" (2003, p.95).

There is a wide agreement on two features of routines in literature on the topic. On the one hand, routines are often presented as necessary for effective coordinated actions because they save time, energy, and cognitive resources and so on. In other words, routines are stabilized collective know-how necessary for effective coordinated action. On the other hand, routines have to bring about change in order to meet the challenges of an evolving organizational environment. That is why routines must be dynamic.

Incorporating the idea that stability and change are mutually constituted processes rather than dichotomous states (Tsoukas & Chia, 2002; Farjoun, 2010), some authors have focused their attention on how organizational routines (as practices) are created and re-created in space and over time (e.g., Feldman & Pentland, 2003; Feldman et al., 2016). In this branch of research, the routine's dynamics is not seen as driven by exogenous factors but by endogenous processes. In other words, routines are defined as intrinsically dynamic processes. According to Feldman and Pentland (2003) -- and their followers -- routines are practices with an internal dynamics that contributes to both stability and change, and this dynamics deserves to be further studied.

More and more authors are suggesting that artifacts play an important role in the dynamics of routines (e.g., Pentland & Feldman, 2005, 2008; D’Adderio, 2011). They are especially fundamental regarding the sociomaterial understanding of routines as involving both human (social) and non-human (material) agencies (Leonardi, 2011; Pentland et al. 2011). The main idea is that routines are dynamic through the ongoing effort of actants consisting in both people and things (e.g., Pentland et al., 2012; Feldman et al., 2016). Ultimately, there is a call for more attention both to how and to what extent artifacts matter in routines’ dynamics (D’Adderio, 2008, 2011; 2014; Pentland et al., 2011; Turner & Rindova, 2012; Pentland & Haerem, 2015). Some scholars have made major advances in studying how artifacts and routines are entangled (e.g., Jarzabkowski et al., 2016). However, there are only a few instances investigating explicitly the role of artifacts in the dynamics of routines (e.g., Turner & Rindova, 2012; Bapuji et al., 2012; Cacciatori, 2012; D’Adderio, 2014; Glaser, 2017). Further empirical investigations and theoretical developments are still needed. Especially, a question still remains understudied: how and to what extent are artifacts involved in the (re)production of routines, i.e., in the dynamics of routines?

This question is also important to address in many organizational contexts. These contexts include some involving low levels of uncertainty -- e.g., hotel (Bapuji et al., 2012), waste management organizations (Turner & Rindova, 2012). Obviously, artifacts also play an important role in organizational areas with higher levels of uncertainty, strong dynamic and emerging phenomena requiring crucial constant adaptation -- e.g., a large electronics manufacturer (D’Adderio, 2014), law enforcement agency (Glaser, 2017). In very sensitive fields where members of the organization must constantly adapt their behaviors, both between themselves and with artifacts, improper adaptations can have very harmful impacts. In some contexts, errors can lead to millions of dollars in damages, or, more critically, to losses of lives (Courtright et al., 2012). In this paper, we propose an empirical study of the role of artifacts in the dynamics of routines within the organizational context of a neonatal unit in a French hospital. More precisely, we study the handoffs routines of nurses, i.e., how two teams of nurses – one leaving the workplace and one arriving to the workplace – coordinate themselves to ensure the continuity of care 24/7. This context involves high levels of uncertainty given the critical health conditions of premature babies whose lives are at stake.

We conduct an abductive exploratory case study (Wynn & Williams, 2012; Avenier & Thomas, 2015). Our goals are twofold: to provide an in-depth analysis of how handoffs seen as sociomaterial practices are performed and have evolved over time; to identify the

underlying mechanisms that are responsible of such an evolution, as well as the manner by which they are contingently activated.

Based on our findings, we identify two underlying mechanisms by which artifacts support the dynamics of routines: a) the *declination* of artifacts and vocabularies, and b) the *combination* of artifacts and vocabularies. Identify these two mechanisms help us to reinforce and/or enrich existing results about 1) artifacts affordances in routines' dynamics, and 2) inscription and vocabulary in routines' dynamics.

References

- Bapuji, H., and Saeed, A. M. 2012. "Intentions, Intermediaries, and Interaction: Examining Avenir M. J., Thomas C. 2015. "Finding One's Way Around Various Methodological Guidelines For Doing Rigorous Case Studies: A Comparison Of Four Epistemological Frameworks". *Systèmes d'Information & Management* 2015/1(20): 61-98.
- Bapuji, H., Manpreet H. and Saeed, A. M. 2012. "Intentions, Intermediaries, and Interaction: Examining the Emergence of Routines." *Journal of Management Studies*, 49(8): 1586-1607.
- Benham-Hutchins, M.M. and J.A. Effken. "Multi-professional patterns and methods of communication during patient handoffs". *International Journal of Medical Informatics*. 2010. 79(4): 252-267.
- Cacciatori, E. 2012. "Resolving Conflict in Problem-Solving: Systems of Artefacts in the Development of New Routines". *Journal of Management Studies*, 49(8): 1559-1585.
- Clark S., Gioia D., Ketchen D., & Thomas J. 2010. "Transitional Identity as a Facilitator of Organizational Identity Change during a Merger". *Administrative Science Quarterly*. 55:397-438.
- Cohen, M. D., & Hilligoss, B. 2010. "The published literature on handoffs in hospitals: deficiencies identified in an extensive review" *Quality & Safety in Health Care*, 19(6): 493-497.
- Cohen, M. D., Hilligoss, B., & Amaral, A. C. K. 2012. "A handoff is not a telegram: an understanding of the patient is co-constructed" *Critical Care*, 16(1): 303-308.
- Courtright S. H., Stewart G. L., Ward M. C. 2012. "Applying research to save lives: Learning from team training approaches in aviation and health care". *Organizational Dynamics*. 41: 291-301.
- D'Adderio, L. 2008. "The performativity of routines: Theorising the influence of artefacts and distributed agencies on routines dynamics". *Research Policy*, 37(5): 769-789.
- D'Adderio, L. 2011. "Artifacts at the centre of routines: performing the material". *Journal of Institutional Economics*, 7(2): 197-230.
- D'Adderio, L. 2014. "The Replication Dilemma Unravelling: How Organizations Enact Multiple Goals in Routine Transfer". *Organization Science*, 25(5), 1325-1350.
- Farjoun M. 2010. "Beyond Dualism: Stability And Change As A Duality". *Academy of Management*, 35(2): 202-225.

- Feldman, M. S., B. T. Pentland. 2003. "Reconceptualizing organizational routines as a source of flexibility and change". *Administrative Science Quarterly*. 48(1) 94–118.
- Feldman M. S., Pentland B. T., D'Adderio L., & Lazaric N. (2016). "Beyond Routines as Things: Introduction to the Special Issue on Routine Dynamics". *Organization Science*, 27(3): 505-513.
- Giddens, A. 1984. "The Constitution of Society". Berkeley, CA: University of California Press.
- Gioia D. A., Price K. N., Hamilton A. L. & Thomas J. B. 2010. "Forging an Identity: An Insider-outsider Study of Processes Involved in the Formation of Organizational Identity". *Administrative Science Quarterly*. 55: 1-46.
- Gioia D. A., Corley K. G. & Hamilton A. L. 2013. "Seeking qualitative rigor in inductive research notes on the Gioia methodology". *Organizational Research Methods*. 16(1): 15-31.
- Glaser B. G., 2004. "Naturalist Inquiry and Grounded Theory". *Forum Qualitative Social Research*. 5(1) Art.7.
- Hillgoss, B., & Cohen, M. D. 2011. "Hospital handoffs as multifunctional situated routines: implications for researchers and administrators". *Advances in Health Care Management*, 11: 91-132.
- Jarzbkowski, P., Bednarek, R., & Spee, P. 2016. "The Role of Artifacts in Establishing Connectivity Within Professional Routines : A Question of Entanglement" in *Organizational Routines: How They Are Created, Maintained, and Changed*, 117-??.
- Kerr M.P. 2002. "A qualitative study of shift handover practice and function from a socio-technical perspective". *Journal of Advanced Nursing*. 37: 125–134.
- LeBaron C., Christianson M. K., Garrett L., & Ilan R. 2016. "Coordinating flexible performance during everyday work: An ethnomethodological study of handoff routines". *Organization Science*, 27(3): 514-534.
- Leonardi, P. M. 2011. "When Flexible Routines Meet Flexible Technologies: Affordance, Constraint, and the Imbrication of Human and Material Agencies." *MIS Quarterly*, 35(1): 147-167.
- Leonardi, P. M. 2013. "Theoretical foundations for the study of sociomateriality". *Information and Organization*, 23(2): 59-76.
- Mayor E., Bangerter A. & Aribot M. 2011. "Task uncertainty and communication during nursing shift handovers". *Journal of Advanced Nursing* 68: 1956–1966.
- Mayor, E., & Bangerter, A. 2015. "Managing perturbations during handover meetings: a joint activity framework". *Nursing Open*, 2(3): 130-140.
- Meum, T., & Ellingsen, G. 2011. "'Sound of silence'—changing from an oral to a computer-mediated handover". *Behaviour & information technology* , 30(4): 479-488. Parmigiani and Howard-Grenville (2011)
- Parmigiani A., Howard-Grenville J.. 2011. "Routines revisited: Exploring the capabilities and practice perspectives". *The Academy of Management Annals*. 5(1): 413- 453.
- Pentland B. T., Haerem T., Hillison D. 2011. "The (n)ever changing world: stability and change in organizational routines". *Organization Science*, 22(6): 1369–83.
- Pentland, B.T., Feldman M.S., Lui P., Becker M. 2012. "Dynamics of organizational routines: A generative model". *Journal of Management Studies*, 49(8): 1484-1508.

- Pentland, B. T., & Hærem, T. 2015. Organizational Routines as Patterns of Action: Implications for Organizational Behavior. *Annu. Rev. Organ. Psychol. Organ. Behav.*, 2(1), 465-487.
- Turner S. F., & Rindova V. 2012. "A balancing act: How organizations pursue consistency in routine functioning in the face of ongoing change". *Organization Science*, 23(1): 24-46.
- Tsoukas, H. (1989), The Validity of Idiographic Research Explanations, *Academy of Management Review*, vol. 14, n° 5, p. 551-561.
- Tsoukas, H., Chia. R. 2002. "On organizational becoming: Rethinking organizational change". *Organization Science*, 13(5): 567–582.
- Volkoff O., Strong D. M. & Elmes M. B. 2007 "Technological Embeddedness and Organizational Change". *Organization Science* 18(5): 832–848.
- Williams C. K., Karahanna E. 2013. "Causal Explanation In The Coordinating Process: A Critical Realist Case Study Of Federated It Governance Structures". *MIS Quarterly* 37(3): 933-964
- Wynn D., Williams C.K.. 2012. "Principles For Conducting Critical Realist Case Study Research In Information Systems". *MIS Quarterly*, 36(3): 787-810