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**4th Organizations, Artifacts and Practices (OAP)
Workshop Rules, Regulations and Materiality in
Management and Organization Studies, 26-27th June
2014, Luis University, Roma**

Nathalie Mitev, François-Xavier de Vaujany, Paolo Spagnoletti, Yesh Nama

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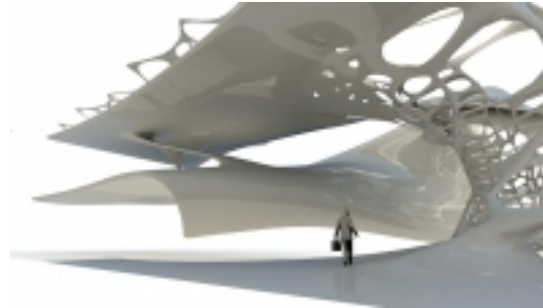
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4th Organizations, Artifacts and Practices (OAP) Workshop

Rules, Regulations and Materiality in Management and Organization Studies

26th and 27th June 2014

LUISS Guido Carli University, viale Pola 12, Roma - Italy



Editors:

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CALL FOR CONTRIBUTION

The first OAP workshop was launched in May of 2011 at Paris-Dauphine with the goal of facilitating discussion among scholars from various disciplines (e.g. management, sociology, anthropology, ergonomics, computer science, psychology...) who collectively share an interest in understanding the dynamics that exist between organizations, artifacts (IT, managerial techniques, buildings, machines, cognitive schemes, symbols...), and practices. OAP relates to debates in the fields of Science and Technology Studies (STS), Sociomateriality, Organizational Space, Symbolic artifacts and Managerial Techniques, among others. The theme of the second workshop at Paris-Dauphine was 'Sociomateriality and Space' and the third workshop at the London School of Economics was on 'Sociomateriality and Time'.

The workshop's fourth session will concentrate on the subject of rules and regulations in organizations. In the context of global competition and the global crisis experienced by most countries all over the world, the issue of regulation is more than ever at stake. How are organizations regulated through everyday practices? How are everyday practices entangled with information technologies, work environments, and organizational spaces? How is organizational control implemented through, against, with, everyday material artifacts? To compete globally, how do organizations standardize their products, services, and infrastructures, to embed themselves in global markets? At a more micro-level, how are these global practices enacted locally and with what effects at the macro-level (on society)? What are the relationships between norms, practices and artifacts? Do regulations expected to be conveyed by artifacts have any specificity?

This fourth workshop will aim at shedding light on the following topics, among others:

- Rules and their relationships with material artifacts in organizations, and more generally, organizational space and time;
- Organizational regulations and their relationships with materiality;
- The relationship between regulation and legitimation in organizations, and their material underpinnings;
- The standardization of organizations and their products and their material dimensions,
- Performativity and normativity in organizations;
- Levels of regulations (societal, organizational, groupal) and their interplay;

It will also be a way to come back to the more usual themes of OAP:

- Artifacts and objects as the constituents, results or outputs of organizations and organizing;
- The issue of materialization and performativity in organizations;
- The entanglements or imbrication between the material and social dimensions of organizational practices;
- New vocabularies to act or overcome the social-material dichotomy (what else beyond Latour)?
- Discourses and materiality;
- The exploration of organizational space, artifacts and spatial practices;
- The affordance of materiality and space in organizations;
- Performativity, time and materiality;
- Marxist and post-marxist approaches of materiality;
- History, longue-durée and materiality.

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WELCOME

We are delighted to welcome you to the fourth OAP workshop! After Paris in 2011 and 2012, and London in 2013 it is a pleasure to now meet in Rome, for a new series of exciting presentations and debates on organizations, artefacts and practices.

This year's theme is rules and regulations in organizations. A theme that becomes particularly relevant in a globalized world in which norms, practices, and artifacts are entangled with organizational everyday practices and at the same time are generated by organizations in their attempt to control the environment. Making sense of the relations between 'Rules, Regulations and Materiality' therefore requires shrewd observation and acute conceptualisation, as well as a broad diversity of approaches.

We are particularly pleased with the quality of the submissions we received, and with the high number of disciplines, of intellectual traditions, of research methods that are being represented in the workshop. Thanks very much to all of you for your interest in the project, and for joining us at LUISS for these two days. We look forward to meeting you in person, to listening to your presentations and questions, and to engaging with your research. We hope that you will enjoy the event and gain useful insights from it.

Special thanks are due to the speakers who have kindly accepted to deliver the keynote lectures and participate in our final panel: Kalle Lyytinen, Fabian Muniesa, Giovan Francesco Lanzara, Philippe Lorino, Bernard Leca, Stewart Clegg and Ole Hanseth. We have no doubt that their presentations will shape debates in all other sessions of the workshop and impact us all. We are also especially thankful to those of you who have agreed to chair sessions and ensure the coordination of exchanges within these. A couple of other individuals were instrumental in the organisation of the workshop and their contribution must be acknowledged publicly: Andrea Resca, Luca Giustiniano, Francesca Marzo, Audrey Davoust, Sébastien Lorenzini, Yesh Nama, Florence Parent, Christine Vicens, without whom none of this would have taken place.

The event would also have been impossible without the full institutional support of LUISS. The Université Paris-Dauphine and LSE as well have continued their generous support to the OAP workshop and deserve our thanks. The French-Italian collaboration is particularly noticeable this year. The French Institute and Embassy in Roma have acknowledged it by hosting the main social event of the workshop. May Benoit Tadié be thanked for this kind initiative.

Have a great 2014 OAP! And do please get in touch directly with us organizers if we can be of help in any way during the workshop.

Nathalie, François-Xavier and Paolo

TIME SCHEDULE – Fourth Organizations, Artifacts and Practices (OAP) workshop 2014

LUISS, Roma (<http://workshopoap.dauphine.fr>)

Day 1, 26th June

12.00-13.30	ROOM Aula Magna Mario Arcelli Registration			
13.30-14.00	ROOM Aula Magna Mario Arcelli Welcome talk by co-chairs and representatives of LUISS			
14.00-15.15	ROOM Aula Magna Mario Arcelli Keynote 1: “Coping with the Rule of Business”, Professor Fabian Muniesa (Mines ParisTech)			
15.30-17.00	<p>ROOM 118</p> <p>Track 1: Creative processes and organizational regulations (Session chair: Ole Hanseth, Oslo University)</p> <p>Working to Rule: Practices of Simplification and Amplification, Chris McLean and Jeremy Aroles (Manchester University)</p> <p>Making room for change: The case of a surgical unit, Berit K. Kraghand Rune T. Clausen (Aarhus University).</p> <p>Creative Destruction as Sociomaterial Becomings: Insights from the Entrepreneurial Processes, Aljona Zorina (Ecole Supérieure de Commerce de Paris</p>	<p>ROOM 208</p> <p>Track 2: Society, rules and regulations (Session chair: Alan Lowe, Aston university)</p> <p>Digital materiality and co-operatives: a shrinking mode of production or an opportunity for growth? Paolo Depaoli and Stefano Za (LUISS).</p> <p>Rules and IT-based practices: a sociomaterial analysis, Stefan Haefliger (Cass Business School), Vladislav Fomin (Vytautas university) and Kalle Lyytinen (Case Western University).</p> <p>The materiality of CSR regulation in industrial organizations: a comparison between longitudinal</p>	<p>ROOM 209</p> <p>Track 3: Space and materiality (Session chair: Rebecca Pinheiro-Croisel, Mines ParisTech,)</p> <p>Movements in/of space and development of learning: The case of a packaging company, Yves Habran, Klaus-Peter Schulz (ICN Graduate Business School, Metz-Nancy) and Mike Zundel (University of Liverpool Management School).</p> <p>Visualization of spatial organization: from art of memory to action? Caroline Scotto (Ecole des Mines ParisTech).</p> <p>Build artifacts in sustainable urban projects: when pragmatism makes innovation, Rebecca Pinheiro-</p>	<p>ROOM 210</p> <p>Track 4: Bureaucracy and new modes of organizing (Session chair: Stewart Clegg, University of Technology, Sydney)</p> <p>Bureaucratized morality, institutional durability: organizationally mediated idealism in the Peace Corps, Meghan Kallman (Brown University)</p> <p>The romance of organizations: saints, sinners, sophisticates or innocents?</p> <p>Stewart Clegg (University of Technology, Sydney) and Miguel Pinha E Cunha (Nova School of Business and Economics, Lisbon).</p> <p>“We are following and supporting you!”: Fan communities and Artists: A gift-based regulation, Alya Mlaiki, (Ecole de Management ESDES, U.C. de Lyon).</p>

	Europe) and Sylvain Bureau (ESCP Europe and Ecole Polytechnique).	case studies, Julie Bastianutti (CRG, Ecole Polytechnique).	Croisel (Mines ParisTech, Centre de Gestion Scientifique) and Tor Hernes (Copenhagen Business School).	
17.00-17.30	Coffee break			
17.30-19.00	<p>ROOM 118</p> <p>Track 5: Performativity and rules (Session chair: Bernard Leca, Université Paris-Dauphine)</p> <p>The arenas of performativity: designing and negotiating the socio-materiality of economic innovations within platforms, Franck Aggeri and Mélodie Cartel (Centre de Gestion Scientifique, Ecole des Mines ParisTech,).</p> <p>Achieving Information Infrastructure performativity across EU national legal domains and practices: the challenge of e-CODEX, Marco Velicogna (Istituto Di Ricerca Sui Sistemi Giudiziari, Consiglio Nazionale delle Ricerche, Bologna).</p> <p>How to perform rules that do not exist? A socio-material perspective on the unrealized creation of rules in a social movement, Philippe Eynaud and Damien Mourey (Institut d'Administration des</p>	<p>ROOM 208</p> <p>Track 6: Routines, nations and regulations (Session chair: Amirhossein Takian, Brunel University)</p> <p>Rules, routines and disruptions in the Dutch railways, Thijs Willems (Vrije Universiteit Amsterdam)</p> <p>Organizational learning in the implementation & adoption of National Electronic Health Records Systems in hospitals in England, Amirhossein Takian (Brunel University)</p> <p>Trials of explicitness in the formulation of a fee system: The case of the nuclear waste program in the United States, Basak Saraç (Centre de Sociologie de l'Innovation Ecole des Mines ParisTech).</p>	<p>ROOM 209</p> <p>Track 7: Historical perspectives on material regulations (Session chair: Peter Clark, Queen Mary University London)</p> <p>The incomplete cathedral: iconic spaces, unfolding architecture, and innovation in the city of Siena (1259-1357), Elena Giovannoni (University of Siena) and Paolo Quattrone (Edinburgh Business School and Oxford University)</p> <p>Innovation and space-time rules in global media sports: comparing American football and rugby by union as laboratories for pacified excitement 1985-2014, Peter Clark (Queen Mary University London)</p> <p>New companies, new organizational forms? Luca Giustiniano (LUISS).</p>	<p>ROOM 210</p> <p>Track 8: Philosophical perspectives on materiality and artifacts (Session chair: Philippe Lorino, ESSEC, Paris)</p> <p>Tecnologia social: A South American view of the technology-society relationship, Marlei Pozzebom (HEC Montreal).</p> <p>Felicitous heterotopia or infelicitous prototopia? The development of new rules as a pragmatist inquiry, Philippe Lorino, Marie-Leandre Gomez and Bernard Blanc (ESSEC, Paris).</p> <p>Materiality and beyond: Theorizing the relevance of artefacts along the third epistemological route, Maddalena Sorrentino (University of Milan)</p>

	Entreprises, Paris) and Nathalie Raullet-Croset (Centre de Recherche en Gestion, Ecole Polytechnique).			
19.00	ROOM Sala selle Colonne, A e C Cocktail at LUISS , Roma. Welcome talk by representatives of LSE and Université Paris-Dauphine.			

Day 2, 27th June

9.00-10.00	ROOM Aula Magna Mario Arcelli Keynote 2: “Remediation of practices: objects, agency and new media”, Professor Giovan Francesco Lanzara (Bologna University)			
10.00-10.30	Coffee break			
10.30-12.00	ROOM 118 Track 9: Tools and regulations (Session chair: Paolo Spagnoletti, LUISS) Knowledge management systems, autonomy and control: how to regulate? Carine Khalil (Université Paris Descartes) and Aurélie Duzert (Université de Poitiers). Electronic business reporting: technology objects in the construction of transparent market infrastructures?, Alan Lowe (Aston University), Joanne Locke (Open University) and Maceij Piechocki (Freiberg <i>University of Technology</i>) Performance measurement in a nonprofit organization: social impact measurement between	ROOM 208 Track 10: Norms, identity and materiality (Session chair: Chris McLean, Manchester University) Rules, norms and materiality in practice: a clinical experience, Giorgia Ciocchetti, Antonio Chimienti, Sandro Mameli and Maria Gisa Masia (National School of Administration, Rome) Professional identity, work environment and sociomaterial practices, Pierre Laniray (Université Paris-Dauphine) Setting rules for the unruly web: organizational behaviour in the context of crowdfunding regulation, Lucia Marchegiani (University Roma Tre) and Elisa	ROOM 209 Track 11: Practice and materiality (Session chair: Sara Varländer, Stanford University) The organization of transport terminal: panopticons, cathedrals, agoras or branded cities? Marcello Martinez (Seconda Università di Napoli), Riccardo Mercurio, Paolo Canonico, Gianluigi Mangia, (Università Federico II di Napoli) and Mario Pezzillo Iacono (Seconda Università di Napoli) Making sense with practice: from an “...as practice” to a “practice as...” perspective, Amaury Grimand, Jérôme Méric and Ewan Oiry (Université de Poitiers). Bricolage as artefactual joke: how	ROOM 210 Track 12: Debates about sociomateriality (Session Chair: Marlei Pozzebon, HEC Montreal) Exploring the sociomaterial grounds of information security policy compliance, Marko Niemimaa (University of Turku) and Anna Elina Laaksonen (University of Helsinki). “Where are the missing masses?” Bringing ANT back into the debate on materiality, Yesh Nama (ESSEC, Paris), Alan Lowe (Aston University) and Paolo Quattrone (Edinburgh Business School and Oxford University) The anthropological contribution of Maurice Godelier’s thought to the relationship between the Mental and the Material: some implications for Organization Studies, Jean-François

	material tools and social practice, Julien Kleszczowski (Ecole Polytechnique, CRG) and Nathalie Raullet-Croset (Centre de Recherche en Gestion, Ecole Polytechnique).	Battisti (University Roma Tre)	bricoleur can use humour to transform mockery into acceptance, Isabelle Ne and Raffi Duymedjian (Grenoble Ecole de Management).	Chanlat (Université Paris-Dauphine)
12.00-13.30	Lunch at LUISS (buffet)			
13.30-16.00	<p>ROOM 208</p> <p>Track13: Artifacts and institutional dynamics (Session chair: Magda Hercheui, Westminster Business School)</p> <p>Socio-materiality and the transnational expansion of institutional rules: Michelin in haute cuisine around the world, Isabelle Bouty (Université Paris Ouest), Marie-Leandre Gomez (ESSEC, Paris) and Carole Godard (Université Paris Ouest).</p> <p>Social media and institutional innovation: the Case of Free Lunch for Children in China, Yingqin Zheng (Royal Holloway University) and Ai Yu (University of Bedfordshire)</p> <p>When sociomateriality meets institutional logics: A study of campus tours as legitimacy building practices, Francois Xavier de Vaujany (Université Paris-Dauphine), Sara Varlander (Stanford University) and Emmanuelle Vaast (McGill University).</p>	<p>ROOM 209</p> <p>Track 14: Law, judicial activities and (Session chair: Luca Giustiniano, LUISS University)</p> <p>Questioning the circulation of agency in two judicial information infrastructures, Andrea Resca (LUISS)</p> <p>Commodifying management knowledge: a dynamic model of conception, appropriation and valuation practices, Chantale Mailhot (HEC Montréal) and Mireille Matt (Applied Economics Lab, Institut National de Recherche Agronomique and Université Pierre Mendès- France, Grenoble).</p> <p>(De)construction of pharmaceutical industry reputation through material practices regulation, Hélène Lambrix (Université Paris-Dauphine).</p> <p>Technological innovation, organization and work: An exploration of the Italian context through the lenses of sociomateriality, Mara Brumana</p>	<p>ROOM 118</p> <p>Track 15: Practice, space and materiality (Session chair: Nathalie Mitev, London School of Economics)</p> <p>Affordances and constraints of rules on material agency of a collaborative IS, Galadrielle Ulmer and Jessie Pallud (Ecole de Management Strasbourg)</p> <p>Agency, practices of leadership, and the roles of computational objects, Barton Friedland (University of Warwick)</p> <p>Projecting space: how organizational members project themselves in an upcoming space? Markman Eliel (Université Paris-Dauphine).</p> <p>Trust networks for knowledge management, Francesca Marzo (University of Siena)</p> <p>Practising organizational spaces, Yoann Bazin (ISTEC, Ecole Supérieure de Commerce et de</p>	<p>ROOM 210</p> <p>Track 16: Sociomateriality... so what? (Session chair: Stefan Haefliger, Cass Business School, London)</p> <p>The expansion of community banks in Brazil and what we have learnt from a sociomaterial lens, MarleiPozzebon (HEC Montréal) and Eduardo Diniz (Fundação Getulio Vargas, Escola de Administracao de Empresas de Sao Paolo)</p> <p>Unfolding practices with unfolding objects: standardization work in global branding, Anna Morgan-Thomas (University of Glasgow)</p> <p>Seeking legitimacy with 'best practices' for ICT in higher education facilities projects, Anouk Mukherjee (Université Paris-Dauphine)</p> <p>Diffraction and imbrication lenses for understanding sociomaterial constitutive entanglement: E-service of land records in Bangladesh, Muhammad S. Alam (University of South Alabama)</p> <p>Regulating a masterpiece: Management of materiality and organizational change in public museums, Irene Popoli (Stockholm</p>

	Bringing artifacts within institutional theory, Bernard Leca (Université Paris-Dauphine), Frédérique Déjean (Université de Lorraine), Jean Pascal Gond (Cass Business School) and Isabelle Huault (Université Paris-Dauphine).	(University of Bergamo), Maurizio Decastri and Danila Scaroza (University of Rome Tor Vergata), and Stefano Za (LUISS).	Marketing, Paris) and Maja Korica (Warwick Business School)	School of Economics).
16.00-17.30	ROOM Aula Magna Mario Arcelli Concluding remarks with Philippe Lorino (ESSEC), Ole Hanseth (Oslo university), Bernard Leca (Université Paris-Dauphine) and Stewart Clegg (UTS). A few words about OAP 2015 at the University of Technology, Sydney			
19.00	Cocktail at the French embassy (Palazzo Farnese). Welcome talk by the French ambassadeur, the rector of LUISS and the VP of université Paris-Dauphine.			
20.30	Concert Piazza Farnese (Concert de clôture du festival franco-italien)			

Day 3, 28th June

10.00	Guided tours at the Vatican's city or Domus Romanae
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Track 1 - Creative processes and organizational regulations

Ole Hanseth (*Oslo University*)

Room: 118

Working to Rule: Practices of Simplification and Amplification

Chris McLean, *Manchester University*

Jeremy Aroles, *Manchester University*

Rules, regulation and practices of standardisation permeate through many different layers of organizations and in a variety of forms. If we take the UK education sector as an example, there are a plethora of standards and systems of measurement and regulation at both the national level – exam systems, OFSTED inspections, education funding, performance measures – and at the local level – including regional and school standards and practices. In relation to standards, rules, and regulations within organizations, there have been a multitude of responses based on a diverse set of ontological and epistemological assumptions and ideas of objectivity and subjectivity. While certain approaches view rules, standards and procedures as existing in some *a priori*, independent and objective form, others focus more on ideas of subjectivity and the role of humans in the process of decision-making. Finally, some approaches have emphasised the need to incorporate a greater appreciation of materiality in terms of standards, rules and procedures as well as the mutual constitution of structures and agency when researching the process of regulation and standardisation.

In addition to exploring the implications of drawing on different ideas of objectivity, subjectivity and materiality in relation to the study of rules and practices, this paper seeks to overcome certain dualities – objectivity/subjectivity, structure/agency and macro/micro – through an *infrastructural approach* to the study of standardisation and regulation. In particular, by exploring certain practices of repetition and becoming, this approach attempts to capture the materiality of becoming together with the many mediations, scripts and actions which assemble and are performed through specific events underlying the enactment of rules and procedures in practice. In order to explore these issues in greater detail, this paper will draw on two ethnographic studies: one conducted within the UK secondary education sector and another in a newspaper printing factory. Through a focus on performance measurement and regulation, the paper will therefore examine how certain rules, procedures and practices of standardization and regulation are enacted within each of these settings and how this enactment is embedded in various practices of simplification and amplification.

The UK secondary education sector provides an extremely rich source of research material on these issues, especially when one begins to delve into the many different practices, artefacts, rules and regulations which emerge within the school setting. This study provides a detailed exploration of specific educational practices, rules and procedures within the school and ‘beyond’ the school setting by focusing on the rules, regulation and standardisation associated with curriculum development. This not only relates to debates about the provision of different national programmes of education within secondary schools, but also how ‘material’ and ‘practical’ scripts are enacted through the everyday practices of schools. For instance, an in-depth examination of the development of the curriculum for 14 to 16 year olds reveals a diverse range of simplifying and amplifying practices underlying this process. By considering events centred

around curriculum development, we can begin to investigate these practices through the different actions which surround this process and explore how certain ‘problems’, ‘issues’ and ‘solutions’ emerge during these events. This includes more ‘philosophical’ curriculum issues concerned with debates over the provision of a ‘child-focused’ curriculum or one directed more towards achieving higher performance ratings for the school; in addition to considerations which are viewed as more ‘practical’ – such as timetabling, options, the allocation of rooms, clashes in timings, etc. This entanglement of rules, negotiations and tensions can also be illustrated through the controversies around surrounding the English Baccalaureate (Ebacc.). While it may have been dropped as a formal qualification in the UK, it still remains as a school performance measure (i.e. students are required to study English, Maths, Sciences, a Language, and either History or Geography in order to be included in this measure). While some schools are attempting to ensure that many of their students follow the Ebacc. route by introducing pathways to encourage this selection of courses, others may have a smaller percentage of pupils taking these options and may offer a wider range of options. Often schools which focus on the Ebacc. route will only leave one option free for other subjects, or may strongly ‘guide’ their student along this curriculum pathway. This has been seen as severely limiting areas such as performing arts, sports, design technology and other areas which are seen as more ‘vocational’ as there are less ‘spaces’ on the curriculum for these options. The impact of the Ebacc. measurement has been further intensified by the performance measures introduced by the Government. For instance, the Performance 8 measure (Attainment and Progress 8) is part of a group of measures used by OFSTED, to assess and compare schools. This measure is based on the best eight grades for each student in the following areas: Maths and English (40% of the total); three from the Ebacc subjects; and the final three from other subjects (including agreed vocational qualifications). While, this goes beyond merely measuring English and Maths (which was the main published criteria of comparison) it still places pressure on schools to restrict the range of options to their pupils (if they wish to attain high ratings). Furthermore, while it attempts to incorporate the idea of value-added into the measure of performance (e.g. by focusing on progress rather than merely attainment), the complex equations and bases underlying such a calculation have also been called into question. Ultimately, a school will end up with a ‘simplified’ final figure made of a multitude of parameters, actions and sets of relations to be used by government agencies, local authorities and parents to ‘compare’ the performance of different schools.

By unpacking the various controversies around UK secondary school curriculum, one can start keying into the complex processes of simplification and amplification as they become manifested through the enactment of educational rules, legislation and procedures. Furthermore, by looking at the different levels of enactment, one can appreciate the great deal of complexity which underlies everyday routines and actions (Pentland and Feldman, 2005; D’Adderio, 2008, 2011). These ideas and concerns find resonance in our investigation of a newspaper printing factory. While a variety of examples could be used to illustrate these aspects, a focus on the controversies around the imperative of ‘getting the paper out in time’ seems particularly appropriate. Timing is key to the printing sector and sometimes, printers engage in what could be considered dangerous activities in order to ensure that the paper gets out in time. For instance, while H&S regulations require printers to stop the lines in case of a blockage, many printers will remove the blockage with the lines running arguing that stopping the line would impede getting the paper out in time

or cause additional problems elsewhere. This practice comes to the front when a printer gets injured while performing such a task and subsequently receives a warning. Therefore, the injury betrays the apparent stability and smoothness of the process. The various gaps and tensions around the application of rules also became prevalent when printers, following unsuccessful negotiations with the management, decided to start 'working to the rule'. In both cases, it is interesting to examine how diverse set of actions can become simplified and black boxed (e.g. a working practice) while also becoming amplified through complex networks of accountability, legislation and practicalities. In contrast to the idea of 'working to rule' as the simple manifestation of objective rules, such an approach seeks to highlight the complex and dense process of simplification and amplification embedded within various mediations, time constraints, internal regulations, negotiations, etc. In this way, the process of repetition through difference and becoming (Deleuze, 2004) relies on the assemblage of multiple and complex actions through particular material scripts, practices and sets of relations (Latour, 2005). Certain moments of simplification are neither a product of objectivity or subjectivity even though both may be produced through such a process. In other words, the practices of simplification not only rely on much alterity, difference and multiplicity, but through the assemblage of actions and relations, certain actions become amplified to create new subject and object positions, openings and closings, inclusions and exclusions. In the case of educational curriculum and performance measure, this is apparent with new ways of comparing schools and making them accountable through new governance structures, while in the newspaper printing firm we can see how certain practices of regulation and rule making are enacted through the complex interplay between certain practices, procedures and sets of relations. Therefore, upon drawing on these two case studies, our research seeks to highlight the intricacies of the processes of simplification and amplification through the exploration of various rules, regulations and fact-making practices.

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Making room for change: The case of a surgical unit

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“The doorway of a house may be a very simple spatial structure, but consider how complex are the perceptions and feelings which a doorway helps engender. The human structures or values of home, shelter, passage, entry, and exiting are all bound up in this one simple spatial design and this simple configuration of a doorway makes values possible, indeed suggests and invents them” (Hammer, 1981, p. 382).

In this paper we unfold how the spatial work environment of a surgical unit at a Danish public hospital takes on different affordances as different employees perform their daily practices. We approach the spatial work environment from two sides. For one the floor plan of the unit reflects an idea of how work ought to be done at the unit. It gives physical structure to and regulates everyday practice. We then look at how the spatial work environment is reflected in the actual work being performed. The hospital unit – first as structure and then as daily practices – hence mirrors the two interrelated parts of organisational routines consisting on the one hand of an abstract idea or structure and on the other of the actual performances thereof (Feldman & Pentland, 2003). Translating the two parts of routines into a concrete work environment – a particular layout and the work being done there – allows us to address the interplay between materiality and routines (Felin, Foss, Heimeriks, & Madsen, 2012) and to ask the question how new routines or new practices are created in a tight and highly regulated work environment.

The case study that forms the basis for the paper is part of a larger study undertaken by the first author of the interplay between exogenous and endogenous efforts at changing everyday practice at a Danish public hospital as part of a research project on innovation governance sponsored by the Danish Strategic Research Council. The paper is based on the empirical realisation that doorways mattered for whether and how nurses’ talked about their everyday practice. This changed the initial focus and approach to the case study. From then on spaces not people were shadowed and focus shifted from development to entanglement in order to shed light on why and how different spaces seemed to change shape depending on how they were perceived by those who entered them and on the opportunities this momentary constellation offered for addressing the rules and norms that govern everyday practice. The paper builds on de Certeau’s idea of the tactics involved in creating spaces for play and hence the opportunity to create something new (Hjorth, 2005) as well as on Goffman’s notion of back-stage versus front-stage (Goffman, 1959) to explain how even highly regulated spaces like the medication room can be temporarily ‘freed’ (Kellogg, 2009) or reconstructed (Taylor & Spicer, 2007) by (ab)using the very mechanisms (built in or otherwise) that are meant to govern what takes place within the confines of its’ walls. The aim of the paper is to explore how nurses navigate the various ‘taskscape’ (Ingold, 1993) that their work environment are

comprised of and hereby make the room for change that their physical work environment does not provide for.

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Creative Destruction as Sociomaterial Becomings: Insights from the Entrepreneurial Processes

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This paper uses the sociomateriality framework to unfold the dialectical process of creation and destruction in entrepreneurial processes. The latter are often referred to as transformation and reinvention of the boundaries structuring our world (Steyaert & Hjorth, 2007, p. 1). Thus, innovating entrepreneurs need to create but also to destroy the existing orders and relationships (Schumpeter, 1950), challenge the established dogmas and practices, and relate the existing material and social resources in a new way. They also need to create a series of destruction-creation practices until they feel that the final result corresponds to their internal criteria as well to the external criteria of the ‘significant others’ (environment, public, potential customers, etc.). However, the key questions here are: how do they learn how and what to destroy, create, and relate differently? And how do they interact with the the material agencies as well as feedback from the environment (like (un)acceptance or (not) understanding) during these destruction/creation processes?

In this paper we argue that rethinking the process through the lens of socimaterial interplay of agencies, i.e. the dance of agencies between human and artifacts (Pickering, 1995), might be particularly useful to answer the questions. In particular, we build on the Barad (2007) and Zorina and Avison (2013) definition of agency as a *process* of making a difference, a practice of interactive differentiating, cutting the boundary between the “self” and the surrounding environment. For example, innovation might be described as new sociomaterial assemblages, and the interplay between the human and material agencies might be re-thought as the creation/destruction processes of making a (new) difference. In this light, entrepreneurial output might be treated as being created through the evolving series of sociomaterial assemblages constituted of agencies making a difference for each other in the dialectical processes of their interaction.

In order to capture the sociomaterial interplay of human and material agencies in the processes of entrepreneurial creation and destruction, we use an experiment with an artistic production workshop called ‘Improbable’¹. The workshop is held by ESCP Europe for Master students and aims at providing them with a real-life entrepreneurial experience of innovation creation. During the 4 days teams of students live and work together outside the campus in a spacious place organized as an artistic atelier. The workshop proceeds through a series of important episodes:

¹ <http://www.strikingly.com/improbable#1>

- 1) A series of workshops on artistic techniques and artistic value creation;
- 2) Collection of material objects for an art creation: students collect discarded materials (wooden boards, old furniture, papers, etc.) that will be used to create art work at the streets.
- 3) The creation/destruction processes: the doors of the artistic atelier are closed and teams spend whole sleepless night constructing their art work. During this time students face the limits of the materiality when they see the difference between what they would like to create and the outcomes. Additionally, several times during the night they face the criticism from the professor and the artist who challenge the meaning and the aesthetic value of their work. Through this exercise teams realize what the process of creative destruction is and live this in the setting of time pressure and resource limits that is similar to the real entrepreneurial settings. Putting students in the setting that they are not familiar with (e.g. art) allows to push them out of their comfort zone, make them aware of their limits, cross the material and social boundaries and question current practices.
- 4) Meaning-making (episodes 3 and 4 often take place abductively): teams create a 'Manifesto', a document explaining the meaning of their art work created and embedding its subversive dimension – the ways they question dogmas, rules, and society values. Here, teams have to find the right format to present their work and thus a lot of changes to the meaning and the material structure of the already created work take place. For example, some teams find a static installation too restrictive and choose to show performance while others reduce the materiality of their work to security vest but develop its social part, meaning, a lot. During this phase, teams draw a new boundary between the result of their creation and the surrounding environment as a result of their interpenetration.
- 5) Presentation: teams present their work at a special exhibition that attended by 300 to 400 people. The workshop thus allows students to experience, learn-by-doing, and live the process of entrepreneurial innovation creation and its major elements (Bureau 2013), such as creative destruction, creation in the environment of uncertainty, overabundance of information, resource and time pressures, search of its meaning.

Methodologically, the study is designed as an in-depth ethnographic inquiry. Observations and follow-up interviews will take place in the end of January 2014 at ESCP Madrid campus. Further stages of this research will elaborate on data analysis and will shed light on sociomaterial interplay of human and material agencies in entrepreneurial creation and destruction processes.

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Track 2 - Society, rules and regulations

Alan Lowe (Aston Business School)

Room: 208

Digital materiality and co-operatives:

A shrinking mode of production or an opportunity for growth?

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The subject of this study is the co-operative enterprise model and how it is affected by the digital world. That is, the aim of the paper is to consider the extent and the way in which co-operative principles are going to be affected by the transition of these firms to-wards ‘digital materiality’ (Leonardi, 2010). The potential implications of a diffusion of co-operative “modes of production” to Internet organizations are also briefly outlined.

Background and the issue addressed

According to the United Nations Committee for the Promotion and Advancement of Cooperatives (COPAC, 2008) the cooperative sector worldwide has about 800 million members in over 100 countries. Cooperatives contribute to GDP from 45% in Kenya to 25% in New Zealand. They are present in all industries and in some of them their weight is overwhelming: e.g. 80 to 99% of milk production in Norway, New Zealand and the USA. Consumer cooperatives are market leaders in Italy, Switzerland, Singapore, and Japan. The European bank cooperatives have shown better performance than other types of financial institutions in the present unstable financial systems (Ayadi, Llewellyn, Schmidt, Arbak, & Groen, 2010).

Research has shown (Whyman, 2012) that the evolution of co-operative enterprises has been regarded with fluctuating interest (and favour) by famous economists from Adam Smith (who thought that this form was bound to decline) and Karl Marx (who sympathized with producers co-operatives) to Alfred Marshall (who considered cooperation a “difficult thing but worth doing”) and to John Maynard Keynes who showed broad sympathy for co-ops and mutuals. They certainly pointed out the potential weaknesses of this model but also its positive effects due to its basic traits which we find to-day in the definition of a cooperative which can be found on the site of the International Cooperative Alliance (ICA)²:

“An autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations, through a jointly owned and democratically controlled enterprise.”

The research question is therefore the following: given these basic characteristics of a cooperative, what are the implications of macro (societal level) and micro (single entity level) digitalization in its organizing?

The theoretical approach adopted and research method

At the ‘macro’ level one of the consequences of the information revolution is the ‘re-ontologization’ of the world, a neologism introduced by Luciano Floridi (2010, p. 6) “to refer to a

² www.ica.coop

very radical form of re-engineering that not only designs, constructs or structures a system (e.g. a company, a machine or some artefact) anew, but one that also fundamentally transforms its intrinsic nature, that is, its ontology or essence". At both macro and micro level the work by Wanda Orlikowski is relevant because her research has convincingly shown the entanglement of technology (including information technology) and organization: "Materiality is not an incidental or intermittent aspect of organizational life; it is integral to it" (Orlikowski, 2007, p. 1436).

Building on the preceding work of one of the co-authors of this abstract (Depaoli, D'Atri, & De Marco, 2009), we examined the literature on virtual enterprises so that both the consequences of this 'entanglement' and the traits of cooperative firms could be considered with respect to the challenges raised by virtualization ('digital materiality'). The sheer dimension of the cooperative sector in the world, its basic traits, and the spreading of digitalization across economic and social activities interconnect the macro and micro levels.

Results and implications

A virtual enterprise (VE) can be defined as "a temporary alliance of enterprises that come together to share skills, core competencies and resources in order to better respond to business opportunities, and whose co-operation is supported by computer networks" (Camarinha-Matos & Afsarmanesh, 1999). Basically, the strengths of a VE are related to the complementary expertise of the firms involved. Such capabilities can be organized to exploit an emerging temporary opportunity in a given market without the constraints of geographical proximity and by leveraging appropriate communication technologies and techniques. VEs potential weaknesses (risks) are the reverse of the coin. They have to do, mainly, with: (i) the organization and integration of different competences, resources and management styles from creation to decommission (relying fundamentally on 'diffused leadership' rather than authority); (ii) the probably different familiarity of members with a set of production and communication technologies to be shared.

Given the decisive character of coordination and integration of resources, to avoid the risks of excessive centralization (one partner that becomes indispensable), of inefficiencies in the exploitation of the market (only one associate searches the market looking for new opportunities), and of heterogeneous activities conducted by one actor (marketing and production management), further research (D'Atri & Motro, 1999) has proposed a 'multi-role architecture'. Besides a 'broker' (which still controls and manages the virtual process enactment and coordinates tasks and applications) the new venture should be based on a 'catalyst' (in charge of new business scouting and relations with customers) and on an 'enabler' (responsible of supporting workflow schema design, of building inter-organizational trust and negotiation, and of VE reconfiguration for new businesses).

The challenges faced by VEs can be facilitated if the VE partners are cooperatives because of the principles inspiring these firms: voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information, co-operation among co-operatives, concern for the community (as stated by ICA). Vice versa, this kind of attitude can help further develop digital networks by exploring and exploiting the opportunities that have been highlighted by Benkler's *The wealth of Networks*

(Benkler, 2006) and which can be grouped in ‘information sharing’, ‘collective action’, and ‘collaboration’ (Shirky, 2008).

Conclusions

Recent research has shown the relevance and vitality of the Italian cooperative sector (Battilani & Zamagni, 2012). The institution that represents at the national level the cooperative movement (Legacoop) has started to evaluate the opportunities linked to the ‘re-ontologization’ of cooperatives in the digital world. Publishing is the first industry that is being concerned because of the critical economic situation of the traditional business model adopted so far.

This example shows the growing awareness coop-operators in digital materiality: monitoring the evolution of the project will offer interesting research opportunities.

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Rules and IT-based practices: A sociomaterial analysis

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Information technology (IT) extensively regulates organizational processes in contemporary organizations by allowing or preventing behaviors—either to the benefit or detriment of the organization. Yet regulatory processes that create, maintain, and enforce rules in IT-rich contexts have not been extensively analyzed in sociomaterial inquiries. We address this gap by conceptualizing and empirically exploring the interplay of rules and IT-based practices. We define a set of constitutive and enabling relationships between a rule, an IT artifact, and practice, and we narrate their relationships from the following perspectives: 1) how rules are materialized in IT artifacts, 2) how practices are interdependent on IT artifacts, and 3) how rules and practices are temporally coupled. To illustrate and analyze the nature of these relationships, we conduct a longitudinal study of the implementation of an e-learning system in a French public university. In particular, we examine how these relationships were constituted and how they evolved by probing 21 regulatory episodes clustered into five modalities, which we label opportunity-, tool-, functionality-, role- and procedure-oriented modalities. These modalities exemplify specific regulation orientations toward germane features of either the IT artifact or the practice. Accordingly, regulatory episodes differ in terms of the application of the rule (to IT- and/or non-IT-related practices); the scope of the rule (all or part of IT or non-IT related practices); the source (exogenous or endogenous to the practice); and the dynamics and their impact on regulatory processes; they also differ in their form of agency. We conclude by discussing implications of our findings for sociomaterial theorizing and consequent policy implications for regulating contemporary organizations.

In summer 2007, Jérôme Kerviel, a trader in the large French bank, Société Générale (SG), was fired. He was accused of exposing SG to a massive financial risk resulting in a €5 billion loss. Jérôme managed to conceal his excessive trading positions through clever violations and (mis)use of SG's control procedures, most of which were information technology (IT)-based. Although the trading system imposed a maximum ceiling of €125 million for trades, Kerviel succeeded in consistently leveraging positions in the order of €600 million. At the same time, he concealed his real positions by “transferring” them to his computer, from which he either erased them or maintained them as fake positions. His practice involved a series of violations of regulations that governed trading in SG: theft of user names and passwords, faking of e-mails, and engaging in inverse operations, among others. By doing so, Kerviel “created” his own (more or less shared with his colleagues) regulated world of high risk-bearing operations. He also demonstrated how advanced IT-based control systems could be misused beyond their intended designs. In fall 2011

we learned that the SG incident is not an isolated phenomenon: Similar IT-based trading systems had also been circumvented by a UBS trader, generating thus far a €1.5 billion loss.

The reason why SG and UBS stories are so interesting is the lesson they teach about rules and their sociomaterial foundations. In a world where money at hand is a sum of daily transactions displayed on a computer screen and the vault's walls are a combination of access and authorization passwords, screen interfaces, and software-inscribed trading limits, a new understanding of the relationship between social and material is needed, of how rules become inscribed in their material foundations and how related practices are affected. The cases suggest caution about the effectiveness of rules in regulating practice: instantiating material constraints into IT does not necessarily result in social compliance. Adding more rules and controls inside the IT system is not automatically effective in shaping practices in the same way that concrete walls and armed guards shaped them. Crucially, students of regulation have known for some time that as more rules are introduced, which was the case at SG, actors can play more games that can result in more unexpected outcomes (Crozier and Friedberg 1977).

Despite the pervasive presence and richness of contemporary IT-inscribed rules, we see a paucity of studies on IT use as a form of material-based organizational regulation and associated forms of control. We define IT-based regulation as the regulatory processes that create, combine, and embed rules within IT artifacts and by doing so maintain and enforce rules that, by constraining or enabling social behaviors, govern both the organizational use of IT artifacts and their organizational effects. Organizational studies on regulation have remained faithful to the notion of pure social regulation and have largely ignored its material elements—in particular, the growing presence of IT (Latour 1994, 2005; Orlikowski and Scott, 2008). A handful of studies has focused on the material dimension of regulation but engaged mainly with “pure” material elements of control, including walls, police, or asylums (Hook, 2001; Latour, 2005). Recent growing interest in material foundations of social life (Orlikowski and Scott 2008, Orlikowski 2008, Leonardi 2011)—labeled sociomateriality—has heeded on a high level the presence of rules and their scripting—their entanglement—in IT artifacts (Orlikowski 2005). But how rules emerge as scripts or how such materialized rules influence practices has remained clouded because the epicenter of sociomaterial debates has been the agent's genius in overcoming materialized scripts in ways that harbor conflict or include illegitimate behavior (Markus and Silver 2008; Barley and Leonardi 2008).

In this paper we address this gap by specifically theorizing about sociomaterial regulation that is carried out by embedding rules in IT artifacts. We address the following two questions: 1) *What is the nature of IT-based regulations in organizations?* We define IT-based regulation as a set of constitutive and enabling relationships between the rules, the IT artifacts, and organizational practices, which we operationalize using three characteristics of rules and their effect over time: 1) the application of a rule (as materialized in the IT artifacts); 2) the scope of a rule (the broad or narrow application to practices); and 3) the source of a rule (whether it is endogenous or exogenous to a practice).

2) *How does the embedding of rules in IT artifacts and the related practices evolve through time?*

We ask whether a sociomaterial perspective can inform how rule creation and its relationship with materiality change over time and influence practices. We juxtapose the sources of rules with

the ways in which rules and practices are coupled and identify conflicts between rules and their materialization over time, as informed by our case study.

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The materiality of CSR regulation in industrial organizations: a comparison between longitudinal case studies

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In this paper, we intend to develop an understanding of the progressive materialization of rules and regulations in organizations that are subject to the implementation of CSR and sustainability policies.

CSR, in specific organizational contexts, often begins as a discourse or an object of discourse (Garsten, 2003). Then it tends to become a new socio-cognitive frame for practice and regulation of organizational life (Dumez, 2008; McBarnet, *et al.*, 2007). CSR being by nature transverse to organizational activities, it is a good subject to grasp spatial transformations of organizations at multiple levels: individual and collective practices inside the organization, the organizing processes, the interaction between entities belonging to a same industrial group, the regulation processes at the industry level (Bastianutti & Dumez, 2012)

The process is twofold. The first dimension is about creating new practices, new understanding and discourses. The second dimension is about linking existing practices and discourses with a new understanding: the cognitive framework of CSR and sustainability. This process has a socio-material dimension: it involves the production of new artifacts, the transformation of existing ones – for example, annual reports, the creation or transformation of organizational structures; the production of CSR road-maps or score-cards; the conception of new products. Hence, the daily regulation (in the literal sense) of organizational life is then deeply transformed (Orlikowski, 2007).

The point is not to say that the nature of work or the purpose of business organizations is completely changing or would *have to* change completely. The dimension of double decoupling (Bromley & Powell, 2012) is inherent to CSR and sustainability development in organizations. The comparison between 2 case studies will allow us to describe and analyse the tensions between discourses and actions, between means and ends in their material dimension.

Based on 2 longitudinal case studies of industrial groups, the paper aims at showing the development of new forms of regulations in business organizations in their socio-material dimensions. The empirical study consisted of series of interviews and extensive and comprehensive analysis of annual reports from 2000 to 2012 of a French conglomerate from one case. The series a semi-structured interviewed was conducted with the corporate director for CSR and all the directors in charge of CSR and sustainability issues in the 5 main subsidiaries. They are operating in various industries, such as construction and public works, urban development projects, real estate, media and communications. For the 2nd case study, the methodology is based on a participant observation in the organization and actionresearch conducted on the electric vehicle project in one of the major car constructor in France.

The analysis will show how the socio-material character of environmental topics (energy saving, carbon efficiency and other externalities). The constitution, development and diffusion of artifacts and new rules of the game (Aggeri, Abrassart, Pezet, & Acquier, 2005) has played a crucial role in the constitution of cognitive frameworks that are needed to implement CSR and sustainability policies and practices. What kind of artifacts are we talking about?

Conception rules and practices; management tools as invisible technologies (Berry, 1983), and socio-material dispositive (Dumez, 2009) are considered in this study. The artifacts are entangled with the diffusion of broader socio-political discourses about environmental protection and the role of businesses which are influencing the group policies and the interactions between entities in industrial groups. The production of new types of artifacts such as indicators, measurements will be considered in evolving regulation, from their creation as a kind of “craft work” at the firm level to their regulation both at a national legal level and at international level. « Management tools are connection points between structured sets of standards, representations, sets not always consistent. Each of the parties involved is taken differently in structured sets» (Berry, 1983, p. 23): indeed, management tools have a regulatory role; they are artifacts that are transforming the practices and then the social understandings, the cognitive frames of actors inside and outside the organizations.

In the end the idea is to show how the progressive regulation of CSR and sustainability transforms not only practices within the organization but also the conception of actors about the role and place of their firm in particular in society. The paper suggests that rather than a consensus, it is more likely at a space for debate that can be identified and characterized.

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Track 3 - Historical perspectives on material regulations

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Room: 209

The incomplete cathedral: iconic spaces, unfolding architecture, and innovation in the city of Siena

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Various studies acknowledge the relationship between the architecture of spaces, such as the architecture of buildings or workspaces, and organizational processes (for a review, see de Vaujany and Mitev, 2013). However, studies on the nature of this relationship have offered mixed results. According to some research, architectures are devices for spatial arrangements, in the sense that they help the construction of spaces and thereby influence social actions in an enabling or coercive way (see Lorino, 2013; de Vaujany and Mitev, 2013). Other studies have highlighted that architectures do not build spaces and social actions. Rather, space gives material/visual form to the social contents that we name in architectures (Hillier, 1996). Also, whereas some studies have argued that certain types of architecture foster creativity and flexibility (Kornberger and Clegg, 2004), the actual performance of space and architecture (and of their relationship) during innovation processes have not been adequately explored by the literature.

By drawing on studies that have challenged the idea of spaces as spatial arrangements constrained or enabled by architectures (Hillier, 1996; Deleuze, 1990), we explore the nature of spaces as platforms within which social contents are constructed and perform. More specifically, we take inspiration from the notion of “epistemic objects”, i.e. objects that are not finite but perform and produce effects within organizations (see Knorr Cetina, 2001), to investigate how architecture and space offer a stage for performing the social: they are ‘machines’, i.e. instruments that create the conditions for innovation within organizations. As highlighted by Carruthers (1998), the term ‘machine’ allow us to build a link, also historical, between the architecture of buildings (*machina*, in Latin, was a tool to erect buildings) and the architecture of knowledge (Galison and Thompson, 1999), value and society (machine was also the term of the medieval rhetorical figures utilised to build and invent new knowledge and define moral behaviours, thus defining the ‘civic being’, Carruthers, 1998). In this sense, a *machina* was not material because it was physical but was material because it acted, because it was an agent thus overcoming the distinction between humans’ and non-humans’ agency (Carruthers, 1998; Latour, 1987).

In order to explore space and architecture as machines for innovation (i.e. instruments that construct not only physical and architectural objects but also the civic being, i.e. a member of a civic community which is defined in a net of relationships), we draw upon the empirical insights offered by the archival material concerning the construction of the cathedral of Siena from 1259 to 1357. This timeframe covers a set of relevant innovations that have informed the construction of the cathedral in the medieval age. This construction was managed by an ad hoc institution labelled Opera della Metropolitana. By analysing the patterns of social interactions within the management of the Opera, this longitudinal and historical case study allows us to explore how spaces and architectures performed and eventually acted as machines for innovation during the

construction of the cathedral (1259-1357). Interestingly, this construction involved evolving inventions (e.g. a new baptistery and a monumental eastern façade) and led to a new and ambitious project for building the biggest cathedral of the world (the Duomo nuovo), which was never completed.

Our study shows how innovation emerges from the gaps left in the planning and accountability practices which surrounded the construction of the cathedral. It is by interrogating these spaces left empty in the project that innovation in the construction of the cathedral could happen. Although the constraining organizational structure of the Opera supported seemingly rational ways of organizing, lacunae (i.e. lacks of knowledge – see Agamben,1999) together with the aspirations of the General Council of the Comune, allowed incomplete and imperfect spaces to unfold and open up the apparent rationality of the organizing structure of the Opera. Within these spaces, multiple actors (the operaio, masons, councillors, governors, citizens) were suddenly made to enter, interact and exit, leaving lacunae and stimulating the ongoing search for solutions which took form into unfolding architectures. Far from being a mere mirror of social actions, these architectures represented epistemic objects that became always something ‘other than themselves’. Through their ongoing visual incompleteness, they triggered a continuous search for the ‘ideal’ solution (which never came). By shedding light on the materially mediated performance of iconic spaces (i.e. spaces that persisted/performed through their material/visual artefacts), our paper contributes to the literature on architecture and organization by showing that these spaces can unfold continuously and perform as machines for evolving inventions within organizations over time.

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Innovation and space-time rules in global media by union as laboratories for pacified excitement 1985-2014

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Clark (1987: 165-191) compared twenty socio-material features of American Football and Rugby Union in 1985 and explained how OAP had evolved since the mid 19thC. Each game possesses stocks of knowledge and affective remembering. What has changed since 1985? What transitions in rules and regulations have unfolded since 1985? Why are the transitions so much more extensive in Rugby Union than in American Football?

This essay calibrates the temporal frame by comparing time-space-place periods as cases of sequential transitions (Elias) with problem sets (Scranton) and problem solving (Haydu). The intention is to articulate the analytic potency of key concepts such as configurations and socio genesis from Elias (Mennell 2007 c.f Clark 2000, 2008). Inequality, which is both context and outcome, requires unpacking in terms of power ratios as much as associations (c.f. Latour).

The Haydu (1998) framework for using the past is revised. This locates the umbrella of the practice turn under and inside the history turn (Clark & Rowlinson 2004) and the comparative turn (Clark 2000, 2014). Comparison plays a reflexive role for the analyst-author in my intention to calibrate episodes in the past, present and near future.

The longue duree trajectory of the American Football has been as a game based around institutionalised American predispositions to controlled violence, hegemonic dominance and designed modularity (c.f. Denny & Riesman, 1951; Riesman & Denny 1954; Clark 1987: 165-191). In American Football since the 1880s extensive rules have been formalised and robustly rehearsed to cover a strategically cognitised problem set of expected future time-space morphology. Exciting media coverage evolved from photos and dramatic line drawing in 19thC periodicals to wireless broadcasts then into carnival TV. Major universities provided a basic training ground. A filiere of nodes and connections guided future players and celebrities. In the American context American Football is an hegemonic subculture of team working in which spectating is enrolled by local and media carnivals (Kroes 2007). American Football has a presence in Japan, but less so in the former British Empire and Europe since the 1990s (c.f Maguire 1999). Since 1985 American Football has evolved less dramatically than Rugby Union.

Rugby Union by contrast in 1985 was still pre-professional with low media exposure (e.g. Dunning & Sheard 1979) More playing than spectator excitement. Since 1985 Rugby Union at its senior club levels has evolved massively into a media spectacle of time-space dynamics in which tracking devices record and afford coaches designed prescient metrics about professional individual players and the team. Live TV reveals the game second by second better than being there. More so than American Football where the nine second episodes permits visual replays at grounds.

Rugby Union has grown in market power and become more complex in the past two decades

(Maguire 1999 c.f. Clark 2003: 190-192). Rugby Union claims to be a global media sport yet its recent history as an organisational innovation differs sharply from F-1 which has been one template for global media (Clark 2003: 45-47). Since the 1990s the game of rugby union has been the focus of multiple rule changes and almost annual incremental innovation. These rule changes, which are complex for players, referees and spectators, have cumulated into a systemic format which can be viewed as an architectural innovation (Clark 2003). Australian entrepreneurial capitalism, originally embedded in Rugby League, has articulated NZ, Australian, Oceanic, South African sub-cultures with European markets.

In Rugby Union since the mid-nineties the sub culture of local support for teams has become excited by live matches yet their spectating depends on finance from global media spectators. Hence the periodic conflicts over media royalties at the meso and macro levels. The contemporary global level creates spiralling multiply of processes (Elias, Wouters). As yet in Rugby Union new metaphors comparable to those American mothers 'teach' their daughters are only thinly evident. Moreover the modern game possesses forms of individual emotional experience which impact gender issues (Giddens).

Five questions are in my Europe-USA comparative problematising:

1. Does Rugby Union now exemplify the controlled uncontrollability outlined by Elias and Wouter's in their theory of rules and self-regulating?
2. Why does Mennell (2007) confine American Football to a totally minor place in the analysis and synthesis of transitions in bonding for American civilising? (Clark, 2006, 2007, 2008).
3. Which are the long and emergent features at the macro-level in Europe and the USA in the late 20th and 21stC which are re-configuring the socio-genesis for media sports like AF and RU.
4. Is the socio genesis since the 1990s stamping differences on the unfolding sequence of age cohorts and gender relations differently? To what extent are cohort and gender temporal horizons and symbolic experiences in sport integrating or dividing?
5. To what extent is mediatisation a key aesthetic?

My paper involves comparing time-place periods as cases involving culturally inflected sequential problem solving trajectories which are mangled (Haydu, 1998; Clark 1987; 2000; 2003; 2008; 2014; Pickering 2013). The aim is to articulate potent concepts which increase understanding of the OAP lens beyond its Latourian influences in order to explain the chosen comparison.

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New Companies, New Organizational Forms?

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Introduction

The concept of scientific management introduced by F. W. Taylor (1914) was based on the idea that the setup of internal rules on task management was “the” solution for coordinating the workforce and achieving managerial control. More than a century later, rules as coordination mechanisms are still embedded in metaphoric and visual artifacts, like organizational forms and their representation in organization charts. Theory and practice of organization design have stated and refined such rules (as organization forms), so that despite the identification of some new emerging forms (Spaghetti organization, Organizational Improvisation, etc.) the contingency approach to organization design has always been able to explain them, both at the inter- and intra-organizational level (see Burton & Obel, 1998). Nevertheless, the joint effect of globalization and economic downturn have boosted the emerging of “modern startups” that, differently from the traditional Small and Medium Sized Enterprises (SMEs) seem to be designed to grow –not just to survive. In fact, while Dodge, Fullerton & Robbins (1994) found that no matter what their stage of life cycle is, the main aim of SMEs is “survival”, these “modern startups” seem to be designed to grow. Their novelty probably seek for new rules of internal design.

The modern startups

As for effect of the financial crisis, young Master graduates have difficulties in finding a job. So have the ex-managers (still not ready to retire) who have lost their jobs. Also thanks to many governmental incentives, these social categories have been very active in creating new ventures, mostly targeting existing or emerging market niches in which the established big players have difficulty to compete. The characteristics of such modern startups seem to be the following:

Founding and managerial team:

- Young graduates having very diverse backgrounds create new ventures by sharing their knowledge;
- Retired (or fired) managers group together for sharing their own expertise, network and competencies;
- The company is not any more a “one man show” (with consequent loss of CEO centrality).

Competitive issues:

- Operate both in mature (niches) and emerging sectors;
- Survival is not the only dominant goal – structural growth seems to be also considered.

Structural characteristics:

1. Designed by competency complementarities;
2. Specialized tasks;
3. Highly decomposable technologies;
4. Selective outsourcing;
5. The growth does not seem to generate:
 - Coordination problems;
 - High hierarchical distance;
 - Loss in centralization in decision making;

- Loss of efficiency and effectiveness;
- CEO (if any?) transformational leadership (Ling et al. 2008).

The research question that arise by observing the rise of these companies is: How can startup grow in conditions of contingency misfits (\leftrightarrow) (Burton, Lauridsen, Obel, 2002)? In details, they seem to develop despite:

Environmental misfits

- high equivocality, high complexity, high uncertainty \leftrightarrow U-form, high centralization

Strategy misfits

- prospector strategy \leftrightarrow U-form, high centralization
- analyzer with innovation \leftrightarrow low organizational complexity

Size misfits

- large size \leftrightarrow simple configuration, low complexity, high centralization

Climate misfits

- group, developmental climate \leftrightarrow U-form, high centralization

Management-style

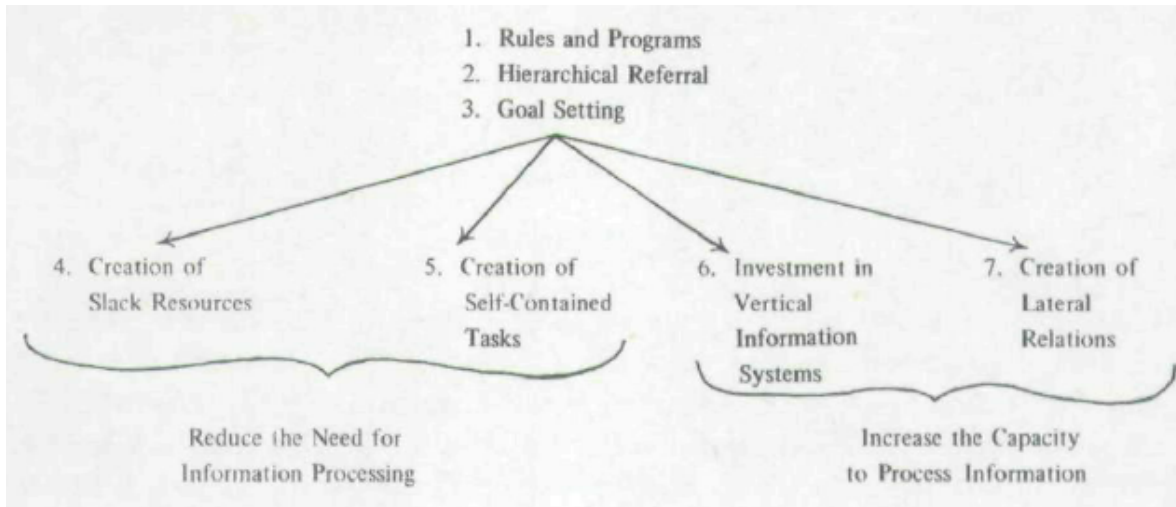
- Low level of microinvolvement \leftrightarrow Simple, U-form

Company growth and organizational forms

The above mentioned misfits arise for several contributions that have nurtured the contingency view of organization design, also during the past recent years. Some of them are worth to be recalled.

The problem of the growth of the company and its organizational evolution has been investigated by many scholars through different perspectives (Chandler, 1962; Galbraith, 1974; Williamson, 1975; Burton & Obell, 1998). In fact, the path Simple-Unitary-Multidivisional form seem to be the common ground of the organizational development. In particular, as Chander (1962) underlines, the adoption of the law of necessary variety and the double feedback introduced by Ashby (1956, 1960) requires the shift of organizational form (see also, Williamson, 2008).

Gaibraith (1974) introduced the information-based approach to organization design and defined the coordination mechanisms as: Rules or Programs, Hierarchy, Coordination by Target or Goals (p.29) “Each of these mechanisms, however, has a limited range over which it is effective at handling the information requirements necessary to coordinate the interdependent roles. As the amount of uncertainty increases, and therefore the information processing increases, the organization must adopt integrating mechanisms which increase its information processing capabilities” (Galbraith 1974: 28,29).



Source: Galbraith (1974).

The company growth of the “modern startups” seem to resist to the “Creation of Self-Contained Tasks” (i.e. from functional organization to product groups), as well as the “Creation of Lateral Relations”. In short, as Galbraith stated lately, “companies add a new strategic dimension to their strategy and structure about every 30 years, thereby requiring the creation of new integrating mechanisms ... The constant interplay of rising complexity and interdependence creates an ongoing demand for organization designs that can respond with new and more powerful coordination mechanisms.” (Galbraith, 2012, 5)

The contribution of Quinn and Cameron (1983) states that as the company grows the criteria of effectiveness shift. In particular, as the company grows, after the Entrepreneurial and Collectivity stages, it should reach the stage of Formalization. The modern startups, instead, seem to keep a low level of formalization and a precise focus on efficiency and effectiveness, on exploitation and exploration (Miles, Miles, Snow, 2006).

Burton, Minton and Obel (1991) have followed the intuition of Kimberly (1976) by which the company size should consider not only the personnel, but also physical capacity, inputs and outputs, and discretionary resources (available to an organization). The size of the organization should then be defined as the “number of resources and policies, and the number of products and services”.

According to Carroll (2012), the pursuit of both exploration and exploitation could be reached through a continuous and incremental reconfiguration of the organization. As the author recalls: “Continuous, incremental redesign may sound ideal. However, frequent reconfiguration of organizational boundaries can be costly and not necessarily successful ... firms that have limited resources for reconfiguration may be dissuaded from this type of process.” (Carroll, 2012: 67).

Discussion and directions for future research

Some preliminary observations made by the author seem to uncover conditions in which companies perform well, despite the misfits in situational and contingency variables (Burton,

Lauridsen, Obel, 2002). Probably some new realities call for new (interpretative) rules of organization design if not, for the definition of new organizational forms.

“In the physical sciences, when errors of measurement and other noise are found to be of the same order of magnitude as the phenomena under study, the response is not to try to squeeze more information out of the data by statistical means; it is instead to find techniques for observing the phenomena to a higher level of resolution. The corresponding strategy [...] is obvious: to secure new kinds of data at the micro level” (Simon, 1984, 40).

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Track 4 - Bureaucracy and new modes of organizing

Stewart Clegg (*University of Technology, Sydney*)

Room: 210

Bureaucratized morality, institutional durability: organizationally mediated idealism in the Peace Corps

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Worldwide, millions of citizens engage daily in channeling their social values through occupations. Some do it through entering “helping” professions, by working for social organizations, or by becoming activists. A striking similarity among these occupations is that organizations mediate them. A daily context that can powerfully influence participants’ experiences, organizations can both amplify and diffuse ideals, and also engender cynicism.

This project, therefore, takes up the broad question of public altruism. The project is situated in order to look at the ways in which altruistic aspirations—the desire to “change the world”—interact with bureaucratic routinization. This project’s case study is Peace Corps, which is, like other social organizations, a necessary compromise between the social and altruistic ideals of its participants and the mundane and sometimes problematic realities of being a sustainable bureaucracy. This research is intended to help us understand how bureaucratic organizations (through which much, if not all, social and philanthropic commitment in the United States is channeled) mediate people’s social commitment. In other words: *what do the organizations do to—and for—the idealists?*

I address a set of related questions about the effect of a bureaucracy on altruism and idealism by asking:

- a. How Peace Corps Volunteers come to understand themselves as volunteers, activists, and/or development professionals;
- b. What the sources and consequences of burnout and/or disillusionment among PCVs are; and
- c. The incentive structure that retains PCV’s either in development work or in other public/helping professions is.

My research and others’ has found that most volunteers do what they do for ideological commitments or reasons of altruism (Georgeou 2012), rather than for monetary or symbolic incentives. The organizational approaches typically involved in studying volunteer settings fail to recognize the macro-ideological context in which behavior is embedded, preferring to focus instead on socio-demographic predictors of volunteering, best practices (cf. Hager and Brudney 2004), and the like. Nonprofit organizations increasingly apply management techniques and practices that were originally developed for the business sector (Speckbacher 2012). While these best practices overlap with those in other types of organizations, and while some can certainly be considered universal to formal organizations, volunteers’ ideological or altruistic commitment fundamentally differentiates them from workers in private settings.

I argue that we need a new way of thinking about volunteering that combines the insights from the sociology of organizations and volunteering with a nuanced appreciation for the motives of these volunteers. Perspectives that use an incentive structure approach to study volunteering seem misplaced in that they emphasize the rewards of volunteering over the ideological components of it. The conventional wisdom on the *practice* of volunteering tends towards the organizational (for

instance, emphasizing small, achievable goals rather than broader political debate about social ills—cf. Eliasoph 1998); the analytic literature on volunteering, while it is much more nuanced, falls short of recognizing the truly ideological nature of volunteer commitments.

Preliminary findings suggest that volunteers are similar in important ways to other activists, both in terms of collective identity and political motivations. Volunteers have similar needs as activists (collective processes, introspection, etc.) that the Peace Corps, understanding itself as a knowledge and service organization, does not meet. Lacking structures for dealing with the “big” questions about development, service, and international relationships, volunteers experience a decoupling of the program’s goals and what they perceive it to be doing. They resolve this cognitive dissonance either via a) increased conservatism, in which they come to understand the *recipients* of services as unworthy, or b) in a critique of the organization itself, understanding the *organization* as unworthy. My paper develops a clearer theory of the effects of “on-the-ground” workers in ideologically motivated fields that, instead of focusing on the psychological elements of burnout, emphasizes the structural-organizational factors that act on participant ideals. My work’s goal is to understand—in order to improve—the ways by which our social change organizations both create and are shaped by the socially committed individuals who constitute them.

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Powers of romance: the liminal challenges of managing organizational intimacy³

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Natural animal instincts have been subject to a long process of civilizational control, especially of relations in public, particularly in organizations (Elias, 2000), being regulated in terms of formal rules of dispositional behaviours (Clegg, 1990). Elias' *The Civilizing Process* (2000) identifies a long-term trend in Western European societies toward a restriction and refinement of social behaviour (for discussions of Elias's work and approach, see e.g. Fletcher, 1997; Kilminster, 2007; Mennell, 1998; Smith, 2001; Van Krieken, 1998). Of necessity, these restrictions and refinements found organizational expression, as the trickle-down effect of mimesis of those higher in the stratification order were central to the development of an ingrained disposition (cf. Bourdieu & Passeron, 1990) to act, think, and feel in ways characterized by greater individuation and more empathy, that are emotionally controlled, curbed, and refined, better capable to postpone immediate gratifications.

While Elias' focus was largely on the organizations of courtly society and the complex rules dictating its etiquette, we wish to look instead at the more mundane world of work. In modern times, for reasons of task interdependence, organizations have required both the physical and organizational proximity of workers. Physical proximity is defined as "the probability of people being in the same location during the same period of time" (Monge & Kirste 1980, p. 110), while organizational proximity is "the extent to which people in an organization share the same physical locations at the same time providing an opportunity or psychological obligation to engage in face-to-face communication" (Monge, Rothman, Eisenberg, Miller & Kirste, 1985, p. 1133). Thus defined, opportunity and psychological obligation for interpersonal relations are outcomes of proximity.

Modern organization, by and large, have increasingly defined relations at work as a sphere of action in which lapsing into gestures or expressions embodying any hint of sexual relations with another are liable to cause both offence and shame, being seen, especially when initiated by an older and more senior person, especially a male towards a female, as an inappropriate use of a position of power. (The recent trials of show business identities for behaviours that they argued were entirely acceptable in the context in which they occurred, or were false accusations, are a case in point as would be the depiction of sexual mores in the pre-feminist setting of the drama *Mad Men*.) Especially with the growth of modern feminist mores, self-consciousness has increasingly been called for in the form of a quasi-automatic self-discipline and foresight. Such self-discipline became also patently more all-round, more stable, and more differentiated, occurring during the course of the twentieth century's "loosening of manners and morals" in a controlled decontrolling of emotional controls" (Elias & Dunning, 1986, p. 44; for a critical

³ The title alludes to PiL's "Flowers of Romance".

discussion, see Newton, 1998). Urges and impulses came to be more effectively subordinated to the requirements of increasingly intricate and differentiated social relationships that lead to and resulted from lengthening chains of social interdependence, Elias concludes.

Physical proximity has historically always been important to the regulation of social regulations. Duerr (1988, 1990, 1993, 1997, 2002; also see Burkitt, 1996; Mennell & Goudsblom, 1997) argues that the late Middle Ages were more restrained in their behaviour than the early modern and modern era because people lived so close to each other, such that everyone could see, hear, smell what the other was doing. Certainly, the rise of more privatized domestic space from the early days of industrial capitalism (Engels, 1845/1977) saw an improvement and refinement of domestic proximities such that the conduct of private lives became more feasible – at least for the propertied and middle classes. Organizational work, especially in industrial settings such as factories, remained largely based on proximity and interdependence (although, with the emergence of digitally enabled postmodern organization, these conditions are obviously changing, leading to a concern with the management of Facebook and other social media). Not surprisingly, organizations have been at the forefront of regulating sexual relations.

In this paper, the research question that we pose asks how organizations cope with sexual relations as they are expressed within the sphere of organizational formal power relations. We address this question in a number of ways. We start by very briefly analysing why the topic is important. Second, we argue that the sexual relationships of workers, mainly inside but sometimes outside the organization, came to play as relevant matters for control from a managerial perspective. Next, we suggest that typical approaches to the management of romance and sex in the workplace solve some problems while potentially opening up others. As pointed out by Clegg and Baumeler (2010), in a world of rapid change and flow, categories and classifications are viscous rather than rigid, a viscosity that has implications for the process dynamics that flow from the application of the categories delineated. Researchers should be aware of the formal rules but need also to look at the liminal spaces in which problematic, nuanced processes incubate, challenging the usual rules and clear-cut categories, precipitating organizational change.

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“We are following and supporting you!”:

Fan communities and Artists: A gift-based regulation

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The music market has experienced a significant upheaval in recent years and this happened, especially since the advent of social networking sites (SNS). Indeed, the music industry has been transformed. This change occurred both in artistic projects' funding and communication. We then, observed the tremendous growth of “crowdfunding” approach, which takes place in order to ask the “crowd” to participate to the funding of several projects. It transpired that this process was beneficial for artists who tend to remain self-sufficient and independent from a major company.

It is obvious that the success of such an approach (crowdfunding or even crowdsourcing) depends largely on the community engagement and implication. It also depends on the social ties created and maintained between the artist and its community (fans).

Some researchers have demonstrated that the use of social networking sites is more and more important in promoting art projects and creating social ties (social capital also) between the artists and their fans (Beuscart 2008; Beuscart and Crowned 2009 , Crescent and Touboul , 2011). We think that it would be interesting and relevant to study **how do people engage in such an approach and how do they develop social ties mediated by social networking sites?** It means that we are interested in the regulation mechanisms that create value from SNS based exchanges.

In order to respond to our research question, we will focus, in this paper, on “gift theory” which was developed by Marcel Mauss (2007) and applied in several researches in order to understand collective dynamics such as cooperation within organizations (Alter, 2002; 2009). We think that this theoretical canvas may explain not only the continuance of usage of SNS (Mlaiki, 2012; Mlaiki et al., 2013) but also the durability of a community and its involvement in collective projects. We then support the idea that this theoretical grid could perfectly be applied on the case of fandom.

Methodology:

For this project, we hope to set up a mixed-methods based research since we will start with an exploratory qualitative approach and then perform a complementary quantitative study that would allow us to expand our spectrum and to get some additional elements to respond to our research goals.

- A qualitative study will help us to understand how artists and fans communicate within social networking sites based on the gift theory canvas. It will help us to identify how do they create social ties (virtual, mediated and real social ties), the consequences of applying such a theory on this context and especially when we are talking about crowdfunding.

- A quantitative research would help us to expand the results of our qualitative phase and to get a better understanding of how do artists create “mediated social ties” (Mlaiki et al., 2013) on SNS and how do they profit from this social capital (how do they transform it to a valuable asset).

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Track 5 - Performativity and rules

Bernard Leca (*Université Paris-Dauphine*)

Room: 118

The arenas of performativity: designing and negotiating the socio-materiality of economic innovations within platforms

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Mélodie Cartel, *CGS, MINES ParisTech*

In the economic literature, markets are traditionally seen as natural settings or as the product of engineering efforts to design market devices according to economic principles. Carbon markets with their innovative rules on tradeable permit exchange, is a typical example of the latter. According to this worldview, roles in society should be divided as follows: economists imagine new sustainable economic models; Public authorities create the institutions necessary to enact such models; and economic agents comply with the new economic order.

This classical view is now challenged by a growing body of literature that study the making of markets and the socio-material arrangements that make them thinkable and manageable. In a dynamic perspective, markets are no longer taken as fixed regulative instruments but mere as on-going experiments based on specific socio-material agencements (Callon, 2009). Rational representation of action doesn't account for the intricate mechanisms and the plurality of actors involved in the on-going adjustment of a theoretical statement that support the design of new market rules (MacKenzie, 2003; 2004; 2006; Mac MacKenzie and Millo, 2003; Muniesa and Callon, 2008). It is possible to identify empirically specific spaces where the adjustment between theoretical models of society and their possible managerial declination is organized (Cartel, 2013; Latour, 1987; Muniesa, 2003). In these spaces, heterogeneous actors design and negotiate the socio-material arrangements of economic innovations. Experimentation plays a central role in such processes (Guala, 2005; 2007).

Muniesa and Callon (2007) have proposed three ideal-typical configurations of experimentation or places that take part in performance processes. One of them, the platform, has been conceptualized by these authors as a calculative agency where ideas, projects and interests are confronted and hybridized, as a way to induce "robust compromise". During the experimental moments that characterize performance processes, platforms become arenas of design and power where actors defend individual strategies and become progressively able to build a collective project. The aim of this paper is to analyze the role of platform as a key regulating device for market creation. It is achieved by analyzing the different socio-material mechanisms whereby economic innovations are designed, tested and negotiated. Based on an original empirical material on carbon markets creation, we focus on the experimentations that took place within these platforms and their effects on the design and negotiation of new market rules.

Our research is based on the comparison of three cases studies which represent three different platforms that arose during the making of carbon markets. In these platforms, major stakeholders gathered to revised economic theory and negotiated the design of carbon markets. The public authorities, the players of the industry, the utilities, the financial sector and NGO's didn't share the same projects, ideas and interests as regard carbon markets but engaged in collective experimentations. Each of them developed an original view on carbon markets: the role they should play, the design they should have. Nevertheless, only one of them was successfully institutionalized. Its design perfectly matched with the EU-ETS design, i.e. the carbon market directive that was put into place in 2004.

Surprisingly, this experimentation was erased from official records ; economic textbook keeping on claiming that carbon markets are perfect illustrations of the performativity of economic

science (Convery, 2009). In the paper, we analyze the mechanisms by which this experimentation took place, how it eventually cristallized into an institutional setting, while others did not, and why this experiment has been purposefully erased although it proved to be highly performative. Based on this case, we discuss the role of invisible platforms in which experimentations based on specific socio-material arrangements take place and perform market regulation. A conceptual model of materiality-based regulation is then proposed where on three on-going activities (testing, negotiating and valuating).

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Achieving II performativity across EU national legal domains and practices: the challenge of e-CODEX

Marco Velicogna, *IRSIG-CNR*

Abstract

What does it entails building an Information Infrastructure that is performative across European Union Member States Judicial domains? Justice systems are highly regulated networks of actors, organizations and technologies. The norms that govern the actions (including the use of any kind of artifact) and the legal effect of such actions are specific to each justice domain. Failure in complying with the rule has consequences, typically resulting in the effects of the action being null and void for the judicial procedure. This paper discusses the challenges of developing and assembling e-CODEX (e-Justice Communication via Online Data EXchange) information infrastructure, an EU cofunded Large Scale Pilot project, which is allowing legally valid cross-border exchange of information and documents in real cross-border procedures in a number of pilot cases.

Extended abstract

What does it entails building an Information Infrastructure that is performative across European Union Member States Judicial domains? With the term preformative I refer to the fact that the communication exchange which takes place is not passively describing but it changes the social order it is describing and re-establishes relations between individuals and organizations within a legal order (Velicogna 2014a, Mohr & Contini 2011).

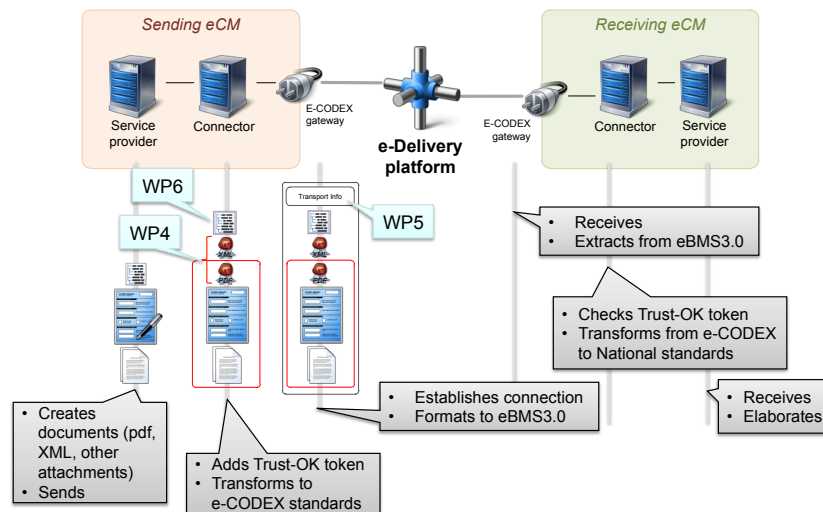
A justice system is a highly regulated network of actors, organizations and technologies. An apparently simple act such as the signature of a document, to be legally valid and therefore be able to perform its function within a specific procedure, may be subject to a number of formal requirements, such as taking place in a specific place, at the presence of specific individuals and be validated through specific actions, such as the identification of the signer through ID card checking, or the checking, in case of a lawyer signing in his quality of lawyer, that he/she fulfills the requirements to practice at the moment when the action takes place (e.g. not being suspended). In this domain, procedures to be followed are described and prescribed by the law and regulations. Technologies, to be used, needs to be provided for in terms of features, modalities of use, and performativity of the result of the use. Failure in complying with the rule has consequences, typically resulting in the effects of the action being null and void for the judicial procedure.

Even in EU regulated cross-border procedures, cross border judicial communication implies the crossing from one National legal domain to another. Each legal domain has its specific rules, only part of them standardized by EU-level norms. Furthermore, judicial actors tend to interpret national and EU norms within the reference framework provided by the specific judicial domain in which they operate. The challenge is therefore two fold: allow judicial ICT applications developed and operating within specific judicial domains to communicate one-another and, at the same time, ensure that the communication is legally valid in the receiving legal domain.

e-CODEX (e-Justice Communication via Online Data EXchange) is the EU project that has accepted and is now confronting the challenge. E-CODEX goal is to “Improve the cross-border access of citizens and businesses to legal means in Europe as well as to improve the interoperability between legal authorities within the EU”. With partners from 22 countries, several being or representing national Ministries of Justice and including the Council of Bars and Law Societies of Europe (CCBE) and the Council of Notaries of the EU (CNUE) and an overall budget of 24M € and its key role in the e-Delivery convergence plan of the EU, it is indeed a relevant case to be discussed.

The result so far has been on the one hand the development of an e-delivery infrastructure for the ‘technical’ transmission and ‘certification’ of documents from one MS to another. This includes the ‘translation’ of specific information from submitting national standard to e-CODEX to receiving national standard and notification of transmission events according to both submitting and receiving national legal requirement. The e-delivery infrastructure is based on a connector/gateway structure assembled from existing and partially developed building blocks (see fig1).

Figure 1 e-CODEX components and functions (Source: Velicogna 2014b)



On the other it has involved the creation of a legal layer, the so called ‘Circle of Trust Agreement’, supporting the legal performativity of the communication exchange, and of an organization layer needed to deal with the organizational complexity of the services provision. Interestingly enough, the development and piloting of e-CODEX is also challenging national practices and interpretations of the norms, resulting also in changes to national norms and procedures.

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How to perform rules that do not exist?

A socio-material perspective on the unrealized creation of rules in a social movement

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1. Introduction

The most visible part of an open and wide social movement relates to its mobilizing activities and framing processes to engender mass resistance (Benford & Snow, 2000). Yet, a social movement is also characterized by a recursive relationship between mobilizing (front stage) and organizing (back stage) activities (Haug, 2013). Admittedly, the formal and structural components of social movement organizations are rather elusive and scarce: their militants explicitly emphasize the egalitarian, horizontal, democratic and transparent way of making decision and taking action. They also like to pride themselves on not being similar to any existing organizational form (Rao, Morrill, & Zald, 2000) and they often vow to disappear when their mission will have been fulfilled. Moreover, the emergence of on-line enabled resistance activities (social network, e-mail lists, websites) and of on-line social spaces has reinforced the trend toward lightweight formal organizational features in social movements. However, the lack of hierarchy, formal and explicit rules do not preclude that other modes of regulations are effectively enacted in these organizations to enable coordination and control both locally and globally. Breaking away from a dualistic approach that would oppose formal to informal rules or global to local dimensions of regulation, we seek to explore the modes of regulations of these organizations from a socio-material perspective.

2. Theoretical framework and main argument

The concept of joint social regulation elaborated by Reynaud (Reynaud, 1979, 1988) combines two apparently contradictory and complex phenomena that coexist in organizations - those of control and autonomy – and focuses on their interplay that fosters the dynamic creation of rules. On the one hand, social regulations seek to build a social order through control mechanisms and procedures but, on the other hand, social actors never really get fully imprisoned within these constraining frameworks. They negotiate permanently and their actions can also be viewed as responses to these constraints. Social actors still exercise different degrees of autonomy through negotiation and their ability to increase gradually their leeway. Reynaud studies forms of control that spread across an organization and his thinking opposes control-based rules (that originate from management, are based on hierarchical power and go down from the top to the bottom of any organization) to autonomous rules that get produced locally by groups of workers themselves. This approach goes beyond a dual perspective that would merely oppose global to local dimensions of regulation. It indeed shows that the combination of different forms of legitimacy – one that would be rational-legal and others that would point to more specific and scattered forms of legitimacy – produces these local and more informal regulations. This theoretical perspective

on control and regulation that makes way both for local emergence and global control seems rather appealing to study a particular type of organizations: those claiming a hierarchy free mode of organizing that limits as much as possible control-based rules (derived from a rational-legal form of legitimacy) and their determination to grant their members a maximum of autonomy. Such organizations exist in particular in social movements. In this paper, we explore the nature of control in these organizations by drawing on a case study method. In particular we seek to investigate the role of tools (such as e-mail lists, websites, etc...) as carriers of regulations that are both control oriented and autonomous. We demonstrate that the functioning of this organization relies on a set of tools revolving around the uses of information systems. These tools induce forms of regulations both at a global and local level. and develop a form of "material agency". Material agency can be defined as "the capacity for non-human entities to act on their own, apart from human intervention" (Leonardi, 2011), through their performativity (Pickering 1995). Scholars have demonstrated that human agency and material agency interact (Pickering, 1995; Orlikowski, 2000; Orlikowski, 2005; Leonardi, 2011), and influence themselves reciprocally. Information systems have then an agency which appears locally and contribute to autonomous and control-based regulations. We argue that the global functioning of the organization is based on these multiplicity of autonomous regulations which are developed through these information systems.

3. Case study

RESF (Réseau Education Sans Frontières) is a social movement organization defending undocumented migrant pupils in France. Its members advocate an egalitarian, horizontal and transparent way of making decision internally (no spokesperson, no hierarchy, possibility offered to anyone to become a member through open on-line registration to existing e-mail lists etc...). This goes hand in hand with the constitutive and founding choice of developing social spaces through on-line spaces (such as an informative website, and dozens of rather autonomous and loosely coupled e-mail lists hosted on a server lent by an independent and critical media organization). When dealing with a specific undocumented migrant pupil under the threat of an administrative expulsion, its militants resort to diverse and far-reaching mobilization activities: research of a national coverage, primacy given to fieldwork activities and to the collective ability to respond to fast evolving situations, trigger of blitz and symbolic operations, open letters to politicians, strategic uses of media and a taste in staging resistance actions having a high media impact. They then pursue two complementary objectives: engendering massive mobilization at specific and crucial moments to increase pressure on governmental authorities and representatives and resisting the discursive processes relayed by public authorities justifying their administrative actions in the name of the law.

Though its members are not digital native individuals and possess very limited skills at using Information and Communication Technologies, they nonetheless all have learnt how to use effectively e-mail lists, web sites and social media both for mobilizing and organizing purposes (Kavada, 2009). Thus, RESF can explore the links between social media and public space (Juris, 2012). RESF is also a lightweight organization: they do not engage in routine work that could make them predictable, they do not accept any financial contribution, they refuse expertise and experts, there is no hierarchy, formal rules can be counted on the fingers on one hand, there is no

screening procedure for registering new members to any existing email list. Yet, such lightweight organizations are made up of few informal rules, tools, objects and material as well as on-line social spaces.

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Track 6 - Routines, nations and regulations

Markus Becker (*Odense University*)

Room: 208

Rules, routines and disruptions in the Dutch railways

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How do organizations standardize and regulate their performances whilst facing a rapidly changing world? Addressing this question, a great deal of organization scholars has recently focused on the role of routines, as “the building blocks of organizations” (Becker, 2008: 3), in organizations and processes of organizing. Whereas organizational routines have long been seen as institutionalized and standardized ways of doing things to reduce, control and coordinate organizational complexity (Nelson & Winter, 1982), lately the conceptualization of routines has shifted our attention to the internal dynamics of routines, and their flexible and emergent character (Feldman, 2000; Feldman & Pentland, 2003). Following a practice-ontology, routines can be said to have two ‘parts’: one resembling routines as structures and one resembling routines as action. The ostensive part, concerned with structure, is the abstract idea or understanding of a routine, whereas the performative part is the concrete routine in practice, an effortful accomplishment that is always, to some extent, improvisational (Feldman & Pentland, 2003). Or, rather, this performative part is a form of regulated improvisation (Bourdieu, 1990), “carried out against a background of rules and expectations” (Feldman & Pentland, 2003: 102) but, in adapting to changing contexts, “always, to some extent, novel” (ibidem).

The role of rules and artifacts in the emergence of organizational routines is still rather underexplored (D’Adderio, 2011). Rules can be seen as normative means for organizations to reduce variability in human behavior in order to make organizational goals more predictable (Jackson & Adams, 1979). However, whether rules prescribe behavior or whether they merely describe a possible course of action for organizational actors remains heavily debated (see, for example: Becker, 2005; D’Adderio, 2008; Reynaud, 2005). Rules, especially when inscribed in material objects and technologies, are according to D’Adderio (2008) both prescriptive and descriptive, but mostly they are performative: they (try to) impose a worldview on others. But this is not exclusively a managerial matter, as all organizational actors can somehow change the course of a routine “by selecting which aspects of a routine to perform at a given time, and how to perform them” (Howard-Grenville, 2005: 635). Rules are thus always put to use by actors in their specific context.

Ordering devices (rules, plans, procedures) are ubiquitous in complex organizations, especially for organizations that routinely have to deal with unexpected events. However, the relationship between ordering devices and unexpected events is a paradoxical one. They have to provide stability in order to control the unexpected, while controlling in turn is only possible if rules and the routines in which they are inscribed can be put to use flexibly in order to be able to improvise on the uniqueness of the unexpected (Weick & Sutcliffe, 2007). In other words, the unexpected cannot be planned completely. In her book about plans and situated actions, Suchman (2007) argues that ordering devices such as mentioned above, should be understood as an artifact rather than as prescriptive representations. It is of great importance to study how, for example, rules are being put to use by organizational actors, as this might reveal how “the heterogeneous practices through which specific ordering devices are materialized, mobilized, and contested, at particular

times and places, with varying effects” (Suchman, 2007: 187). Or, in Weick & Sutcliffe’s terms, we should not only study how people anticipate the unexpected (thinking and then acting), but rather how people in the face of chaos “act while thinking or act in order to think more clearly” (2007: 81, emphasis added).

In this paper I explore the relationships between ordering devices, routines and disruptions in the context of the Dutch railway system. More specifically, how ordering devices, such as rules and plans, are being put to use by train and traffic controllers. Basically, train and traffic controllers are responsible for making the train schedule work according to the plan. Train controllers are responsible for routing trains through railway stations, making them arrive and leave the designated platforms on time. Traffic controllers manage trains on a larger scale; they are responsible for (re)routing trains between stations and managing delays and disruptions in order to prevent other trains from queuing up.

As a part of a larger ethnographic study in the Dutch railway system I observed and interviewed train and traffic controllers in order to understand how they routinely manage disruptions, and what role ordering devices play in their tasks. A first and preliminary analysis of my data shows the contingent nature of rules and plans to the situation at hand. I distinguish three different kinds of disruptions, and how controllers use rules and plans in their routines to manage disruptions. Firstly, when no disruptions occurred, controllers basically were only controlling and monitoring the system, as the plan was being executed without any deviations. Secondly, for minor disruptions, controllers were busy to align the plan and the situation outside. This was done by i) managing the disruption in such a way that it would resemble as closely as possible the plan, and ii) by updating the plan to make it resemble the situation outside. Thirdly, large disruptions revealed how the work of train and traffic controllers took on a form of ‘bricolage’ (Yanow & Tsoukas, 2009), by improvising towards the situation at hand through combining those rules, plans, routines, materials and other organizational actors available to the controller at that specific time. It shows how rules, plans and other ordering devices are, in the context of disruptions, pragmatically being put to use by organizational actors in their routines, how they were sometimes contested or even discarded because they were effectively counterproductive, and how ordering devices can serve as a springboard to ‘act while thinking’.

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Organizational Learning in the Implementation & Adoption of National Electronic Health Records Systems in Hospitals in England

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Keywords

Electronic health record (EHR), evaluation, Implementation, Adoption, Methodology, Case study, Sociotechnical changing, organizational learning

Introduction

There are now very substantial investments being made in electronic health record (EHR) systems across the world, many of which now have regional or national dimensions. As the essential building-block of England's historical National Programme for IT (NPfIT), the National Health Service's EHR aimed to provide every patient in England with a cradle-to-grave EHR. At an estimated cost of \$20billion, NPfIT has been one of the most expensive and ambitious politically-driven IT-based transformations of public services ever attempted.

Our research

We were an established team of academics and clinicians based in four universities and two NHS hospitals across the UK⁴. We were commissioned by England's Department of Health (DH) to conduct the world's first independent, longitudinal, socio-technical and mixed-method evaluation of the implementation of national EHR systems. As such, and given the substantial focus on international EHRs, as well as the need to learn from the past and on going endeavours to implement and evaluate EHRs, our experiences will, we hope, contribute original insights that will be relevant to the now broad array of colleagues who are engaged in initiatives to evaluate the implementation of EHRs into hospital settings, here in the UK and globally.

Aims of this contribution

The aims of this workshop contribution are to share and discuss the organizational insights, findings, and reflections drawn from our national evaluation (commenced in September 2008 and ending in March 2011).

Structure of the Presentation

Tailored to the scope and aims of OAP workshop, three inter-related dimensions of our evaluation will be presented, which will provide delegates with some authoritative and in-depth insights into the English EHR and the nature of its national evaluation. The presenter will set the scene of hospital EHR systems as part of NPfIT and present overall organizational-related findings from 12 first-wave adopters from across England. Key themes will be considered together with the main policy implications of these findings.

⁴ <http://www.nhs-crs.org.uk/>

The second part of the presentation will describe the process of designing a national-scale study for evaluating the implementation and adoption of EHR systems. This section will reflect on the methodological challenges inherent in undertaking such large-scale evaluations. The evolving methodology employed by our multidisciplinary research will be described, and policy implications of such methodological adaptation to undertake the evaluation will be discussed.

The last section will compare findings from two of 12 in-depth case studies that were conducted in this evaluation, in greater depth. This will report a concurrent, in-situ and real-time evaluation of the arrival of identical EHR software at two NHS hospitals. In doing so, the researcher will explore various stakeholders' perceptions of EHR and their consequent behaviors, with greater focus on organizational learning that was experienced as a result of sequential implementation of EHR. This section intends to provide a detailed narrative of the adoption (or non adoption) of EHR in context, through the lens of a socio-technical and performative ontology that was explained in the 2nd part of presentation

Trials of explicitness in the formulation of a fee system: The case of the nuclear waste program in the United States

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By the very end of the 1970s, the Carter Administration announced that the federal government would undertake a national nuclear waste program, which would also include nuclear waste generated by the civilian nuclear power. The national policy is founded on the principle of “*polluter pays*”, which requires making the generations using electricity produced from nuclear energy financially responsible for the nuclear waste program. Looking from outside, the policy principle appears to resolve the temporal distribution of responsibility. However, once empirically explored, we see that making the present generations financially responsible for a long-term nuclear waste program confronts the federal government and its agencies to several moral, technical and political questions. In order to operationalize the policy principle, they enter into a long process of formulation of a fee system, which requires many trials, adjustments, fine calculations, displacements in order to “*accurately*” distribute responsibility, while constituting the responsible publics by defining what would be qualified as a “*fair*” distribution. Here, what I mean by formulation, is not the fabrication of a mathematical formula, but the articulation of a continuous process of arrangements, requiring the organization of a grammar of responsibilities, the crafting of a justified fee, in an effort to make parties and qualities hold together (Callon 2009).

Using a “simple” cost calculation method distributing financial responsibility sounds easy, but different morals and politics can be inscribed in the calculation, while different responsible publics can be inscribed in the calculation method: For which period the fee should be calculated? Which materiality of waste generated by different technologies should be accounted for? Should the fee be “uniform”, flattening different material properties of spent nuclear fuel produced by different types of reactors having different physical efficiency levels, or not? Should the government calculate separate fees for different services? Should the calculation be based on the volume of nuclear waste produced or be converted into number of kilowatt-hours of electricity that generated the waste? When should the utilities pay for the service provided by the federal government: As soon as the electricity is generated? Once waste arrive at the disposal site? Or in between the two? Each of these questions are crucial and these micro-questions address moral, technical and political issues, even though the calculation method remains the same.

For exploring the formulation of the fee system, I will concentrate on the financial, political, legal “trials of explicitness” that the fee system underwent throughout its thirty-five years of career. According to Muniesa and Linhardt (2011) the notion of “trials of explicitness” corresponds to the ordinary idea of being called to make an explicit statement about something that was at first formulated in rather loose terms. According to Muniesa, the notion is particularly relevant during the moments of implementation, the operationalization of a project, a reform, a policy, an algorithm (2011). Linhardt and Muniesa (2011) insist that the notion also recalls the idea of explication, which is related to the idea of “*deploying, unfolding, opening up*”, contrary to the idea of “*folding, or of complicating*”. The authors also underline that a call for explicitness

generates « *grey areas* », which results in the discovery of new issues, and eventually produces « *controversies about what is exactly what is to be made explicit and how* ». The research empirically draws on; the official governmental and legislative documents produced during the initial formulation of the fee system, the annual fee assessments conducted by the federal agencies as soon as the fee started to be collected, as well as several litigations submitted to federal courts questioning the formulation of the fee, covering a period of thirty five years.

Through a pragmatist approach to the formulation of the fee, the research hopes contributing to the debate about undertaking action under uncertainty. Sociologists, philosophers and economists address the question of acting under uncertainty mainly as an issue of making high-level policy decisions. Some argue that the action should be undertaken in “the present” (Ackerman and Heinzerling 2002) others argued that it should be undertaken in “the future” (Viscusi 2001), some explore “third way” temporal arrangements (Gollier 2012) for decision-making under uncertainty, while another stream of literature concentrates on the reversible or irreversible character of the action to be undertaken (Callon et al. 2001, Barthe 2006). The empirical exploration here shows that even when the action is undertaken in the present, the trials of explicitness constantly reconfigure the temporal distribution of responsibility, redefining what is “the future” and what is “the present”. In this sense, the research underlines the importance of focusing on the continuous process of formulation of responsibility in action, rather than pre-categorizing the action in categorical or a consequentialist morality, by only focusing on its initial policy definition.

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Track 7 - Space and materiality

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Room: 209

Movements in/of space and development of learning

The case of a packaging company

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Klaus-Peter Schulz, *ICN Graduate Business School*

Mike Zundel, *University of Liverpool Management School*

Purpose

In this paper, we explore theoretically and empirically the spatiality of the material fabrication of knowing. More specifically, we explore how the making of space (or spacing), by materially affecting the development of body-world relations, may affect the emergence of knowing, considered as a continuous upgrading of our skillful coping with the world (Dreyfus and Dreyfus, 2005).

Research gap

Such theoretical and empirical exploration is worth as, despite some calls to ‘bring space back in’ organization studies (Kornberger and Clegg 2004; Hernes 2004; Taylor and Spicer 2007...), the spatiality of knowing has not figured prominently in organization studies (Fahy et al, 2013). This is however quite surprising in a practice-based (PB) perspective of knowing, the perspective adopted here. In such approach, knowing is usually considered as an ongoing practical accomplishment, enacted in and through participation in social practices (Lave, 1988; Lave and Wenger, 1991; Gherardi and Nicolini 2000; Orlikowski 2002; Tsoukas, 2005; Gherardi 2006). Such practical accomplishment is in particular seen to be ‘materially situated’ and a notable contribution of PB scholars has been precisely to show how learning was decisively shaped by material conditions. This then implies that spacing can be a way to develop knowing. This has indeed been illustrated by Fahy et al (2013) showing that reconfigurations of space could help knowing development by allowing access to different forms of participation. Then, forms of spacing, although not much studied, could complement studies considering other forms of connectivity like boundary objects, brokers or boundary spanners in knowing development.

Theoretical background

There are two difficulties in studying how forms of spacing can affect knowing development.

First, as argued by Orlikowski (2007), there are different ways of considering materiality and hence spatiality in organization studies. For example, space can be considered as a container in which action takes place and its effects studied. This would however be at odd with a relational ontology shared by many PB scholars. In relational ontologies, space is not simply producing effects, for example knowing, but is also itself an effect of the relations formed during practices. To overcome such difficulty, we review some principles quite commonly accepted by PB studies of knowing (notably relationality, situatedness, embodiment, recursivity and emergence...) and draw their possible theoretical/methodological implications for the spatiality of knowing.

Second, the paucity of studies directly concerned with the spatiality of knowing implies a lack of analytical resources in organization studies. As a result, organizational scholars have usually imported analytical resources from other fields. Lefebvre (1991) has been the most drawn authors and may be considered as *'the kernel of what one could call organization theory's minor spatial turn'* (Beyes and Steyaert, 2012, p. 48). We are no exception here and also draw on some of his insights. We however combine them with the spatial thoughts of Schatzki (2002, 2010). We believe such combination is fruitful. The two authors offer valuable, compatible and complementary resources. Regarding their compatibility, Schatzki has himself acknowledged the many similarities between his treatment of space and Lefebvre's. Regarding their complementarity, if both authors acknowledge the importance of activity when studying space, Schatzki has insisted much more on its ontological primacy. To the contrary, if both authors are sensitive to the body when studying space, this aspect has been more developed by Lefebvre. Their insights will be introduced based on the principles shared by PB scholars to ensure their compatibility with the adopted perspective.

Empirical exploration and contributions

Based on a case study of a company manufacturing plastic packaging reels, the paper also empirically explores how forms of spacing may affect knowing. It analyses how three 'movements in/of space' affect the development of knowing.

The two first movements concern the two generic ways of materially affecting body-world relations i.e. the material reconfigurations of the world and the physical movement of human bodies. Those are found to materially affect the development of knowing in two ways. First, they affect accessibility to material others, human but also non humans, and hence favour or ease or to the contrary inhibit or exclude connections with some material others. As such, they can be seen as a 'material politics' (Law and Mol, 2008). Second, they reconfigure the very material form of connectivity. By so doing, they reconfigure bodily engagement in practices, which can affect mental and social spaces considered by Lefebvre (1991) as intertwined with the development of physical spaces. This emphasizes that in a relational view of knowing, the materiality of relations with the world notably reintroduces the corporeality of learning (Yakhlef, 2010).

Those movements in/of space allow us questioning the ontology of knowing development. Connecting different practices, people, spaces... has frequently been considered, even in PB studies, as a matter of crossing boundaries to facilitate the transfer and sharing of knowledge. Those expressions tend to reify both the 'transferred' or 'shared' knowledge and the 'crossed' boundaries. Instead, consistent with a relational view of boundaries (Hernes, 2004), the case suggests that if learning occurs it is by reworking physical, mental and social boundaries. Knowing development appears then more as a matter of (re)creating conditions, including material ones, to develop practices than a matter of crossing boundaries.

The case also distinguishes a third movement in/of space. It consists in developing spaces by gathering humans or non-humans to reflect on work and/or experiment some possible activity reconfigurations. We call 'reflective and experimental spaces' such gatherings. The case shows that they can take place either in 'neutral spaces' (in corridors, in the changing room, in meeting rooms...) or in 'specialized ecologies'. If 'neutral spaces' can offer temporary protective enclosures to favour knowing development, the case also shows that locating them in 'specialized ecologies' may be useful when a particular ecology is primarily targeted by expected reconfigurations. Such location has two material advantages. First, the tangibility of the material

others populating the visited ecology can ease the development of understandings. Second, it can also allow experimenting materially the envisioned reconfigurations.

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Visualization of spatial organization: from art of memory to action?

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Keywords : visuals artifacts, spatial organization design, actors dynamics, regulating organizational construction.

Abstract:

Spatial settings are more and more present in organizational and management studies looking the interactions of space and organizations (Clegg, Kornberger, 2006). The study of workspaces organization, for example, has become a remarkable way to analyze organization modalities and practices (Van Marrewijk, Yanow, 2010). This study proposes to introduce the notion of projection by analyzing a viable link between spatial settings and visual dimension in organization (Meyer, al., 2013). By this approach, the paper will question the role of images during organization construction processes. Images – as places – are known to be the foundation of the art of memory (Yates, 1966), a way for the organization of thought (Quattrone, 2009). The idea is to interrogate the possibility for images to project action.

The paper's aim is to analyze the role of visual artifacts during spatial organization design. More specifically, we will focus on the uses of images (maps, models, drawings) in order to represent organizational actions during identity construction processes.

Research question:

How can visual artifacts be used as an instrument for the construction of an organizational identity during spatial design processes? An investigation through maps, models and drawings.

Methodology and case study:

The paper proposes to study the use of maps, models or drawings as “visual language” by the political discourse (Kress, Van Leeuwen, 1996) in order to give projections of the future organization of the Campus of Paris-Saclay in France. The French State's intention at Saclay is to group on the same territory several institutions in order to create a new university and to promote the scientific cooperation between some of the best French higher education institutions, public research and the economic world.

Based on Spicer and Tyler typology (2007), the paper takes a projected view of the territory (macro level). From a large focus based on « pre-existing » maps, models and drawings, we will use an *archeological approach* (Meyer and. al. 2013) to collect the data. The collection of these visuals artifacts allows to investigate and trace several points of view according to actors dynamics in situation of institutional change (Battilana, Leca, Boxenbaum, 2009).

As an example, the scientific project management at Saclay uses a map (Figure. 1), which represents the grouping on the same territory -through the use of logos- of all institutions involved in the project.

By contrast, the designers use models and drawings (Figure. 2 and 3) in order to project the future spatial organization, though architecture and urbanism.



Figure 1. Saclay territory map with institutions logos, 2009, FCS website.



Figure 2. Model of the Saclay territory project, XDGA website.



Figure 3. Vision of the future area of l'Ecole Polytechnique, Eva Le Roi, XDGA website.

Trough these examples, we observe that actors use visuals artifacts in order to project their future actions, to construct and crystallized their visions of the organization identity.

The use of visual artifacts also seems to transpose actors institutional logics (Lounsbury, Boxenbaum, 2013).

Conclusion and contribution:

Through this project of spatial organization, we understand that visual artifacts can be used from an actor point of view:

- To project actions;
- to construct and crystallized a vision.

Visual artifacts can also be used, from a researcher point of view, in order to understand actors dynamics.

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Build artifacts in sustainable urban projects: When pragmatism makes innovation

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Abstract:

This paper explores innovation and social behaviourist theory in relation to sustainable urban projects in the highly institutionalized public sector (towns). Using empirical data from France, we examine the dynamics of a design process in which unexpected practices generated innovative urban design. We show how the fact that the design process did not follow the standard phases of planning meant that the actors redefined themselves in relation to one another. We point out how the absence of urban design plans during a precise phase of an innovative design process drew the actors into a movement of collective action, which presupposed the acquisition of a new identity. Ultimately, our objective is to combine social behaviourist theory and innovation theory and to facilitate innovative design in urban projects.

Keywords: *design process; innovation; urban studies, case study, project management*

In this paper, we analyze how the intentional lack of an urban design plan enabled a creative process of involvement between multiple actors. The fact that the urban design plan was not represented physically meant that the project's actors had to search for solutions through explorative actions while redefining themselves with respect to one another and their collective role. Their roles in relation to the project were transformed through their inter-actions and the openness of the project itself, which we call a 'spontaneous model'. In our analysis we draw upon Mead's (1934) processual theory of meaning creation through social interaction. We attempt to understand the phenomena that made it possible to design a new district in a town without using any a priori formal graphic representations, in a one-year pre-design phase.

Theoretical context

Mead's (1934) pragmatist view of social interaction embedded in time serves as a point of departure for examining the issue of the acquisition of roles and identities in relation to the project. Mead joined process philosophers, such as Heidegger (1927) and Whitehead (1929) in inverting the Cartesian dictum 'Cogito, ergo sum' (Descartes, 1664) in favour of seeing entity as emerging from the process, and not vice versa. Whereas with Whitehead, for example, process is a metaphysical phenomenon, Mead focused on processes of social inter-action. Central to Mead is the notion of meaning, which may be found with several other theorists, such as Schutz (1967), the idea being that acts are oriented towards that which is meaningful. Meaning, however, is not meant to reside in an object as such, but in the gesture towards that object. Thus Mead writes that meaning arises in an actor's expected response to another actor's gesture (see Figure 1 below).

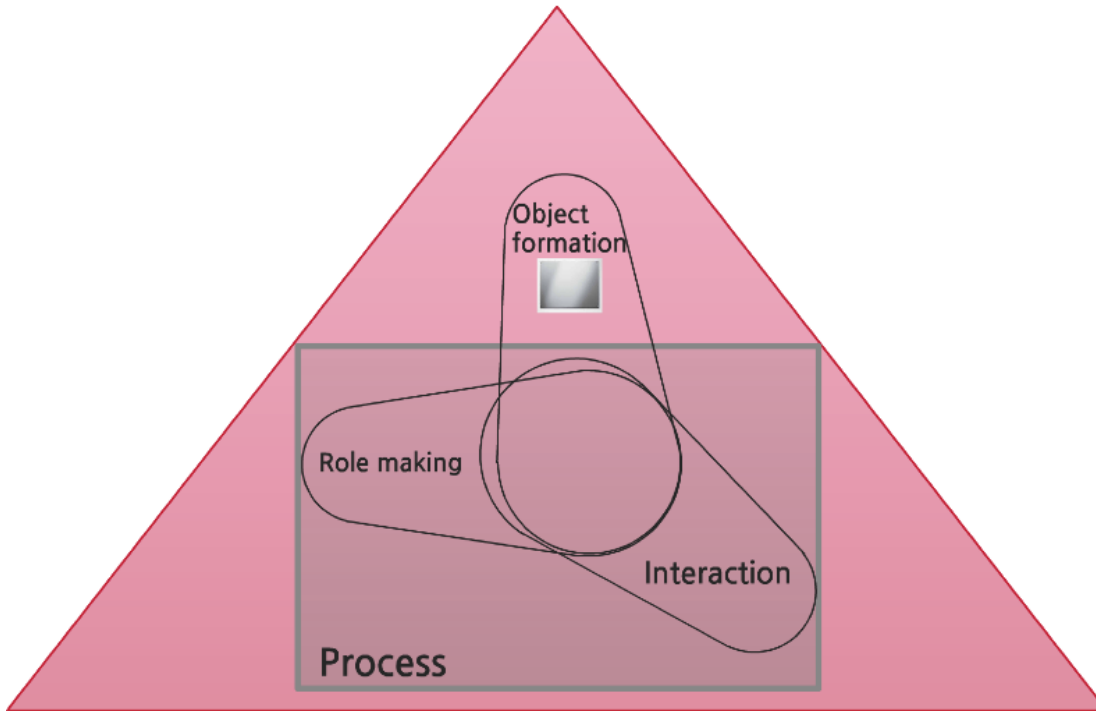


Figure 1: Dynamic process of innovative design

Meaning is created as actors inter-act towards objects. Objects may be temporal products of the actors themselves, as when actors become ‘objects’ to themselves as gestures fade into the immediate past, thus giving rise to the actor’s *self*. Objects may also be objects of inter-action other than inter-acting humans, such as objects of economic exchange. Where Mead takes us one step further in relation to human interaction and objects as opposed to dualist subject-object positions is by assuming that humans act and inter-act *through* objects (Simpson 2009), as the organism takes the roles of things that it manipulates directly, or indirectly, as in perception.

An object may take many different forms, one example being language. The object we assume for our paper is the overall urban development project, which begun largely as an ‘open’ object for inter-action, in the sense that there were relatively few guidelines as to the final shape of the project. With time, as inter-actions unfolded, and a collective role of designer began to take hold, the object became gradually more explicit without reaching a closure.

Empirical context

The design team at the Urban Community of Dunkirk (CUD) gained precious experience and knowledge from these urban projects and even helped it produce an ‘unknown object’, a ‘green’ district called Grand Large. In 2002, Michel Delebarre decided, on the strength of thirteen years of experience of the urban projects in Dunkirk, to service a plot of land (ridding it of pollution,

demolitions) in the southern part of the Grand Large area, with the aim of constructing a new district. In 2004, when he appointed a head of major projects for the Dunkirk Urban Community (CUD), the project entered its design phase. However, for the first year, no block plans, design sketches or development plans were drafted.

Jean-Louis Muller, an economist, was one of the main players in this operation. In charge of major projects at the CUD, former director-general of the CUD departments in charge of the Grand Large project, he decided in 2004, at a time when the project's 'programme' (Peuportier 2008) or functional unit (Gobin 2010) did not yet exist, that no plans for the roads and local networks should be prepared before the first results of the design for all the 'built' elements.

A feature of the process was that they did not draw up a programme in the form of a target framework or specifications. A decision was made not to define precise targets until a later stage, in order to allow time for explorations. By "giving things time" the urban community did not decide on the project's content or urban form. Nor did it suggest an organizational framework for the project design, although it proposed 'conceptual objectives' for sustainability.

Method

At the end of the first phase of the project, an intervention-research approach (Hatchuel and Molet 1986; David, Hatchuel and Laufer 2000) was adopted, with the aim of becoming actors in the case under analysis rather than simple observers and thus being able to exchange knowledge. We took an active part in over twenty work meetings and certain work groups designed to explore new concepts and mobilise new knowledge were organized with the contractor's permission.

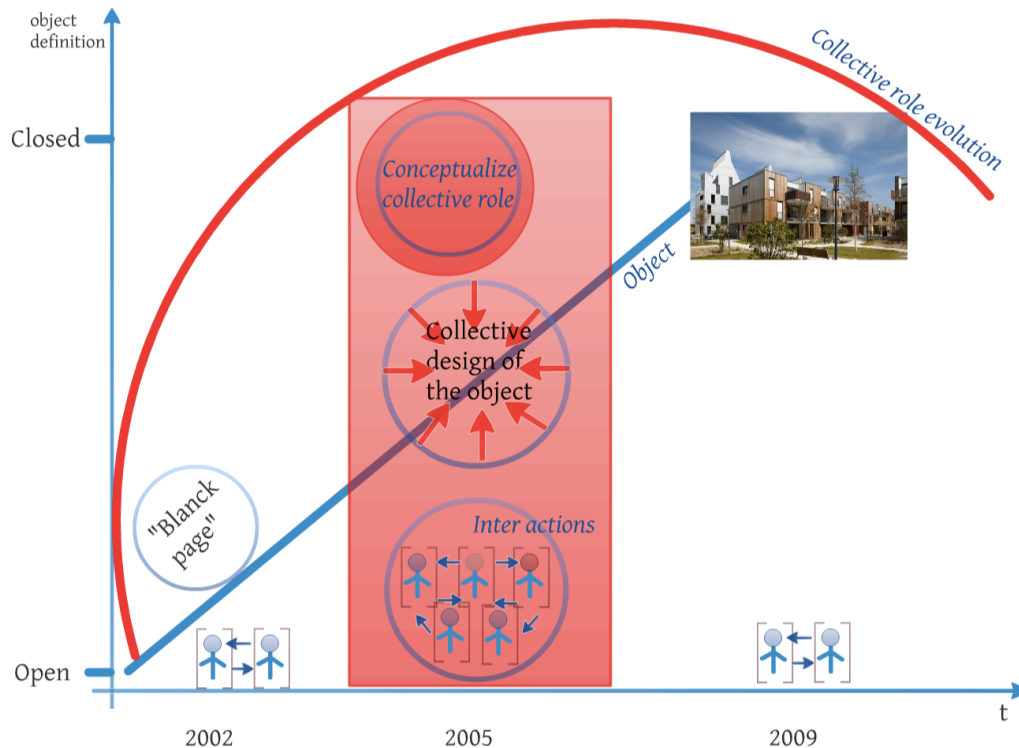
The collective role of designer

In a design process where the object is omnipresent even if it does not exist yet, the interactions between the actors give rise to a collective, social role that can in turn be shared by the actors. The interaction is key to the creation of a role that is firmly based on concrete design actions, independent of the actors' pre-acquired knowledge or their usual roles. A collective role is not attributed to an individual as such; it is an extrapolated, widely spread, macro role which, during a design process, constantly interacts with the emerging object and can only exist through the actors' interactions and in the presence of the omnipresent yet invisible object. This collective role consists in a set of new capacities acquired by the actors.

Contributions

Using empirical data revealing that an absence of urban design at a strategic point of the project helped to develop the conditions required for an innovative design process to emerge, we propose the continuation of a social behaviourist concept and a complement to mainstream works in innovation studies. Importantly, we argue that the object (or project) cannot be seen as separate from the inter-actions that create it, nor can the formation of roles be seen as separate from the inter-actions and the object. The actors are caught up in the process and it is in fact the latter that shapes the actors and not the contrary, offering them the opportunity to acquire a new professional identity through their actions.

Figure 2: Trajectory of the collective role



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Track 8 - Philosophical perspectives on materiality and artifacts

Philippe Lorino (*ESSEC Business School*)

Room: 210

Tecnologia social: A South American view of the technology-society relationship

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The purpose of this paper is to revisit the concept of *tecnologia social* – “social technologies” in English – from a socio-material perspective. In my investigation of South America writings on social innovation, I found a vast and rich literature describing, analyzing and theorizing around grassroots social innovations from the perspective of the underlying arrangements among people, tools and methods, all of which brings to bear an interesting viewpoint on the relationship between technology and society. The term *tecnologia social* is applied with reference to those sociomaterial arrangements or assemblages. I am speaking of a long tradition that seems to have started with Gandhi in India by the beginning of the twentieth century, had a short trajectory in Europe and North America, and eventually reached the minds of South America researchers and practitioners of social innovation by the 1960s. There it has been transformed, sliced-and-diced and remixed, having an impact that has been very prolific (Dagnino, 2009).

It is worth noting that contributions to the South American stream of literature on *tecnologia social* were practically never written in English, with very few exceptions (e.g., Neder and Thomas, 2010). The intent and vision of those researchers and practitioners involved with the conception and implementation of social technologies was to have a profound local impact. They seek to promote social changes in a land where, from the very beginning of colonization 500 years ago until more recent waves of globalization, society has been characterized by, poverty and inequality. For that purpose, writing in the native and local language was perceived as crucial.

Recovering the foundations of *tecnologia social* writings, I soon recognized an amazing coincidence. The theoretical streams influencing the development of this approach were the same ones that marked my own intellectual road: social constructivism, socio-technical approaches and critical thinking. Moreover, the vocabulary utilized in the *tecnologia social* literature expresses the inseparability of different levels of analysis – micro and macro – and the inseparability of the material and the social aspects of a phenomenon. Put simply, social technologies are socio-material by definition. While the use of the word sociomaterial today represents a fashionable way to connect with specific research communities, an understanding was already present in socio-technical approaches from the 1980s (Pinch and Bijker, 1984) – that social innovation implies an intertwined assemblage tying together social actions and materials.

Revisiting a long trajectory that led in South America to the consolidation of a critical mass around the relationship between technology and society, I recognize that such an inseparability of the social and the material in ways of relating, connecting and performing constituted the very core of the *tecnologia social* tradition much before the emergence of the socio-material current in organization studies (Dagnino, 2009; Thomas and Buch, 2013). Still, their convergence is relevant in contributing to our knowledge on social innovations. I argue that European and North American socio-material researchers have much to learn from South America’s *tecnologia social* stream, in terms of both theory and practice, as I will try to present in this paper.

The term social technology has different meanings

It is important to mention that the South American concept of *tecnologia social* is not directly related to what we find in the English language literature when we search for the term. Scanning in Northern databases, I discern two primary and different meanings attached to the term *social technology*. One is related to the sociology of economics, and it was used by Nelson and Sampat (2001) to refer to some kind of coordinating mechanism which assures that economic activities involving multiple actors are performed well. The authors make a distinction between the physical technologies involved in those activities and the social technologies that represent that way the work is divided and coordinated. The metaphor applied by the authors is that of a *receipt*, a way of doing (Chataway et al, 2009). Although we can find some similarities between Nelson's conceptualization and the South American outlook, the key distinction is precisely the clear separation that this economic-based view makes between physical and social technologies. It is also important to note we might find an even older use of the term around the end of the nineteenth century, by Henderson (1901). In this case, it relates to social engineering and it influenced social theory throughout the century (e.g., Popper, 1945 and MacKenzie, 1985, apud Wikipedia). Again, the term is applied to refer to social norms and principles and institutional logics, and we could not identify a direct influence on the theoretical stream we are discussing in this paper.

The second meaning attached to the term *social technologies* is quite recent and refers to the use of web-based platforms like Facebook or Twitter by groups of people, i.e., technology-mediated social networks and social media. A relatively large and recent number of publications refer to social technologies to discuss the social effects of web-based platforms like Twitter, Facebook and the prominent use of blogs (Li and Bernoff, 2008). Again, the theoretical connections to our work are weak: although web-based platforms might take part in grassroots social innovations we are looking for, we do not understand social technologies as simply technology-mediated social networks.

After revisiting those various uses of the term *social technology*, I wonder whether or not I should retain it, as confusion and ambiguity might be produced in the Northern audience. However, because of the force of this term in Portuguese or Spanish, and to respect the history and the meaning behind the concept, I decided not only to keep the term, but to use it without translation – *tecnologia social* – to reinforce that this is a concept developed by South American researchers and practitioners to refer to a strong intellectual social movement that exists, that is relevant and that deserves to be well-known. Recent articles have supported the idea of using native terms to better express our ideas and feelings (Steyaert and Janssens, 2012; Alves and Pozzebon, 2013).

In the remainder of this paper I present the history of the concept of *tecnologia social*, I revisit the term using a sociomaterial language and I present some empirical illustrations to clarify its meaning. The empirical illustrations represent a small fraction of more than 10.000 documented experiences implemented in Brazil alone. I conclude the paper with a research agenda that enables better synergies between research traditions.

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Felicitous heterotopia or infelicitous prototopia?

The development of new rules as a pragmatist inquiry

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Within a pragmatist approach, this paper aims at shedding light on the interaction of habits and rules in the development of activity. It is grounded on the case of the development of new urban planning rules and we analyze some brakes in the activity as the difficulty to integrate rules in habits.

Activity paradigms and practice-based approaches have emphasized the role of tools and artefacts in enabling, modifying, structuring, or constraining activity. However, tools influence activity if, and only if, they are actually used. In particular, rules and regulations impact activity if, and only if, they are actually implemented. In other words, the ultimate constraining and enabling element, engaged in activity, is not the artefact per se, be it tool or rule, but the social and cultural habits that the artifact conveys and embodies - utilization habits for tools, implementation habits for rules.

The concept of habits is a cornerstone in the system of action, sensemaking, rules and tools in pragmatist theories (Peirce, 1931-1958, 1992; Dewey, 1938/1980). In this perspective, actors involved in socially organized activity must make sense of their own and others' acts. Acts must be intelligible, recognizable, potentially linked with others' acts in sensemaking combinations (sociality), recordable and potentially linked with the past of activity and its desirable or probable future (historicity). Such a coupling between acting and meaning requires the semiotic transformation of situated acts, unique and never repeated, into interpretable and intelligible signs, stabilized and socially shared segments of meaningful activity. This is the very definition of "habit" by pragmatist philosophers. Human action generates its own semiotic mediation, in the form of experience-based and socially constructed habits, which relate the activity in-progress here and now with its past and expected future, its final purpose, and other activities taking place elsewhere and involving other actors, making activity an object of communication and critique, memory and transformation, inhabited by history and society.

Habits can be strictly cultural interpretive schemes, present in mental processes. But they can also be embodied in artefacts such as legal texts, organizational procedures, rules, information systems, technical tools and technological devices. They are not perfectly malleable, but are characterized by a certain level of inertia, with three sources of inertia, which also appear as three classes of obstacles to innovation: material inertia, when habits are embodied in material artefacts which present structural and technical inertia; cultural inertia, related with identities: if the habit appears as part of the symbolic identity of a social group, for example a profession, there may be

strong resistances to change it; and organizational inertia: when the habit is closely entangled with other habits to constitute an organizational process, for example through division of labour, changing a habit can prove practically difficult because it destabilizes many other habits and requires their concurrent transformation.

When actors feel tensions between rules and the need to innovate in their activity, they can start an inquiring process to re-design social processes, i.e. rules, norms, regulations, and to the last resort the corresponding habits.

In this perspective, this research characterizes innovation as a complex social process, more precisely as an abductive and dialogical inquiry, bound to transform rules, habits and activity, in response to new environmental conditions:

- inquiry (Dewey, 1938/1980): the social process of knowing through the inseparable intertwining of reasoning, narrating and experimenting;
- abduction (Peirce, 1931/1958; Eco & Sebeok, 1983): the narrative mode of thinking which underlies the construction of new hypotheses - plausible narratives - and leads to invention;
- dialogism (Bakhtin, 1981; Tsoukas, 2009): the meaning of utterances and acts is not built by an autonomous individual conscience, but emerges from their concatenation with addressed acts and discourses and responding acts and discourses.

The paper illustrates this approach of innovation with a longitudinal field study conducted in 2012 and 2013. Through the gradual design of a new urban district in the South-West of France, a group of institutional actors tries to transform the existing organizational and inter-organizational rules of urban planning. Analyzing this process through the dialogical and abductive inquiry frame, we stress the pivotal role of two specific narrative mediations. First, oxymora: the inquirers deliberately challenge their own habits by raising issues which look insolvable within the existing practical, technical and regulatory frameworks. Second, a semi-fictional character, the future inhabitant of the district, who is not known and does not exist yet, a kind of ghost, but a ghost inhabiting the future rather than the past. This "ghost of the future", used as the central object of the dialogical exchanges, allows actors to free themselves from existing frames and to invent the "people of the future" through collective "fabulation" (Deleuze, 1998).

To this end, they bracket their first phase of work in time and space, building together a kind of narrative community. They agree that they are trying to tell a story together, through words: "The true specificity of this project: it is managed with words, not with plans, there is no ground plan so far" (urban planner). They make an intensive use of images, which themselves appear as narrative artefacts. They try to free themselves from regulatory constraints and rigid habits. "For example, the architect says, we made the decision to authorize over-heights of buildings - from ground + 2 to ground + 4, if surfaces are freed for vegetal spaces. There is no pre-conception about architectural forms. Some claim we risk getting a patchwork, but shouldn't we accept it?" In this bracketed process, they imagine a new space, the future urban district, and its inhabitant, thus "creating other spaces, heterotopias in which new practices can be invented" and where it is possible to "withdraw from the reigning order" (Hjorth, 2005: 392). The concept of heterotopia,

developed by Michel Foucault (1984), is a real space in which fictional types of social relationships can take place, in particular the imagined future of social relationships, the "fabulation". Like utopias, those places function as counter-models of present society, bracketed spaces, closed to normal rules and regulations, but unlike utopia, they are located in real places.

This heterotopia - the future urban district - should not remain a heterotopia too long, if the project is to be successful, since the leaders of the project hope to transform the general rules and frames of urban planning processes by showing this example as a prototype of future rules, regulations, norms and tools. They plan to transform this "heterotopia" into a "prototopia", the prototype of future social rules.

But today, the project is experiencing a critical situation, the transition from the design and planning phase to the actual building of the residences and their commercialization. Initial participants (planners, developers, architects, town council) now face the challenge of pursuing their dialogical and abductive inquiry with new actors (commercial agencies, in charge of selling apartments; actual inhabitants, who will gradually replace the imaginary "ghosts of the future") who did not participate in the previous phases and did not "fabulate" with them. Even if the rules have spread, the traditional habits (selling standard apartments without mentioning the peculiarities of the project, parking the car directly below the apartment building...) still pervade them and bump into the rules defined by the first group of inquirers. Present difficulties illustrate one of the three forms of habit inertia: organizational inertia, due to the intricate entanglement of innovative habits with other complementary habits which have not incurred the same transformation process.

This critical transition exists in many innovation processes. We suggest that an analysis through the pragmatist frame should contribute to a better understanding and explicate the tensions between activity, rules and habits. It should also help actors to overpass critical transitions.

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Materiality and Beyond:

Theorizing the Relevance of Artefacts along the Third Epistemological Route

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Keywords: artefacts, technology, organizing, materiality, rules, regulation, third epistemological route

Exactly what does the ability to regulate the artefacts mean in practice? How do the artefacts influence rules and regulations in organizational life?

These questions continue a research agenda that began in the 1950s and has since spawned an array of studies and perspectives that straddle several academic disciplines. At first, the aim was to describe a brand new theme, the meeting of technologies and organizational contexts, on which much traction needed to be gained. The far from linear reflection process was further dogged by polemics and opposing views. A few decades later, the narrative that was traditionally anchored to an idea of cumulative learning, in which one theory was replaced with another that somehow represented its criticism or continuation and was meant to push the boundaries to improve on the previous one, lost its plausibility (Hatch, 2006).

When the debate started to shift its focus to the structure of theory, i.e., the ‘researchers’ conceptions of the nature and direction of causality’ (Markus & Robey, 1988, p. 584), the linear narrative was replaced with a multifaceted story that, in accordance with the structure of theory adopted, i.e., technological imperative, organizational imperative and emergent perspective, gave at least three answers to the question: “*What is the relation between information technology and organization change?*” But still the fragmentation and clashing paradigms continued apace, as did the breakaways, the contaminations and the passing fads.

Few people today would dispute the claim that new technologies bring changes to the way people communicate, act, and organize their social relations (Kallinikos, Leonardi, & Nardi, 2012, p. 3).

The renewed academic interest for investigating the organizational relevance of artefacts is a clear indication of just how complex it is to get to grips with these themes, while underscoring the limitations of certain dominant responses. The distinction between objectivism and subjectivism has yet again reared its head, implying that the multiple theoretical perspectives are still stuck in the same old groove: how to decipher the tangled concept of social contexts and action in its many guises. Some of the terms proposed by the scholars, and the meanings not always attributed to them coherently, are an attempt to use new notions to overcome the inconsistencies and limitations of the theories that fell short of their objectives. This is the case, for instance, of the concept of ‘materiality’ and its numerous offshoots (e.g., socio-materiality), which has gained in popularity over recent years (Leonardi & Barley, 2010; Robey, Anderson, & Benoit, 2013).

For OAP 2014, I plan to sketch a more refined concept of technology, clarifying the assumptions and setting out the implications for research.

In particular, taking my cue from Masino (Masino, 2005, 2011), I will apply the term 'technology' to the meaning of *technical rationality*. A choice that is purposefully epistemological rather than terminological because it neatly sidesteps the objectivism/subjectivism issue.

For reasons of space, this proposal and its ability to deepen our understanding of the meeting of technologies, artefacts and organizational contexts can be narrowed down to four assumptions.

First, to bypass the limitations of the theoretical proposals that focus on the system and not on the actors and of those that, to the contrary, focus on the actions of the individuals yet ignore the environment that enables those actions, a good starting point is the third epistemological route, which sees the organization as a process of actions and decisions guided by bounded and intentional rationality. As observed by Masino (2005, 2011), when thus interpreted, the research's specific object of interest is the ongoing process of regulation.

Second, the technology, defined as *technical rationality*, is itself an organizational choice, fruit of the intentionally and rationally bounded decisional processes (Masino, 2005, p. 166). Note that this interpretation of technology severs any link to the presence of artefacts, materials and non-materials in the implementation of the action. For example, there is technical rationality in the action of the physician who uses sophisticated instruments to make a diagnosis, but also when the physician converses with the patient to give them his/her diagnosis. Hence, the technical relevance of the artefacts needs to be evaluated and analyzed in relation to the regulatory process.

And that is the first thing that differentiates Masino's approach from that of technology as the ineluctable presence of physical artefacts. Indeed, some theories are underpinned by a concept of technology so limited they consider exclusively the materiality of the artefacts. However, such a single-minded approach to the study of the regulation of social action and its relationship with technology ignores all those activities in which the artefacts are not used. So, to return to the earlier example, the action of a doctor who makes a diagnosis without the use of clinical instruments would be excluded from the study field, even though, when supported by a simple stethoscope, that same action would make it a full-fledged object of research and analysis.

Third, the adoption of any artefact (material or non-material) is organizationally relevant because it opens a window of change in the process of regulating both the individual and the collective action (Masino, 2005, 2011, p. 161). While material mediation is an important dimension of the study of practices (Lanzara, 2009, p. 1370), the artefact's influence does not come from its physicality, nor merely its installation in a said environment, but from the decisions, i.e., the results of intentional and bounded-rational processes. Those decisions, distinguishable solely from the analytical perspective, are made at, and intersect different levels and have different and unpredictable outcomes (e.g., greater or lesser autonomy). Even the technical knowledge needed

by people undergoes significant transformations that cannot be attributed to simple dichotomies, such as flexibility/rigidity, upskilling/deskilling, or autonomy/heteronomy.

Fourth, the technical rationality concept of technology not only explores such opportunities, it interprets how these influence the overall regulating process.

In essence, this paper offers an alternative and complementary understanding of the problem of regulation in 'technologically dense' (Bruni, Pinch, & Schubert, 2013) settings and suggests how to best address these themes by using theories that advance along the third epistemological route.

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Track 9 - Tools and regulations

Paolo Spagnoletti (*LUISS*)

Room: 118

Knowledge Management Systems, Autonomy and Control: how to regulate?

A case-study in an industrial company

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There is a general agreement that knowledge represents a sustainable competitive advantage for enterprises working in turbulent and unpredictable environments (Drucker, 1993; Grant, 1995, 1996; Alavi & Leidner, 2001). As knowledge becomes fundamental, organizations are restructuring themselves in order to better use this valuable asset. The implementation of knowledge management systems have led to the emergence of new organizational forms such as post-bureaucratic and decentralized organizations. In fact, these systems seem to affect the control and the autonomy of organizational actors. On one hand, knowledge management systems enhance horizontal communication and encourage self-organizing and self-managing teams. They facilitate access to information and contribute to individuals' cognitive development. Hence, employees have greater levels of autonomy which allow them to better address problematic situations. Besides, technologies are socially constructed. They are structured by employees' interpretations and mental models (Orlikowski, 1996). In this respect, knowledge management systems supported by these technologies amplify "uncertainty zones" (Crozier and Friedberg, 1977) and employees' autonomy. Additionally, knowledge sharing largely depends on employees' willingness and engagement. On the other hand, knowledge management systems control organizational actors' activities through formalizing their collaboration practices and informal exchanges, and increasing the transparency of their work and interactions. However, controlling actors' activities can decrease collective intelligence and creativity (Stoycheva & Lubart 2002). And simultaneously, enhancing actors' autonomy can destabilize the organization and act against its interests. Given this focus, how can organizations regulate the tension between autonomy and control while implementing knowledge management systems? This paper work aims at analyzing this question through conducting a case study within the information systems division (ISI) of Infra/SNCF. We use Reynaud's social regulation theory (1989, 1995) for analyzing interactions and negotiations between actors involved in the implementation of knowledge management systems. This theory offers a lens through which the implementation of knowledge management systems can be understood as the product of organizational regulations and compromises between actors.

We adopted a qualitative approach in order to understand how different modes of social regulation evolve and affect the implementation of knowledge management systems in the studied context. 23 interviews were conducted within ISI division. The panel of interviewees included top managers, middle managers, projects managers and technicians. In fact, the two persons in charge of promoting knowledge management systems in ISI division have helped us composing the panel. The interviews aimed at exploring the existing knowledge management systems and identifying the perceptions of ISI actors regarding these systems. We also spent 5 months in ISI department attending meetings and observing interactions between stakeholders involved in the implementation and use of knowledge management systems. Complementary data

such as documents and reports helped us to better understand the context of ISI. For data analysis, we adopted an interpretive approach. The research question and the social regulation theory have guided us in identifying key concepts in each sentence or/and paragraph. A set of inductive categories were subsequently defined and justified with verbatim (Brown & Jacobs, 2009).

Regulations are defined as the process through which rules are created, modified or suppressed by parties in order to fix the frame of their relationships and their mutual rights (Reynaud, 2001). In Reynaldian terms, organizations are constructed through continuous social exchanges and negotiations between control and autonomy (Reynaud, 1989). From this perspective, Reynaud distinguishes three types of regulations: “control” regulations, “joint” regulations and “autonomous” regulations. Control regulations are imposed by top managers in order to control others’ activities. Autonomous regulations are generated by actors or subordinates on whom control is exerted. Joint regulations are based on negotiations between the two parties. It is the result of compromises between actors.

Data analysis shows that, on the first side, the existing knowledge management systems such as wikis, database, Instant Messengers, and emails are perceived by top and middle managers as tools that help them controlling actors’ activities and monitoring information flow. However, top managers insist on structuring these tools in order to better formalize knowledge capitalization and sharing practices “we should precisely define the scope of information diffusion ... the formalization of knowledge management systems is necessary ... it generates more rigorous practices”. For these actors, defining rules for controlling information exchanges and accessing information is essential. It guarantees the quality of services delivered by Infra. On the other side, project managers and technicians perceive knowledge management systems as tools used by top managers to increase information traceability and the control of their activities “emails enhance traceability... we should be aware of this”. This group of actors privilege informal exchanges “oral communication is essential Tools can’t replace direct exchanges for sharing our experiences”. Thus, by using these systems, actors modified their properties to meet their personal interests.

In fact, by drawing on Reynaud’s social regulation theory, we tried to understand how the joint regulation is constructed through the confrontation of control regulations and autonomous regulations. Our data analysis highlights that the emergence of a joint regulation is not necessarily spontaneous. In this case study, it necessitates the intervention of an intermediate actor. Accordingly, the engineering service of the ISI division intervenes in th negotiations processes, thus, helping the two parties develop compromises regarding knowledge management systems.

This research work contributes to the studies in the field of socio-political appropriation of knowledge management systems (De Vaujany, 2006; Verra ad ali, 2012). It outlines the way knowledge management systems generate different modes of regulations within an organization. In fact, the appropriation of knowledge management systems is preceded by a psycho-cognitive and socio-politic phases. The psycho-cognitive phase is essential for understanding the functionalities integrated in each system. In this case study, knowledge management systems are user-centered which facilitated their comprehension. This study also highlights the need to

develop a joint regulation for implementing KMS. In this case, the involvement of an intermediate actor in the implementation process was essential. However, the research results are limited to a single study constraining their generalization. Therefore, the study of social regulations in other contexts can constitute a further step of the study.

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Electronic business reporting: technology objects in the construction of transparent market infrastructures?

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Macej Piechocki, *cundus AG*

Introduction

Our research focusses on an important aspect of the development of interactive data technology which has been touted as a key reporting initiative for addressing recent financial market problems and enhancing corporate accountability (SEC, 2009; Roohani et al., 2009). XBRL is promoted on the one hand as improving transparency by increasing accessibility and democratizing access to information while on the other remaining a neutral conveyor of accounting and business information ‘as reported’. We argue that its development requires the co-ordination of complex knowledge and skills and the effects of the resulting technology on the future of business reporting are indeterminable and may reduce transparency as much as improve it.

We examine the activities of developers who have been engaged in the construction of an XBRL taxonomy, which is essentially a structured dictionary of concepts located in a structure to facilitate the tagging of items of data. Our theoretical framework is provided by a broadly practice theory perspective from a number of writers who are associated with the practice turn in social science (Knorr Cetina, 1999, 2001; Latour, 2005) and management (Carlile, 2002; Orlikowski, 2010).

In the paper we outline the use of TRAX software using empirical data and reflect on our increasing reliance on digital media for communication and especially for mediation and decision support devices in the construction and development of complex technologies such as interactive data.

Boundary Objects, Translation and Technology

In this paper we theorise the construction of a major infrastructure project using ANT theory but with particular emphasis on the boundary object concept. We believe that boundary object ideas can still be usefully deployed to effectively theorise and explain the development of complex technologies that are reliant on working across different groups of knowledge workers.

The Role of Trax as a Boundary Object

Tracking technologies are designed to support taxonomy development processes and project management, by using feedback gathering system that target specific taxonomies and their development and user groups. The aim is to enable contributions by accountants who need a familiar presentation of the concepts. The challenge is to represent the thousands of concepts and their complex relationships in a way which enables accountants to identify conceptual problems and IT experts to ensure the correct application of XML and XBRL specification requirements. Figure 1 demonstrates the number of files and the difficulty the raw XML poses for accountants.

One of the most popular electronic feedback gathering systems, used mainly in the software engineering space, is Bugzilla. Another example is PageSeeder. The main functionalities of PageSeeder include managing documents (HTML, Word, Excel, PDF, etc.) and other annotations contributed by reviewers. Second important feature of PageSeeder is managing and distributing emails to the groups of people (Corefiling, 2007). This functionality is similar to the operating of mailing list. However PageSeeder does not provide XBRL taxonomy commenting possibilities. This was the major factor behind the introduction of the TRAX system. TRAX is specifically an XBRL taxonomy review system (see Figure 2).

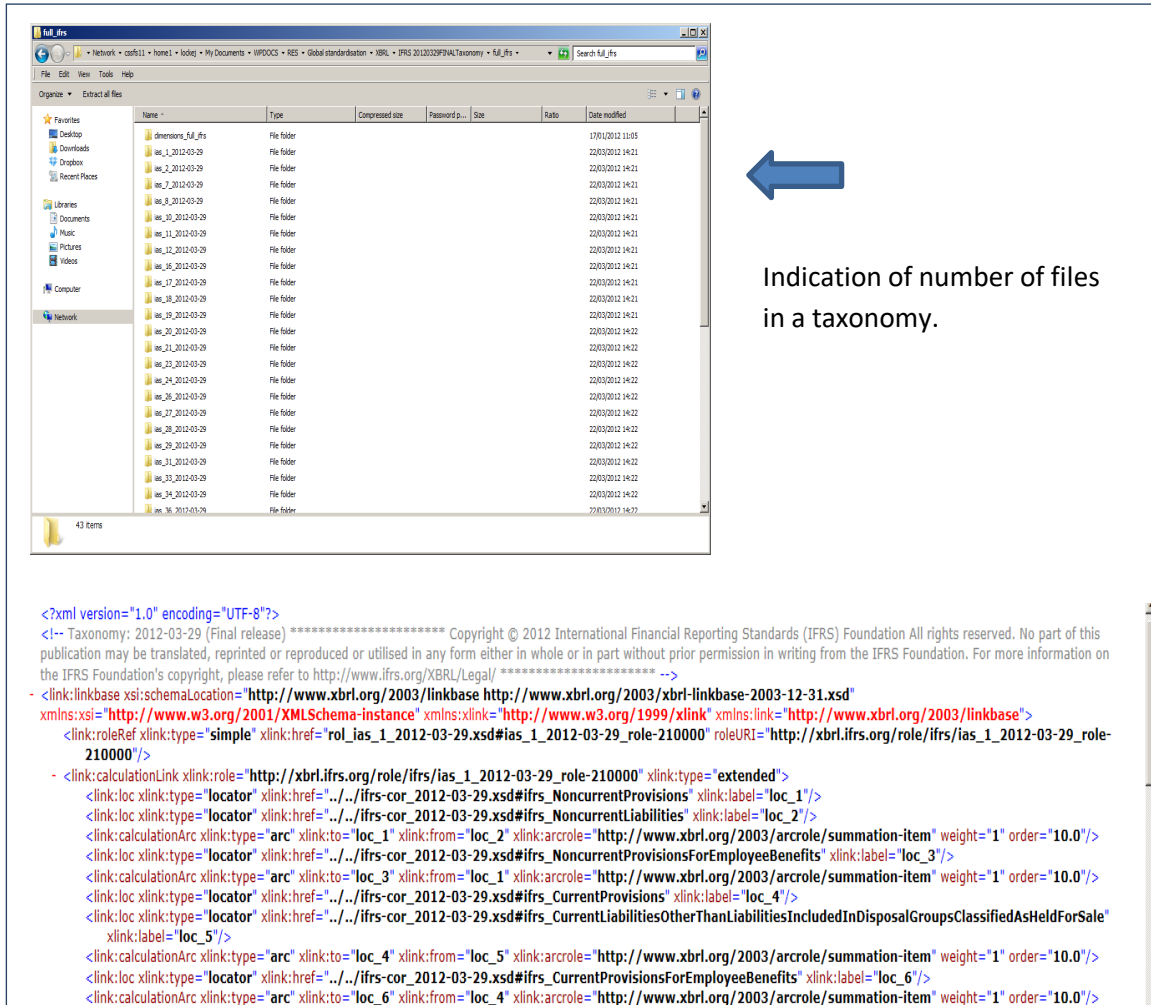


Figure 1: Example of a ‘raw’ presentation of an XBRL taxonomy

The viewer provides a tool to navigate through the taxonomy into elements or their attributes. The TRAX user is then able to place a “seeded” comment next to an item. Each comment is then automatically sent to all users registered for the review of that taxonomy. Others can reply to the comment either using their mail system, by logging into the taxonomy viewer via the TRAX system, or by using the TRAX review panel. Figure 3 shows the review panel which lists the submitted issues with issue title, description and the name of the person submitting an issue. It is possible to reply to any comment in a given thread.

Discussion and Conclusions

The processes we have described documents the role of one specific piece of software – the TRAX system – that has been deployed in the development and debugging of XBRL taxonomies.

The digital technology we describe in the paper reflect an aspect of our increasing reliance on digital media for communication and for mediation devices in the construction and development of complex technologies. In spite of the use of support technologies such as TRAX our evidence suggests a tendency of IT professionals to see the presentation of accounting data as a technical issue in their area of expertise, not requiring input from accountants. Our observations suggest that the majority of the exchanges in TRAX and in other fora are from IT professionals rather than accountants, who tend to be unaware of the significance of XBRL.

Systems like TRAX are designed to allow the working across traditional professional boundaries but its functionality and application also implicitly shape the development in ways that bias the outcomes in favour of an IT perspective.

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CoreFiling

Presentation

- <Presentation relationships
- < Balance Sheet, Classified Format
 - < Balance Sheet (Presentation)
 - < Assets (Presentation)
 - < Assets, Non-Current (Presentation)
 - Property, Plant and Equipment, Net
 - Investment Property**
 - Intangible Assets, Net
 - Biological Assets, Non-Current
 - Investments in Subsidiaries, at Cost
 - Investments in Associates, at Cost
 - Investments in Joint Ventures, at Cost
 - < Equity Method Accounted Investments, Total
 - Deferred Tax Assets
 - Assets Pledged as Collateral Subject to Sale or Re
 - Other Financial Assets, Non-Current
 - Hedging Assets, Non-Current
 - Trade and Other Receivables, Net, Non-Current
 - Prepayments, Non-Current
 - Cash Restricted or Pledged
 - Other Assets, Non-Current
 - Assets, Non-Current, Total
 - < Assets, Current (Presentation)
 - Assets, Total
 - < Equity and Liabilities (Presentation)

- < Balance Sheet, Order of Liquidity Format
- < Balance Sheet, Net Assets Format
- < Balance Sheet, Portfolio Format
- < Income Statement, By Function Format
- < Income Statement, By Nature Format
- < Income Statement, Financial Institutions
- < Cash Flow, Direct Method
- < Cash Flow, Indirect Method
- < Cash Flow, Direct Method, Financial Institutions
- < Cash Flow, Indirect Method, Financial Institutions
- < Statement of Changes in Equity
- < First Time Adoption of IFRSs Disclosures
- Assessment Policies

Investment Property

Labels

Role	Language	Label
standard label	en	Investment Property

References

Role	Reference
presentation guidance	Name IAS Number 40 Paragraph 79 Subparagraph c
presentation guidance	Name IAS Number 1 Paragraph 68 Subparagraph b
presentation guidance	Name IAS Number 40 Paragraph 76

Equations

Aggregation

Tuples Amount to Aggregate, Assets

Weight	To	Balance
+	Carrying Amount of Class of Investment Property	(debit)
		Total (debit)

Presentation Hierarchies

This concept has no presentational breakdowns defined below it.

Definitional Relationships

This concept has no definitional breakdowns defined.

General Feedback

Any general feedback about this concept should go here.

CoreFiling Weborganic Galaxy

Figure 2. TRAX taxonomy viewer (source: TRAX for the IFRS taxonomy)

PageSeeder Review Space - trax.corefiling.com

http://trax.corefiling.com/ps/review? pageSeeder

Getting Started Latest Headlines

PageSeeder Review Space Steven's Groups

My Preferences Help Refresh Logout

New Comment Email Comment Upload Comments New Review User: Steven Baker

Review Groups

- Steven's Groups
 - Comments
 - Documents
 - Uploads & Edits
 - My Issues
 - demo
 - gen
 - test
 - corep
 - ebr
 - ifrs
 - Comments
 - Documents
 - Uploads & Edits
 - My Issues
 - Members
 - Home Page
- trax
 - xbri_us
 - Comments
 - Documents
 - Uploads & Edits
 - My Issues

Comment Detail Last: 7 days 30 days 90 days All days Steven's Groups

Type	Subject	User	Date	Document	Status	Group
<input type="checkbox"/>	Label misstated	Maciej Plechocki	12 Oct 05	Profit (Loss)	Open, Minor	demo-ifrs
	A new comment on this item	Philip Allen	12 Oct 05	Property, Plant and Equipment, Net	Comment	demo-ifrs
	Reference appears to be wrong (1)	Philip Allen	12 Oct 05	Property, Plant and Equipment, Net		demo-ifrs
	This label is ok	Philip Allen	12 Oct 05	Property, Plant and Equipment, Net	Comment	demo-ifrs
	Reference appears to be wrong	Philip Allen	12 Oct 05	Property, Plant and Equipment, Net	Comment	demo-ifrs

Reference appears to be wrong - Identifying data removed - 12 Oct 05, 1:23 PM

Luclan can you fix this ?

Priority: Comment

Reference appears to be wrong - Identifying data removed - 12 Oct 05, 1:27 PM

Done

Figure 3. TRAX review space (source: CoreFiling, 2008)

Performance measurement in a nonprofit organization: social impact measurement between material tools and social practice

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Nathalie Raulet-Croset, *Ecole Polytechnique*

Over the last years there has been an increasing need for nonprofit organizations (NPO) to evidence their effectiveness through measuring their performance. Accountability as an external demand and monitoring as an internal need are the two main reasons for the emergence of this movement.

Scholar publications stress on difficulties of performance measurement comparing to for-profit organizations, since NPOs' performance cannot be measurable only on a financial basis, but has to take into account social effects (Kanter, 1986), which leads to a multidimensional evaluation of their effectiveness (Herman, Renz, 1997). NPOs' specificity relies on its social mission, and measurement performance implies to assess actual fulfillment of their mission, by evidencing social outcomes and social impact (Arvidson, 2013). However, this aspect is far more difficult to evaluate since it relies on a subjective and qualitative dimension. Furthermore, practices and culture of NPOs are often opposed to the logic of evaluation (Kanter, Summers, 1994).

Several specific methods and tools were built by researchers and practitioners to face these challenges. Balanced scorecard adapted to nonprofits (Kaplan, 2001) and Social Return On Investment (Lingane, Olsen, 2004) are two tools among the most well-known ones. However, several studies stress on the fact there is no method which suits for every nonprofit organization. Each NPO should adapt tools to its specific context, needs and activities (Herman, Renz, 1999).

This research is a part of an ongoing Ph.D. work based on an action-research methodology about the implementation of social impact evaluation in a huge French NPO. The NPO is a charity which deals with youth at risk through housing, education and training and supports families in their parenting role. The NPO is funded by public grants as well as private donors. In order to implement social impact evaluation, it was decided as a first step to build five social impact measurement processes on chosen units (childcare refuge, social integration support service, support service for families, digital project in schools) inside the organization which cover the main activity fields of the charity. These five processes will be the cases of the analysis (Yin, 2009).

The processes will try to measure outcomes and impact of each unit or project evaluated, in order to respond to specific needs of each. External accountability and internal monitoring are the two main reasons for this evaluation. Design of evaluation will be built in different ways: in some cases, existing tools or methods will be implemented, and in some other ones specific tools will be designed starting from activity of each unit or project. Different cases show different situations of entanglement (Pickering) between everyday practices and evaluation designs.

Although processes in the organization contribute to formal regulation (Reynaud, 1988), we can observe that evaluation practice of actors is not very formalized. Reporting of supporting work for recipients is low, and hardly concerns support work itself. However, accountability of the action is developed through other ways than quantitative tools and field actors are reflecting implicitly on their effects on recipients during regular team meetings. Objectives of accountability and monitoring seem

to be reached by other ways than development of tools which measure social outcomes or social impact of the action: tools are articulated with storytelling and team introspection sessions for example. Therefore articulation between material dimension of evaluation tools implemented and social practice of actors (Orlikowski, 2007) is worth observing in our five cases.

We assume that results of the research will show articulation and degree of closeness between materiality of tools built and practice of actors. On the basis of a case comparison, we will be able to identify factors which influence closeness and these ones which strengthen dichotomy. This research will contribute to enlighten dichotomy between material and social dimension of practice inside nonprofit organizations through the process of building tools for performance measurement of these organizations.

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Session 10 - Norms, identity and materiality

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Room: 208

Rules, norms and materiality in practice: a clinical experience

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Welcoming the invitation from Balogun *et. al.* (2013) to bring together discourse, sociomateriality and power in research in order to fully contextualise a strategy-as-practice lens, the paper draws upon an ongoing dialogue between two perspectives using a clinical approach (psycho-sociological (Salvatore 2003) and socio-political (De Gaulejac 2009; Crozier, Friedberg 1977)) to the study of organizing. The research team enquires the relationship between power-relations, meaning-making and materiality in a view to understand the strategizing process in act within the context of a public organization.

The case of the training experience at the Italian National School of Administration (SNA), following a strategic turn in the period 2010-2013, brings to light the difficulties of adapting to new training models for management, i.e. reflexive and practice-based learning, in an organizational context coping with contrasting demands derived from intra-, inter and supra organizational rules and norms:

- supra-organizational level: a broader reform process at Central Administration level, increasing managerialism in public administration and severely reducing available financial resources;
- inter-organizational level: financial/administrative accountability rules, registration selection softwares and procedural constraints;
- intra-organizational level: power-relations and meaning-making between executives, administrative staff, professors/trainers and participants as well as affordances/constraints from the spatial organization and internal management tools.

The research team draws upon a three-years organizing and training experience (January 2011-December 2013) and focuses on the recursive relationship between those three levels. Taking practice as the unit of analysis, the aim of the paper is to understand the affordance/constraints relationships derived from a sociomaterial perspective (i.e. granting some form of agency to artifacts), a psycho-sociological perspective (i.e. how a socially negotiated meaning - at conscious and unconscious level-of training, rules and artifacts informs and guide agency) and a socio-political perspective (how both sociomaterial and psychological agency are mobilized by different actors to maintain or redefine power relations at intra and inter-levels of organization).

A clinical approach gives an ontological/epistemological primacy to relationships in the research process whatever, we argue, they may be (human, non human or human/non human). Following relational constructionist accounts of organizing, relations are understood as local-historical and local-cultural (Hosking 2006).

A clinical approach to the case appears to overcome the current theoretical fragmentation:

- Traditional approaches to training (behavioural, cognitivist or constructivist) focus on the individual or social learning process without conceiving specific properties to artifacts (training room, program, selection software). The sociomaterial literature concerned with training, although providing insights on the way to “bring together” social and material agencies, focuses on highly digitalized contexts (as regard training, it would focus on e-learning or training platform or the design of virtual learning spaces). Nonetheless, there is a strong case not to exclude “low” or “medium” digitalized context from a sociomaterial approach, insofar as other artifacts than the digitalized learning platform can be taken into consideration.

- In public management studies, the most widely acknowledged research (Pollitt, Bouckaert 2004) focuses on the typologies of public administration reform design (New Public Management, New Public Governance, New Weberian State) following a systems model of analysis that focuses on meta-level variables (socio-economic forces, administrative system, political system and elite decision-making, (see Pollitt, Bouckaert 2004 p.25). Such variables do not make it possible to understand how, in everyday practices, the competing demands are enacted at intra-organizational level to produce organizing realities that both enable and constrain the development of a new training strategy. Ontological debate among scholars in public management/public administration field is only at an embryonic stage (Stout, 2012) and does not include yet a practice-based view of how multiple ontologies are at play in everyday practices in public organizations.

- The growing body of literature referring to the relational nature of institutional complexity and organizational response focus on broad categories of relational dynamics without explaining how such strategies are enacted in practice (Pache, Santos 2010). However, as suggests some researches (Tummers 2011, de Gaulejac 2010) there is a case to analyse this relational dynamic in public organizations, following the widespread of both management techniques and IT-innovations in government. Such studies do not provide - so far - solid theoretical ground for a sociomaterial approach, since their aim is focused at highlighting the dysfunctions of these competing demands at individual (socio-psychological) or organizational level.

A comprehensive framework, that takes as a starting place the -already- entangled organizational realities (Orlikowski 2010) would provide, we assume, a better understanding of the complexity of this *organizing* and a more useful ground on which change can be conceived and developed (Barad 2003). The paper concludes discussing the potential theoretical developments of a clinical approach that includes in a single framework the sociomaterial, psychosociological and socio-political dimensions.

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Professional identity, work environment and sociomaterial practices

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Abstract

Work appears a significant dimension of identity formation : organizational identity, as well as values and social status inferred from work enable the individual to answer the question « Who am I », both for himself and in front of others (Kreiner, Hollensbe, & Sheep, 2006; Pratt, Rockmann, & Kaufmann, 2006; Sainsaulieu, 1985). The perception of the workplace as a « stage » for identity enactment, in the sense of Goffman (1959) has produced interesting recent research (Ibarra, 1999; Ibarra & Barbulescu, 2010). However the role of materiality in identity work remains under-investigated. Yet, identity representations often rely on a series of material artefacts which provide resources for these enactments. Our research analyses the role of artefacts (both technological and non technological) and the related sociomaterial practices, in the constitutions and enactment of professional identity of social actors. Our unit of analysis for this research is an occupational community of train drivers (Salaman, 1974; van Maanen & Barley, 1984).

Introduction

In a context of globalization of trade, « post-bureaucratic » reorganization of firms, diffusion of near ubiquitous communication technologies and « post-modernist » evolution of society, the question of individual or collectives identities and the role of work in their evolution or recomposition has been the focus of an increasing number of research, in philosophy, sociology and organization theory (Castells, 2000; Gay, 1995; Giddens, 1991; Sennett, 2000; Taylor, 1989).

Human labor provides material conditions of existence, while generating meaning (through what is being produced) and being a source of future projection (career as central focus of biographical trajectory) (Bardon, Josserand, & Clegg, 2012). As an essential socialization space, it appears quite natural that the workplace, being both a material and a social space, acts both as a stage on which we enact our character (Goffman, 1959) and where, receiving interpretations and feedback from others, we nurture our own sense of self (Dubar, 1992).

But challenges to maintaining a coherent sense of self are more and more acute as change and reorganization tend to become a day-to-day modus operandi for organizations (Alter, 2003), career perspectives prove to be relatively unpredictable, boundaries of workgroups are regularly modified and the division between private and professional life fades (Sennett, 2000; 2007).

Recent research in organization theory on identity formation at work has studied this phenomenon mainly through discursive practices, be they organizational or individual discourses. According to these research, the construction of meaning, the integration and enactment of values and beliefs forging professional identities, be they individual, collective or organizational, would therefore be mainly located and reproduced in discourses, after rationalization by social actors.

Despite delivering promising results, these approaches tend to neglect an overlooked dimension of organisations and, more broadly, of collective action, i.e the material dimension. (Bardon et al., 2012; Orlikowski, 2007; Spicer, 2008). Social actors' practices in organisations are indeed necessarily sociomaterial. They require the use of objects whose material properties both enable and constrain action (Gibson, 1986).

The objective of our research is to enlighten the role of materiality in the workplace on identity formation. Studying the features and properties of an ensemble of artefacts used by train drivers in their daily tasks, we wish to show how these object integrated in sociomaterial practices specific to the occupational community contribute to identity formation and identification for its members. Whilst

looking at artefacts in regular, day-to-day activity, we will focus as often as possible on « material incidents » (i.e material changes, troubleshootings, accidents, etc.) to reveal the identity disruption generated by changes in sociomaterial practices and to explain the identity work mechanisms led by social actors to restore a certain form of stability.

The role of materiality in identity formation

We define identity formation according to the definition provided by Ybema (2009) : « a complex, multifaceted process which produces a socially negotiated temporary outcome of the dynamic interplay between internal strivings and external prescriptions, between selfpresentation and labeling by others, between achievement and ascription and between regulation and resistance ».

The role of materiality in identity formation in organizations has been studied by some relevant research streams:

- in research led by Hugues (1958) on « dirty jobs » (« Tasks and occupations that are likely to be perceived as disgusting, degrading, or physically, socially or morally tainted »).
- in the SCOS (Standing Conference on Organizational Symbolism) literature, organizational symbolism comes from organizational artifacts conceptualized as symbols and revealing personal or organizational identity and status (Gagliardi, 1990)
- research in organizational theory has considered some objects as « additional semiotics » (Ybema et al., 2009). Certain objects are therefore vectors of projection of personal identity, e.g. clothes, makeup, office decors (Elsbach, 2004; Swann, 1987). Other signal the valorization of identity by the organisation, e.g high salaries, luxury company cars and other non financial symbolic compensations that a company can grant its employees (Alvesson & Robertson, 2006).

These research tend to integrate some materiality in the analysis of identity formation, rather than to focus on the role of materiality per se in identity formation. This is precisely the objective of our research.

Theoretical framework

Given the absence of systematic study of the role of objects in identity formation, our research is largely inductive. However, we borrow from SCOS and sociomaterial approaches in order to define the object of our study.

We use the definition of artefacts provided by Gagliardi (1990:3), according to which artefacts are 1) the product of human actions that exists independently from its creator ; 2) intentional, i.e which aims at solving a problem or satisfying a need ; 3) perceived by the senses, thanks to its own corporality or physical dimension (Gagliardi, 1990:3). This physicality is constituted by the assemblage of matter and form (Leonardi, 2012). The materiality of an artefact refers to « those properties of a technological artifact that do not change, by themselves, across differences in time and context. »

If the properties of an artefact are stable, defined by their materiality, they only produce effects when used within sociomaterial practices. Practice is indeed the entanglement of material and human agency. Therefore « what the technology is does not change across space and time, but what it does can and often changes. Function – or material agency - is a construction that depends, in part, on materiality but also depends on one's perceptions of whether materiality affords her the ability to achieve her goals or places a constraint upon her.» (Leonardi, 2012).

Research design

Our ongoing research deals with members of the occupational community (van Maanen & Barley, 1984) of train drivers. Data is collected through semi-structured interviews and nonparticipant observation within the train cabin.

Train drivers come from 5 different sites of the French National Railway Company, specialized in specific missions : fret, long-distance, long-distance and high-speed, suburban. Sites vary also in the type of engines required for these missions (automatic, diesel, etc), and on technological equipment (mobile phone only, mobile phone and smartphone, mobile phone and tablet).

Our research considers these different objects present in the driver's cabin and analyses their material properties and affordances. Interviews and observations enable to understand how these artifacts channel identity material and contribute to identity formation. The role of material changes in identity disruption and reformation is specifically studied.

Contributions to OAP Workshop

This research can contribute to the 4th workshop on Organizations, Artefacts and Practices at 3 different levels:

- this research considers the role of materiality in identity formation, and in particular how some objects may be chosen and deployed in organization in order to trigger a certain type of identity amongst employees. This contributes to current research on « artifacts and objects as the constituents [...] of organizations and organizing »;
- by looking at the unintended effects of materiality regarding identity formation, this research contributes to highlight the specificity of material agency and the performativity of materiality in organizations.
- through the systemic mobilization of Gibson (1984) for all artefacts present in the train cabin, our research will provide some insights regarding the affordances of materiality in organizations.

Finally it seems that since technological and technical changes are happening more and more frequently in organizations, this research could help explain how individuals represent these material changes based on occupational identity and how they reform a coherent sense of self through new sociomaterial practices. Furthermore, our research aims at contributing to the broader debate on the meaning of work and questions of deskilling related to personal and collective identities.

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**Setting rules for the unruled web:
organizational behaviour in the context of crowdfunding regulation**

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Among the intangible assets, which are at the core of the competitive arena, financial resources and knowledge are nowadays undoubtedly the most valuable ones. Thus, firms seek for financial and knowledge sources not only within their organizational boundaries, but increasingly involving external stakeholders. The exchange of information from the outside towards the inside of the organization allows increasing the knowledge base. The knowledge coming from the market reinforces the importance of the network of relationships, especially in a context of expansion of markets, in which the sources of knowledge can be very diverse. In particular, social capital, defined as the set of resources on which the firm has access to and that can be mobilized on the basis of the network of active relationships, may enable understanding the ability of an organization to acquire and improve its innovative capabilities. The web-based technologies have enhanced the ability to reach the external stakeholders in innovative ways. The evolution of so-called web 1.0 into WEB 2.0 includes every kind of social media which allow organizations to share content and to create a system of relations in which everyone can be connected to each other directly and / or indirectly.

Linking the knowledge-based perspective of firms with the relational analysis of organizations, our research aims at investigating the behaviour of firms on the context of a new regulation that prompted out recently on crowdfunding.

By analyzing the steps that led to what we might call the outsourcing of knowledge, the changing relationship between business and the market can be summarized as follows: a) initially, all activities were conducted solely within the organization and we can identify this mode, therefore, in the Hierarchy; b) Bearing in mind the theory of transaction costs by Williamson, some organization then adopted a first model of outsourcing production or special function, identified in outsourcing; c) today, in addition to the outsourcing of production and work, we assist to the outsourcing of knowledge, i.e. the Crowdsourcing which consequently has also developed the branch of Crowdfunding.

Crowdsourcing has been defined by Jeff Howe as the assignment of a task traditionally performed within the company to a community of persons not related to organizational constraints or other factors. Crowdfunding is a collaborative process for the provision of financial resources from alternative channels or complementary to the traditional ones or shareholdings by professional investors.

The historical origin of Crowdfunding is placed at the end of the 90s , with the first websites dedicated to fundraising campaigns, mainly for charity, that used the network as a tool to expand the traditional fundraising campaigns. Crowdfunding has gained popularity in 2008 when the U.S. President, Barack Obama has managed to collect most of the money needed for the campaign thanks to this system. Between 2008 and 2009 in the USA two major crowdfunding platforms were born: Indiegogo and Kickstarter. On April 5th, 2012, the U.S. Congress enacted the Jumpstart Our Business Startups Act, also known as the JOBS ACT. This bill requires the SEC, Securities and Exchange Commission to adopt regulations to allow the use of crowdfunding market. At the moment the only enabled investors to conduct crowdfunding are those defined accredited, such as banks, insurance companies, registered

investment companies or business development companies. An important requirement set by the regulation prescribes that each year a report must be submitted to the SEC on investment and provide a discussion of the results with the investors, as well as provide for any request for publication that the SEC requires. It further stipulates the payment of a fee due to the platform, by those who fail to achieve a successful project, this would exclude all others from the payment of this fee.

On the verge of the American success of this phenomenon, crowdfunding has gained momentum also on the European fore. The interest of many arouse, especially of the experts in the fields of economic and financial markets, in search of new financing instruments and careful to observe the new social participation supported by the web.

The attention to these new forms of collaboration, together with the success of crowdfunding achieved in recent years, has stimulated the interest of a wider audience, as well as of professionals and enthusiasts of the web, so as to make it necessary to define a specific regulation. Italy has been the first country in Europe to stipulate a specific legislation on the subject, via the Decree Growth (Decreto Crescita) in October 2012.

The attention given to this phenomenon becomes important to encourage the development of innovative companies and ensure that they become an element of greater competitiveness of the economy, especially in the current environment where there is a general restriction of credit by financial institutions.

The effects of crowdfunding on organizations are prominent, as this method of fundraising gives impetus to a collaboration that could speed up the financing of business projects while requiring new sets of behaviour by the different actors. A new vision of corporate finance could be envisaged, with respect to innovative start-ups. This could boost a major change in the relationship between the investor and the one who receives funding. We explore these major changes in light of the knowledge-based perspective and relational view of firms that we presented above.

The research that we present in this paper was designed: a) first, to investigate and explore some general aspects and highlights of Crowdfunding; b) to assess the effect of crowdfunding regulation on different groups of actors, namely financial institutions, innovative firms and start ups, crowdfunders, other organizations; c) to offer a systematic overview of the organizational behaviour that such actors could enact in the development of a new market for crowdfunding and of the relations between those actors.

To do so, we first set up personal interviews with the different groups of stakeholders and then developed a quantitative survey that was submitted to a wider audience.

We believe that our research could contribute not only to the specific academic interest for crowdfunding, our analysis of the international regulation on crowdfunding could also shed light to the general impact of rules on organizations and on the behaviours of organizational actors in the development of a new sector.

Track 11 - Practice and materiality

Sara Varländer (*Stanford University*)

Room: 209

The organization of transport terminal: panopticons, cathedrals, agoras or branded cities?

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Organization studies are growingly acknowledging the role of space as a key topic for understanding of the various forms of organizing (Orlikowski, 2007; Van Marrewijk and Yanow, 2010). Train stations, ports, airports and motorway service stations have always been characterized by the highly opposing concepts that affect their nature: are they buildings or sites for socialisation? - Anthropological spaces or non-places? - Doorways or bridges? - Cathedrals or mechanical factories? - Transit areas or sedentary sites? - Local or global entities? Agoras or Panopticons? Social expressions or shopping malls? The combination of these different dimensions strongly influences a building's architectural and engineering model, but also expresses an organizational, economic and business model for the firms that manage them, as well as the quality of life of passengers and workers, and of the cities to which they refer.

Our study draws upon the paradigm developed by Marc Augé (1992), in which ports, highways, train stations and airports are structures built for fast movements. They are non-places, through which millions of people pass quickly without entering into a relationship; they ultimately lack three anthropological prerogatives, namely 1) identity (such as houses), 2) history (monuments), and 3) relational attributes (such as for city squares). In non-places, people define themselves through individual contracts (passports, boarding passes, tickets, credit cards), interacting via encoded information (signs, ideograms, directions) relating to distant organizations or institutions.

More recently, airports, train stations, ports and service stations have been considered small *branded cities*. The *agora* (public space of social interaction of the Greek polis) has given way to commercial exchange: 'I exist as a citizen because I buy universally recognized branded products.

The study highlights how transit areas act as a combination of various organizational artifacts (buildings, vehicles, communication systems, showcases), positioned in space according to different criteria, as well as on the basis of new modalities. In other words, we examines organizational spaces as "lived spaces" (Lefebvre, 1991) with both material and symbolic dimensions.

What emerges is that the basis for the organizational models in the space of the artifacts is a "latent combination" resulting from the interaction between different actors who, within specific policy networks, play a role in the design, construction, custody and management of transport terminals. Case studies are presented focusing on motorways service stations in Europe. Our cases show that the variation in procedures for awarding contracts for managing such rest areas, and the organizational models governing the interaction between the motorways network administrators and catering service

providers, generate some of the dynamics of transformation of the combinations of artifacts that define these social sites:

- From service areas to villages;
- From islands separated from the local context to places of social interaction, and cultural and tourist promotion;
- From mini-markets to experiential places.

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Making sense with practice: from an “...as practice” to a “practice as...” perspective

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More than twenty years of practice turn give us the opportunity to become more reflexive on what is still a promising perspective in organizational research. Focusing (or widening the scope) on practices, practice and practitioners (Whittington, 2006) help question or even evacuate some dichotomies from traditional management thought. Western minds progressively get conscious that many paradoxes like theory vs. practice, decision vs. action, management vs. labor, strategy vs. tactics, etc., may result in dead ends for management research (Mintzberg, 1993). Syncretism and recursion are probably the salient markers of practice based approaches, as suggested by the definition of praxis by Castoriadis (1998): doing and awareness of doing as simultaneously oriented towards others, a definition that can be adopted to study both practice and practices. In such a conceptual context, situated emergence is made a principle. From strategy to accounting, managerial functions are comprehended through the interaction of discourses, artefacts and courses of action within the ‘murmuring of the everyday’ (de Certeau, 1980) instead of explicit and deliberate processes. There lies the novelty and above all the extraordinary renewing power of practice based approaches in management research, as well as probably their main weakness.

In this contribution, we examine the case of SAP (Strategy as Practice) as a both luminous and problematic research stream. As focused on intra-organizational analyses, we underline the main paradox of practice based approaches: strategy must be found in what managers (and not only them) actually do everyday, but is what they do everyday necessarily strategy? This question is crucial to research as well as to practitioners who would be committed to inserting strategic practices in current organizational routines. Research and consultancy frequently identify strategic practices ‘by decree’, when such a choice should be made and justified thoroughly. At the opposite, the notion of praxis would guide us towards a phenomenological comprehension of strategy: a practice is perceived *ex post* as a strategic one because it induced a “strategic effect” (a change in company’s orientations, strengthening a KSF, etc.). This stance is definitely hard to hold, at least exclusively, in the scientific field of organized action. As Martinet (2006) contends, ‘[a strategic thought] cannot be based exclusively on analytical, sequential, serial, digital schemes...but it must be protected against deliria engendered by uncontrolled global, simultaneous, fusional or analogic ones’ (p.38). An answer to this concern could be found in that practice can be strategic according to different points of view, and that is crucial to distinguish these perspectives from “unstrategic” ones. Strategic practice can be seen as:

1. A rational construct, like an action plan (see the traditional approach of strategy by Martinet, 2002),
2. The construction of behavioral regularities, like routines (Feldman & Pentland, 2005),
3. A behavioral innovation, improvisation or bricolage (March, 1991),
4. The development of knowledge, learning, cognitive development (Argyris & Schön, 1974),
5. A sensemaking and sensegiving process by which individuals: seek to interpret and understand the reality in which they are evolving by acting (Weick, 1995); attempt to focus organizational actors’ managerial attention (Occasio, 1997)

6. The construction of an identity, an image of self (Sainsaulieu, 1977, Dubar, 1998), a way for people to call attention to their professionalism or to increase their legitimacy (Molloy and Whittington, 2005, Kaplan, 2011),
 7. The setting up of power-domination relations (Crozier, 1964), a way to mediate social interactions (Orlikowski, 2007),
 8. The locus of institutionalization or deinstitutionalization (Meyer & Rowan, 1977), structuration or destructuration processes (Giddens, 1984).
- Each point is developed in reference to a musical metaphor and exemplified with a specific management situation (Girin, 1983).

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Bricolage as artefactual joke:

how bricoleur can use humor to transform mockery into acceptance

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KEYWORDS: Bricolage, humor, bricolage-as-outcome (BaO), artefactual humor, continuity.

The concept of bricolage gets quite successful in Organizational Sciences since the 90's. Crossing with fields as varied as information systems (Ciborra, 1994), organizational behaviors (Weick, 1993) innovation practices (Garud & Karnoe, 2003), entrepreneurial dynamics (Baker & Nelson, 2005), it is essentially described as a practice consisting in making do with what is at hand, and opposes itself from rules and regulation practices considered as more formal -“break-through” (Garud & Karnoe, 2003) and “resources seeking” situations (Baker & Nelson, 2005) that are more legitimate under the myth of Managerial Rationality (Bowles, 1997).

Although quite prolific in the way bricolage is studied, current research almost exclusively analyzes bricolage as a process and rarely as an outcome, even though Lévi-Strauss himself does actually define it both as a way to do and as an achievement (Lévi-Strauss, 1966). Scarce are the articles, like Duymedjian & Rüling (2010) that devote part of their reasoning to bricolage-as-outcome (BaO).

We believe that taking into account BaO allows grasping the conditions and consequences of a critical stage: the reactions it arouses within a productive system. Indeed, confronted with BaO, bystanders may react with two opposing ways. Namely 1) the reaction of despise and rejection justified by the belief of incompetency (Rey, 2006) of the bricoleur or of his covert resistance to the rules (De Certeau, 1984, Clegg, 2002); or 2) an admiring reaction confronted with such ingenuity and craftiness (Rey, 2006), that could be regarded as “contributing” rather than “rule deviation” (Jackson & Adams, 1979). We make the assumption that it is the incongruity inherent of the presence of formally unexpected elements that is the source of the crisis induced by its reception in the organization.

Based on this hypothesis, the paper suggests using the mean of humor theories to interpret BaO as an original humoristic arrangement we shall name Artefactual Humor. Taking into account this dimension should allow transforming an Accidental (because unintentional) Artefactual Humor of BaO into an Intentional Artefactual Humor resulting in the bricoleur being able to gain better acceptance of the ingenuity of his achievement. In our sense, humor can be a mean for BaO to be admitted within a system where the rationality principle is dominating. It seemed thus relevant to rely on humor theories, since the recurring aspect of a humoristic situation precisely holds within the incongruity of at least one of its elements (Ross, 1998; Martin, 2006).

Martin (2006) strongly suggests linking theories on humor with other investigation fields, as it is a mean for social interaction and in this aspect the issue of humor is quite serious. We retain that humor may be observed from a social and interactive perspective: the goals being humor for itself, or humor as a mean to reach other objectives (Collinson, 1988). Such humorous plays, inducing the social understanding that one is not being serious and involving positive friendly response, may be taken as the way to read bricolage settings, even when these settings were not intentionally being built with

this objective. The bricoleur could “take control” of the reactions to his bricolage in generating a reaction of “laughing with” rather than one of “laughing at”.

Contribution

The analysis of BaO as a humorous dispositive allows us to provide three contributions.

- 1) It gives a detailed description of bricolage as an outcome of a process, identifying the specificity of the arrangement and the elements composing it. We shall display that it holds an inherent dimension of incongruity, which enlightens the uncertainty of its reception.
- 2) In interpreting the incongruity of BaO through the lenses of the theory of humor, we suggest reading it as an inherently funny structure that drives us to determine a new type of humor called accidental artefactual humor. By this, we stress the fact that the humorous dimension of BaO is unconsciously ignored by the bricoleur intending to make things work, endangering its reception in the organization.
- 3) This detour throughout humor allows adding to the tactical strategy based on the efficiency of the arrangement, another variable based on narratives accompanying its life into the organization: its intentionality recognizes humor as part of BaO, so that irony and scorn be replaced by admiration of resourcefulness and ingenuity, thus allowing the bricoleur’s setting being perceived as legitimate “for continuity” of the organization.

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Track 12 - Debates about sociomateriality

Marlei Pozzebon (*HEC Montreal*)

Room: 210

Exploring the Sociomaterial Grounds of Information Security Policy Compliance

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Anna Elina Laaksonen, *Tampere University of Technology*

Organizations devote significant resources to implement information security policies (hereafter InfoSec policies). Despite the efforts, InfoSec policies seldom produce the expected outcome [Karyda, Kiountouzis and Kokolakis, 2005]. Ever since Siponen's [Siponen, 2000; Siponen, 2001] seminal work, scholars have been interested in studying ways to ensure employees comply with the InfoSec policies. Compliance to InfoSec policies is considered to be a key to successful information security management as the InfoSec policies lay foundation for it [Siponen and Iivari, 2006]. To explain compliance behavior (and non-compliance), scholars have largely built on variance theories that focus on antecedents of predicting/anticipating compliant/non-compliant behavior [Warkentin and Willison, 2009]. Despite the efforts, understanding compliance persists to be a challenge.

Focusing on the antecedents predicting/anticipating compliant/non-compliant behavior, that which is to be complied with (i.e., InfoSec policies as material artifacts) has been only of peripheral interest [Pahnila, Karjalainen and Siponen, 2013]. In contrast to prior research, we focus on how the materiality of InfoSec policies is implicated in the policy compliance.

Building on a case study conducted at a large internet service provider (SecureISP, a pseudonym), we provide an alternative interpretation of compliance in which compliance is not a binary or a matter of degree but a situated enactment with the InfoSec policies. A variety of data sources – interviews, site visits, organizational documents, shadowing – collected over a period of several months provides us a robust basis for theorizing⁵. SecureISP has its headquarters in Sweden and has over 30 000 employees. Information security is a central concern for the organization which is reflected in the maturity of their information security management practices. Despite what becomes documented as InfoSec policies mostly flow from the top management to down, a group of information security professionals is responsible for the organization's InfoSec management, including formulating the InfoSec policies and ensuring compliance. The InfoSec policies are to provide a common view of information security for the organization against which compliance/non-compliance can be 'objectively' determined. Therefore, what counts as information security has become to be understood as equal to the InfoSec policies. Over a number of years the policies have evolved gradually into documents that contain several hundred pages, categorized under several categories, differing largely in the level of abstraction. Other employees are to comply with the laid out policies. They engage in the application of InfoSec policies by enacting them in their work.

We build our theorizing on Barad's [Barad, 2003; Barad, 2007] concept of intra-action (in contrast to interaction) to formulate an understanding of InfoSec policy compliance as intra-actions of actors and material artifacts. Intra-actions assume the ontological inseparability of matter and meaning, which affords us to account for the materiality of InfoSec policies in policy compliance. We use the critical social concepts of reification and fetishization as 'intriguing templates for rethinking the relationship between sociality and materiality in conditions of ontological uncertainty in which the demarcation

⁵ The empirical material we draw on has been used earlier to study employees' perceptions influence on policy outcomes (i.e., Niemimaa et al. [2013]). The alternative interpretation of our empirical material is not to be taken as a sign of analytical failure in our earlier work, but rather as a sign of richness of the empirical material (cf. Feldman [2000]).

between the world of things and the world of persons is losing its former obviousness and solidity' [Pels, Hetherington and Vandenberghe, 2002, p.4]. More specifically, the concepts provide us templates for thinking the materialization and abstraction of the InfoSec policies, the (re)ma(r)king of boundaries in Barad's terms. That is, we refer to reification as a type of intra-action in which the abstract notion of information security is transposed as the material objects (InfoSec policies), whereas fetishization is the reverse process of 'personification and 'agent-ification' of material objects [InfoSec policies]' [Pels et al., 2002, p.4].

Our findings suggest the organizational actors engage in the processes of reification and fetishization through which the policy compliance becomes meaningful. The reified information security as material artifacts become fetishized as organizational actors enact them in their work, remarking the boundary of the material artifact and its meaning. In other words, the InfoSec policies as artifacts begin to live a life of their own within the organization. Compliance then becomes indeterminate outside of particular situated practices in which the actors' enactment with policies is rather an enactment with the fetishized artifact than with the material object.

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“Where are the missing masses?”

Bringing ANT back into the debate on materiality

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Organization studies have “traditionally overlooked the ways in which organizing is bound up with the material forms and spaces through which humans act and interact” (Orlikowski, 2007, p 1435).

Orlikowski and Leonardi “are forgetting decades of system sciences [research] which have prevailed” in the literature. (Kautz and Jensen, 2013, p 23)

Early this morning, I was in a bad mood and decided to break a law and start my car without buckling my seat belt. My car usually does not want to start before I buckle the belt. It first flashes a red light “FASTEN YOUR SEAT BELT!,” then an alarm sounds; it is so high pitched, so relentless, so repetitive, that I cannot stand it. After ten seconds I swear and put on the belt. This time, I stood the alarm for twenty seconds and then gave in (Latour, 1992, p. 151)

The first two statements above describe the paradox we want to explore in this paper. The third shows us the ways to solve it. It is also the way in which Bruno Latour opens his famous essay “Where are the missing masses? The sociology of a few mundane artifacts” (Latour, 1992) that lead us to title our own essay as we have. We attempt to bring the contribution of Actor-Network Theory (Latour, 2005) back into the debate on materiality.

The importance of materiality to organizational and other social practices has been an issue which has received increasing attention (recently) in various streams of literature including sociology (Pierides & Woodman, 2012; Schatzki, 2010a), organization studies (Carlile, Nicolini, Langley, & Tsoukas, 2013; Leonardi & Barley, 2010; Leonardi, Nardi, & Kallinikos, 2012; Nicolini, Mengis, & Swan, 2012; Robichaud & Cooren, 2013), information systems (Leonardi, 2011; Leonardi & Barley, 2008; Orlikowski, 2006, 2008) and accounting (Wagner, Moll, & Newell, 2011) among others. This renewed interest is worth exploring given that: “the discussion about [the role of objects and] things has a long sociological tradition, from Marx, Durkheim, and Mauss through Mead ... up to contemporary social theorists” (Preda, 1999, p 364). It is also claimed that these things, these masses, have been missing from inquiries into organizations and societies. They have recently been brought back, as if anew in the ‘sociomateriality’ literature. We want to reflect on this move.

Why are the masses missing?

Orlikowski (2007, p 1435) also argues that “our primary ways of dealing with materiality in organizational research are conceptually problematic” and proposes to adopt an “alternative approach that posits materiality as constitutive of everyday life” (ibid). Drawing on Barad and Suchman, Orlikowski labels this approach as ‘sociomateriality’ (See also: Orlikowski, 2010b; Orlikowski &

Scott, 2008). Orlikowski (2007, p 1437) states that she is basing her position on the tradition of Latour, Callon, Law, Pickering, Knorr-Cetina, and others. However, the translation of this tradition into other fields such as organization studies has not been smooth and very little has been done to assess what has been gained and, above all, lost in this translation.

What if the masses were not missing?

“...the multiple engagements that have been energized by a line of inquiry termed “sociomateriality” in information systems and organization research” (Scott and Orlikowski, 2013, p 77) remind us similar moves in other literatures. Recently, in the sociology literature, Lamont (2012) has called/argued for a comparative and cumulative theory building in the sociology of valuation and evaluation. She recognizes that there are “more than half a dozen of literatures [including cultural sociology under the influence of Pierre Bourdieu, economic sociology, sociologists of knowledge and science, students of inequality, social psychology, organizational sociology, etc] that consider valuation and evaluation from different angles” (ibid, p 203). Lamont aims at “putting various bodies of work in conversation with one another in order to stimulate more cumulative theory building” on valuation and evaluation. Lamont’s idea on cumulative theory building on [e]valuation offers us important points of reflection for studying sociomateriality.

Drawing on Lamont’s (ibid) work, we suggest, we should similarly aim for a comparative and cumulative sociological theory building on sociomateriality. Please note, this is not to suggest a unified and/or coherent theory (or grand theoretical reconciliation) as in Arhens et al (2008). Neither are we assuming/suggesting philosophical and methodological commensurability. Furthermore, we recognize that “engagement with other methodological traditions is time-consuming and intellectually demanding ...” (Lowe & De Loo, 2013). All we are suggesting is that the various streams of literature interested in theorizing sociomateriality should converse with each other more enthusiastically, and, to some extent, more nomadically, that is, without falling into the trap of following a path leading to a common promised land, where all can rest wrapped oneself up in the comforting blanket of an emerging dominant paradigm⁶. This would help us to “specify exactly whether and how each study may contribute to a [comparative and] cumulative theory” of sociomateriality, “and alternatively whether they simply provide one more instantiation of previously identified [theoretical frameworks, methodologies, and] processes” (Lamont, ibid).

Scholars such as Appadurai (1986), Law (1987), Knorr-Cetina (1997) and Preda (1999), have long argued for a sociological theory of things, that is, for a theory of sociomateriality. “From the perspective of the sociology of soci[omateri]al processes, the main challenges ahead are those of comparing individual studies that concern similar processes in order to specify exactly whether and how each study may contribute to a [comparative and] cumulative” (Lamont, 2012, p 204) theory of objects/sociomateriality⁷. “This will require moving to a higher degree of abstraction so as to identify similarities and differences across studies” (ibid) and approaches.

⁶ This we hope may avoid duplicating [same] studies across different [streams of] journals. Please see our notes in the subsequent paragraph.

⁷ It may well be the case that some scholars do not intend to contribute to the theory of sociomateriality and rather focus their case studies on contributing to domain literatures of accounting, organizing, etc.

Leonardi's (2013) comparison of agential realism and critical realism can be seen as an initial step in this direction. In the following we have extended both the dimensions and approaches to Leonardi's contribution. In the adapted and extended comparison, we add two additional dimensions for comparison: (1) View on agency, and (2) How are practices organized and/or linked? Which includes view on structure. In terms of theoretical frames, we add 2 further theories to compare and contrast: (1) Schatzki's (2002) 'site' ontology and (2) Actor-network theory. We believe this extended comparison will be very useful both in developing a gradual comparative and cumulative [not single/unified and/or coherent] sociological theory of objects/sociomateriality. As Nicolini (2013, p 1) argues, "much is to be gained if we appreciate both the similarities and differences among practice theories...". We also hope this extended comparison helps in further elucidating "how depending upon the type of theoretical foundation one lays, he or she will build very different empirical studies, and make significantly different kinds of contributions to the study of sociomateriality" (Leonardi, 2013, p 74). It will also help to reflect on the 'ontology of things' without falling into the trap of reifying these things as objects. This would lead us back to the 'dark age' of positivism, where a belief in the possibility of positively know objects, artefacts, technology made us all blind to their power and agency.

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The anthropological contribution of Maurice Godelier ' thought to the relationship between the Mental and the Material : some implications for Organization Studies

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As the workshop's fourth session will concentrate on the subject of rules and regulations in organizations. In the context of global competition and the global crisis experienced by most countries all over the world, one of the questions raised is how linking materiality with discourse, cultures and mentality. In this paper, we will present the contribution of the French anthropologist Maurice Godelier to enlighten the relationship between the Mental (l'idéal) and the Material (le matériel).

Maurice Godelier is one of the leading figures in Anthropology. From the beginning of his career in anthropology (1966) and his classical work on the Baruyas (1982) to his last book on Lévi-Strauss (2013), he has developed a reflection on the production of societies (1984, 2007). Influenced mainly by Marx (1973), the economical anthropology (Polanyi) and Lévi-Strauss, he has put the emphasis on the relationships between what he calls ' l'idéal ' (The Mental) and le matériel (The Material). He defines five forms of material and shows how these forms are articulated with the world of ideas (representations, symbolic and imaginary spheres) according to societies. In these articulations, he gives to the social relationships (rapports sociaux) an important role in the social dynamics regulation. In his works, he underlines the limits of the Marxist vision of society divided between an infrastructure (economical activities) and diverse superstructures (parenthood relationships, religious institutions,...) which would be built on this base and would disappear with her. He demonstrates that in all the social relationships between human beings and with Nature, even the most material relationships, it exists mental components which are not the reflection of these relationships but a part of their internal framework.

After a presentation of his key ideas, we will show how Godelier's anthropological reflections are relevant to organization studies and management research, notably on these issues of rules, regulations and materiality. As some articles show anthropology can be a good source of inspiration for organization studies (Luthans and Morey, 1987, 2013), this presentation wants to give new elements coming notably from French anthropology which was (Chanlat, forthcoming) and is always an important source of reflections, often ignored by the Anglo-Saxon mainstream.

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Track 13 – Artifacts and institutional dynamics

Magda Hercheui (*Westminster Business School*)

Room: 208

Socio-materiality and the transnational expansion of institutional rules: Michelin in haute cuisine around the world

Isabelle Bouty, *University of Toulon*

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In the transnational arena the development of rules has historically been the mission of formally set-up governmental or regional organizations (Djelic and Sahlin-Andersson 2006). More recently, a new category of actors emerged: non-governmental and private actors. These non-state actors contributed to the development and growing importance of soft rules and regulation (non-hierarchical regulation that is not legally binding), with the multiplication of classification systems, standards, evaluations and audits, assessment and accreditation, and comparison and rankings (Jacobsson and Sahlin-Andersson 2006). The Michelin red guide precisely exemplifies this new form of actors and institutional logics, and its expansion around the world illustrates how a for-profit company regulates a now transnational field. We therefore draw on an analysis of the Michelin guide's strategy around the world to develop a better understanding of how socio-material elements contribute to the transnational expansion of institutional rules within soft regulation.

In this paper we extend the institutional logic literature through its relationship to socio-material practices. Thornton and Ocasio define an institutional logic as "the socially constructed, historical patterns of material practices, assumptions, values, beliefs, and rules by which individuals produce and reproduce their material subsistence, organize time and space, and provide meaning to their social reality" (1999: 804). Jacobsson and Sahlin-Andersson (2006) distinguish three modes of soft-regulation: rule-setting, such as standards, codes of conduct, and guidelines; monitoring, which serves to guarantee rule-following; and agenda-setting, which creates deadlines and rhythms the process. They also specify three unique forms of authority and compliance: organizing, expertise, and authority through association with other rules, regulations or rule-makers. The salience of socio-materiality within these processes transpired in past studies. For example, authors showed how categorization, accreditation, ranking and rating tools sustained reproduction in a field (Espeland & Sauder, 2007; Wedlin, 2010). Ruef and Patterson (2009) analyzed how the classification and rating system set up by Dun and its agents to sustain the organization's development impacted firms. They highlighted that the rating system, initially intended at providing information to non local actors, turned out to also be a coercive means to enforce Dun's classification, underlying logic, and competitive position. However, past research has primarily focused on the institutional logics and their evolution. Regulating actors and their doings in this process have not been the major focus of investigations, despite shared acknowledgement of interdependencies between their strategy and the institutional logic they carry. Our goal here is to contribute to a better understanding of how socio-material elements contribute to the transnational expansion of institutional rules within soft regulation.

We base our paper on the empirical analysis of the Michelin red guide and its internationalization strategy, aimed at defending its position in haute cuisine worldwide and, in relation, a particular understanding of what haute cuisine (gastronomy) is and should be.

Contemporary haute cuisine is a highly institutionalized field (Parkhurst-Ferguson, 2004; Rao et al., 2003). And Michelin has been the uncontested (though not always unchallenged) arbiter of the field in Europe for several decades (Karpik, 2000, 2010; Rao et al., 2003). Karpik (2000) showed how the

Michelin guide rating system was developed on the base of the Michelin Group's strategy and at the same time carried a logic that progressively impacted French gourmet restaurants and their customers over the last hundred years. In the years 2000's Michelin begun its expansion outside Europe to America and Asia, with red guides dedicated to the United-States (New-York in 2005, followed by Chicago, San Francisco, and Las Vegas), Japan (Tokyo Yokohama Kamakura in 2007, followed by Kyoto Osaka) and other Asian cities. We will primarily focus our study on Michelin's expansion to New-York and Tokyo. We used data collected from Michelin and the local press between the years 2000 and 2010 (a total of 169 articles; articles in Japanese language were translated with the automatic translator integrated into Factiva).

We show how such socio-material elements as Michelin's three-star rating scale and time have been crucial in the expansion process. Michelin's rating tool, criteria and overall system did not change as the red guide expanded its geographical scope. The only changes were superficial evolutions in the austere form of the guidebook (ex. inclusion of pictures) mainly intended to gain customer's acceptance with easier use. They left the rules unchanged: the dominant importance of cuisine over decor, inclusion / exclusion, ranking, comparison, stars as rewards... This stability proved even central to Michelin's expansion as stars or the mere inclusion in the guide were rewards precisely because of the Michelin's system stability that made comparison between restaurants possible across the world. We also analyze how the annual and seasonal regularity of the guide creates a rhythm infusing constituents' practices with its rules. The annual releasing implies that a chef's position should never be regarded as definite; published issues also demonstrated this with some chefs being demoted or promoted from year to year. It places a permanent tension on chefs who grow eager to either defend or increase their ranking in the next release. As such it contributes to infusing restaurants and chefs with Michelin's underlying understanding of gastronomy and deeply contributes to institutionalize Michelin's logic.

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**Social media and institutional innovation:
The Case of Free Lunch for Children in China**

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Introduction

The “new media power” (Bennett 2003) transforming the organization of collective action and social movements has long been noted, and the transformative role of social media seems to be gaining momentum in recent years. For example, the Arab Spring in 2011 has often been attributed to Facebook, although plenty of research shows that there are much deeper seated historical and political undercurrents that led to the revolutions. In this paper, we are interested in the affordance of social media, in particular, the Chinese twitter-like platform Weibo, in the collective action of institutional innovation in China’s NGO sector. With a case study of the successful charity program Free Lunch for Children (FL4C) in China, we argue that social media could give rise to a new form of organising of NGO programs, especially in contexts where civil society is under developed.

From April 2011 to October 2013, the Free Lunch for Children charitable program raised more than 6.8 million pounds, setting up kitchens in over 341 schools to provide cooked lunch for over 73,000 pupils (FL4C 2013). FL4C is one of the pioneering and most successful charitable campaigns on social media in China. Not only was it launched and promoted on Weibo, China’s twitter-like social media platform, the program enrolls and coordinates a large number of volunteers distributed around the country online, and raise funds successfully using Weibo and other technical platforms. FL4C took place within a context of 1) an underdeveloped and ill-reputable NGO sector with weak foundation of legitimacy 2) under significant institutional and political constraints.

Theoretically the paper draws upon the literature of institutional innovation, in particular, the collective action model of institutional innovation (Hargrave & Van de Ven 2006) and the affordance of technology as “the translation of sociomateriality” (Faraj & Azad 2012). Heavily influenced by the social movement literature, the collective action model considers a network of distributed actors, rather than individual actors, “embedded in the collective process of creating or revising institutions” (p.881). This is a highly accurate description of the case of the FL4C campaign. Hargrave and Van de Ven (2006) discuss four institutional change processes within the collective action model:

- enacting institutional arrangement;
- framing interests;
- constructing networks;
- collective action processes.

The affordance of Weibo in FL4C

It is only sensible to talk about the affordance of Weibo within the sociomaterial assemblage (Orlikowski 2007) of FL4C, including the agency of distributed actors and the social institutional conditions under which sociomaterial practices are performed. Table 2 summarises keys aspects of the affordance of Weibo in the collective action process of FL4C: scalability, public engagement, framing collective action, establishing legitimacy, and distributed collaboration.

The affordance of Weibo in FL4C	Elaboration
Scalability	<ul style="list-style-type: none"> • Forming alliance with a wide range of actors to construct and expand network across time and space; • Mobilise resources through a variety of channels, often mediated by Weibo; • Scaling up the project (in terms of participants, resources, alliances, and impact) in a very short period;
Framing collective action	<ul style="list-style-type: none"> • Problematizing child poverty and hunger; • Proposing solution via Weibo; • Defining shared goal and scope;
Facilitating participation	<ul style="list-style-type: none"> • Significantly lower participation threshold for types of citizens and organizations; • Blurring the line between public and private good; • Encouraging public participation in social issues;
Establishing legitimacy	<ul style="list-style-type: none"> • Creative practices to transparency and accountability; • Enacting agency of recipients (schools); • Participatory supervision by the public;

Table 1 The affordance of Weibo in FL4C

Contributions

The paper aims to make the following contributions:

Firstly, Free Lunch for Children represent a highly successful grassroots NGO innovation in an institutionally restrictive environment. Analysed as a collective action process of institutional innovation (Hargrave and Van de Ven, 2006), the case demonstrate the power of social media in constructing networks, motivating participation, mobilising resources, framing and scaling collective action, and establishing legitimacy.

Secondly, a sociomaterial perspective of affordance (Faraj & Azad 2012) enriches the study of social media by analysing its affordance as contingent upon socio-institutional dynamics and the agency of actors. While Weibo has witnessed waves of cyberactivism in the last few years (Zheng & Zhang 2012), it has suffered severe political crackdown in 2013 and significantly declined. In other words, to avoid deterministic accounts of technology in society, the affordance of social media on social transformation has to be considered as embedded in complex, multi-dimensional and contested social, institutional and political processes.

Thirdly, this paper enriches the collective action model of institutional innovation by integrating the role of technological artefacts in social change. The mainstream literature of institutional theory is largely anthropocentric, and so is that of social movement and collective action (Rodríguez-Giralt 2011). A sociomaterial perspective of collective action allows us to take materiality seriously in understanding the basis of legitimacy and social transformation, not in a deterministic manner but in examining sociomaterial practices and possibilities that artefacts affords.

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**When Sociomateriality meets institutional logics:
A study of campus tours as legitimacy building practices**

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Scholars of management and organization studies have become increasingly interested in space and spatial dynamics. The organization of space, the distribution of artifacts, and, more generally the very materiality of work, have become recognized as key dimensions of organizational life (Clegg and Kornberger, 2006; Dale and Burrell, 2008; Yanow and Marrewjik, 2010). Organizational spaces are not merely the context in which practices unfold, but they also shape and are shaped by these practices (Yanow and Marrewjik, 2010). Scholarship on science, technology and society (STS) has long theorized the importance of the mutual constitution of materiality and human agency to understand organizational dynamics, and has viewed materiality and space, in particular, as deeply entangled in every aspect of human life (Latour, 2005; Pickering, 1995; Knorr-Cetina, 1997). This idea of the entanglement between the material world and the organizational one has become recognized as important in organizational scholarship.

This growing interest in sociomateriality (Orlikowski, 2007; Leonardi and Barley, 2008; Leonardi, 2011) has not yet fully been reflected in the institutional literature. The flourishing literature on institutional logics draws upon a terminology that acknowledges ‘the materiality’ of logics (see Jones et al., 2013; Thornton et al. 2012), but it has conceptualized materiality in discursive and structural terms at the expense of its tangible and physical aspects. The connections between sociomateriality and institutional logics have thus not been much examined theoretically or empirically, except for a few, very recent, studies that have recognized the role of artifacts and space in institutional processes (see de Vaujany and Vaast, 2013). This gap in the literature has recently been noted. Friedland (2012) for instance laments that scholars of logics have come to emphasize language and the ideational while artifacts have remained “inert and invisible” (Friedland, 2012, p. 590). Along similar lines, Jones et al (2013) argue that the material dimension of logics “has been surprisingly overlooked” (p. 52) and that objects “have been peripheral to the arguments of those [institutional] articles that focus instead on structures and practices.” (p 53).

At the same time, sociomaterial research has not yet much ventured in the realm of institutions, focusing instead on how the material and the social mutually constitute each other and shape organizational practices. Examining how organizational space gets endowed with institutional meaning and how institutional logics may be or become ensconced in space and artifacts can broaden the scope of sociomaterial research (de Vaujany and Mitev, 2013). It can connect the entanglement of the social and the material not only to practices, but also to more symbolic, yet significant, dimensions of organizational dynamics, such as, in particular, efforts to legitimate the organization to its stakeholders. This paper therefore argues for a cross-fertilization of sociomaterial and institutional research and does so by examining how the material space(s) that an organization occupies is invoked in organizational legitimization exercises.

More specifically, this research investigates the relationships between organizational space and legitimacy in a context where they are most vividly at stake: university campus tours, i.e. the guided discovery of a specific space, aiming at giving an audience an overview of its past, present and future and at establishing the legitimacy of the organization being visited. The importance of tours of physical spaces to 'impress' visitors has long been established (Kuh, 1990; Braxton and Clendon, 2001; Atkinson & Hammersley, 1994). For long, showing a place, emphasizing its history, its beauty, its technical or aesthetic performance, has been a way to legitimate an organization and its leaders. Recently, it has taken on a special criticality for many organizations, though, given the multiplicity of stakeholders they face and the diversity of institutional logics that may govern them. In this paper, we argue that during campus tours organizational members attempt to align their presentation of the campus and its physical setting with what they expect can legitimize their organization in the eyes of external stakeholders.

To collect rich and contextual data we used a participant-observation method of several tours. We also relied on secondary data (universities' websites, maps, leaflets, etc). Our sample was based on multiple observations, e.g. at McGill University, La Sorbonne University, Stanford University and Berkeley University. Through our participant-observation of campus tours, the identification of the spaces and artifacts encountered, and the analysis of the story telling produced by our guide, our aim was to understand simultaneously the narrative of the tour and its material inscription. The cross-fertilization between the literature on institutional logics and that on sociomateriality applied to a case of campus tours allowed us to contribute to the literature in three important ways. First, we allude to the role that materiality plays for actors to demonstrate adherence to particular logics. Our research sheds light on how narratives aimed at producing organizational legitimacy and artifacts are interwoven. The narratives made the institutional logics on which the organization drew (e.g. logic of history, logic of social responsibility, logic of functionality, logic of innovation, logic of the market) visible both through the use of language and by invoking a variety of artifacts and spaces to emphasize and visualize these logics to the audience in attempts to make the organization appear trustworthy, aligned with stakeholders' interests and ultimately legitimate.

Second, in response to recent calls for a deepened inclusion of materiality in the institutional literature (Friedland, 2012; Jones et al 2013), we show how organizations develop sociomaterial practices to manage potential tensions between institutional logics. For example, in the case of Stanford university, showing the church and framing it as a non-religious place and instead emphasizing its ethical messages clearly illustrated the tensions between a religious logic which the university rejected, and the desire to frame themselves along the logic of social responsibility. Third, we show the importance of employing adequate methodological devices and procedures that enable researchers to visualize institutions and theorize around their materiality. In this particular paper, observing campus tours and being attentive to the artifacts and spaces involved, and document in written as well as photographic forms gave visibility to the institutional logics at stake for the organization in question.

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Bringing artifacts within institutional work.

Arese's artefacts and the institutionalization of socially responsible investment in France

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The notion of institutional work has recently been developed to account for the purposive actions whereby actors attempt to create, maintain or disrupt institutions (Lawrence and Suddaby, 2006). It intends to complement the strong accounts of how institutions govern actions developed in institutional studies by accounts of how actors attempt to shape institutions. Examining the means by which actors do institutional work, researchers devoted to a great deal of attention to some specific means such as discourse while other means have been overlooked (Levy and Scully, 2007). In particular, the role of artifacts and their influence within institutionalization process has been repeatedly acknowledged to be a missing dimension of research on institutional work, and more generally of current institutional analysis (e.g. Lawrence and Suddaby, 2006; Pinch, 2008; Zilber, 2008). This is especially problematic as organized activities increasingly rely on the use of artifacts (Knorr-Cettina, 2007).

Acknowledging the problem, an increasing number of authors have recently insist on the need to account for the role of artifacts when studying institutional work (e.g. Gawer and Philipps, 2013; Lawrence and Suddaby, 2006). However, despite such calls for more research to be done on the role of artifacts there is little empirical research about how artifacts are used in institutional work and how they influence institutionalization processes.

The present paper seeks to address those calls and advance the integration of artifacts within research on institutional work by investigating how an artifact developed by an actor doing institutional work impacts the institutionalization of new practices. As such our work combines an interest for artifacts, with an interest for the institutionalization of practices. It provides novel insights to our understanding of the influence of artifacts within the institutionalization process, and contribute to bring materiality into the analysis of institutional work.

More specifically, we draw from an in depth qualitative case study of the artifacts introduced by a non-financial rating agency named ARESE and how they influenced the institutionalization of socially responsible investment (SRI) within the French banks. Arese's action was decisive to structure the activity, so that years 1997 to 2003, when the market really took off are commonly named the "Arese years" (Loiselet, 2003). Central to the action of Arese was the creation of artifacts to articulate their in-house system elaborated to measure corporate social performance and the demands of socially responsible fund managers. We listed three artifacts : rates available on Excel spreadsheet; a sheet with qualitative corporate data and social responsible indexes. We examine how those artifacts facilitate and shaped the institutionalization of SRI among the banks in France ou French financial market? Ou financial market in France? Ce qui permet d'englober d'autres acteurs que les banques?.

We find that those artifacts had four types of effects on the institutionalization of SRI. First they legitimize SRI toward the large financial community. Second they favor the articulation of SRI with the existing routines of fund managers. Third, they limit the involvement of SRI fund managers in the development of the funds. Fourth they constrain the development of SRI funds that align their activities on what the artifacts made possible. Est-ce qu'on fait un rappel de type : so, these artifacts have both an enabling effect and a constraint effect.

In identifying these types of effects our study makes three important contributions. First, we provide some initial insights into the use of artifacts as a mean to do institutional work. Artifacts appear as very specific means in the way they convey the initial institutional project as they influence the routines. The research also points that while artifacts channel the behavior of actors they also permit some interpretive flexibility, which may vary depending on the artifact, and allow practices to vary within specific limits. Second, we provide some insights on the effects of artifacts within the institutionalization process. The research points to the relation between artifacts and higher level 'structures' such as institutional logics, and how this relation can be used for legitimation purposes, as well as how artifacts influence practices through shaping routines and allow actors to limit their involvement as they rely on artifacts. Finally, our work leads to discuss the study of artifacts within the tenets of institutional theory. In particular it points to the importance of the symbolic dimension of artifacts as well as their capacity to shape routines. Furthermore, as institutional theory is initially more preoccupied with symbols and discourse, the present paper offers a framework to integrate artifacts within this approach.

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Track 14 - Law, judicial activities and materiality

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Room: 209

Questioning the circulation of agency in two judicial information infrastructures

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In Italy, investments in ICT have been considered the only way out (and also the “one best way”) to take out the justice system from a never-ending crisis (Brescia, 2004; Contini & Lanzara, 2009; Jacchia, 2000). Online trial – Processo Civile Telematico (PCT) is an example in this respect. It is a traditional top-down government project that started at the beginning of the last decade to introduce a large-scale nation-wide information system to digitally manage, in a comprehensive way, documents and communications of any civil trial proceeding. The PCT was a system envisaged for the first trial level and not for the appeal level. It is in this context that another project took place: the Online Records Office – Cancelleria Telematica (ROO). This regional project has been promoted by the Court of Appeal of Florence and the Tuscany Region with substantially the same objective of the PCT, even though it was designed specifically for the appeal level. Eventually, the ROO evolved to serve the first trial level system as well and has been adopted by the courts of the Tuscany district, except for the Tribunal of Florence.

Even though, according to the PCT project, in 2005 more than 50 (out of 165) courts would have taken advantage of the PCT’s applications, at the end of 2006 only one application (payment order decree) was available and only in one court, the Tribunal of Milan. At the end of 2011, things have changed significantly. Specifically, the payment order application was used in 32 courts; the real estate execution was used in 12 courts; the contributory procedures in 5 courts. The exchange of deeds and documents between parties and judges is limited to 4 courts, and only in the Tribunal of Milan the large part of the proceedings planned by the PCT project were already available. Data related to the ROO is different as the ROO has been progressively deployed to its full capacity. However, online proceedings run by the ROO have no legal validity, and at a certain point it is necessary to switch to paper documents to have the proceedings finalized. As a regional system, the ROO has not adhered to the norms that regulate the PCT online proceedings: the national standard.

In a context such as the judiciary, it is not sufficient that a specific system provides a service like the exchange of documents and data. This process must also determine legal effects (Lanzara, 2013). This means that online proceedings are necessarily built according to the normative standards so that they acquire legal validity and then circulation of agency is supported. Agency is here intended as the capacity of a proceeding to produce effects upon a state of affairs and its circulation represents the possibility “for such capacity to be transmitted across multiple media, national borders, and functional domains (Lanzara, 2013 p. 5). The exchange of documents and information in the business environment is not subject to the same rules. Norms regulating economic transactions tend not to control in detail aspects related to online procedures established between economic actors. A mutual agreement between parties is sufficient to obtain the validity of documents and information exchanged. This is not the case of the public administration environment where is the legislation that provides rules for the establishment of online proceedings.

The literature on information infrastructures (Ciborra, 2000, 2002; Hanseth, Monteiro, & Hatling, 1996) - and both the PCT and ROO can be considered information infrastructures - has elaborated a series of principles to be followed for their construction. Specifically, Hanseth and Lyytinen (2010), studying the evolution of the internet, maintain that the development of these systems is subject to two types of problem: the “bootstrap problem” and the “adaptability problem”. As it will be demonstrated, the ROO project has succeeded to face successfully both of the problems, unlike the PCT. But

according to Aanestad and Jensen (2011), the study of the internet at the basis of Hanseth and Lyytinen design principles does not stress sufficiently the role of involved stakeholders, specifically in the projects like those ones considered in this essay. Therefore, the focus, here, is not only to investigate the “bootstrap problem” and the “adaptability problem” but also to the level of mobilization of the stakeholders required both by the PCT project and the ROO project. Also in the considered case, the ROO succeeded to mobilize and coordinate the stakeholders necessary for its evolution and spread to the courts of the Tuscany Region. Again, the PCT succeeded in this intent only with difficulty and after a long time.

The study of the PCT and ROO development according to the perspective proposed by the literature on information infrastructures considering also the role of involved stakeholders, suggests that the question related to the capacity of online proceedings to acquire legal validity is not considered. Therefore, the intent is to enrich this interpretative framework considering the fact that in specific contexts such as the judiciary, it is not sufficient to build flexible and generative information infrastructures (Zittrain, 2006) limiting stakeholders’ mobilization. The circulation of agency (Lanzara, 2013) needs to be guaranteed. To say it differently, the aim of the present work is to emphasize the necessity to guarantee legal validity to documents and information exchanged due to online proceedings and whether the provision of the circulation of agency eventually requires the reformulation of principles at the basis of information infrastructure evolution.

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Commodifying management knowledge: a dynamic model of conception, appropriation and valuation practices

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In the context of the knowledge economy, management knowledge has become a commodity. Despite the presumed “gap” between theory and practice in management, there is a growth of the management knowledge industry and a multiplication of knowledge products sold on markets (Suddaby & Greenwood, 2001: 934). The production of management knowledge is seen as an organizational field in which actors (managers, consultants, academics, business students...) interact to produce, legitimate, distribute and consume management knowledge (Suddaby & Greenwood, 2001). One of the issues is to understand how management theories are transformed into a product valued by a price and exchanged on a market. The process of commodification of management knowledge is the focus of our paper.

The main objective of this research is to deeply investigate 1) the practices of commodification of management knowledge and 2) their consequences on the ecology of relations between academics and practitioners (i.e. the complex set of interactions and coordination modes that enable knowledge to be exchanged between producers and consumers through markets). Our research questions are: *How* is academic management knowledge transformed into economic goods? *What* are the effects of the commodification process on the ecology of actors involved?

In the literature, commodification is seen as a process of transforming ideas into a product sold on a market place (O’Mahoney et al., 2013). This process is conceived as a linear model, where the steps of codification, abstraction and translation produce knowledge commodities (Suddaby & Greenwood, 2001). These theories do not explain how exchange-value for knowledge are generated. To explain the creation of an exchange-value, the model is complete by O’Mahoney & al., (2013) who add “comparison” and “valuation” as two last steps.

Three important aspects characterize this set of investigations. First, even if the interactive nature of the production of knowledge is recognized, researchers have analyzed the role of specific actors (knowledge commodification by producer, its impact on consumers or the role of intermediaries). Second, the process of commodification is considered as being largely socio-cognitive. Finally, codification, abstraction and translation are seen as knowledge characteristics that allow its diffusion with more or less ease from one setting to another, instead of actions (to codify, to abstract, to translate). Since the process of commodification is widely conceptualized as a socio-cognitive process, the literature provides little insights on the concrete and material practices that enable knowledge to evolve from an idea to a commodity and to travel between communities of actors. Our paper aims at contributing to this literature on management knowledge commodification by taking into account a socio-material perspective.

Our theoretical approach is based on socio-materiality, a perspective developed in organization studies and the sociology of economy. More precisely, we use the core concepts of *assemblage* and *calculability*. The economic sociology analyzes markets as an assemblage of material and discursive elements (Muniesa et al. 2007; Beunza, et al., 2006 Cabantous & Gond, 2011; Callon and Muniesa, 2005). It underlines the central role played by various calculative devices (accounting methods, pricing techniques...) in allowing knowledge to become a commodity and to get a market value.

Based on this perspective, we see commodification as the result of socio-material arrangements and we seek to highlight the ecology in which it is achieved. The ecology is constituted by the various actors intervening on the good and making technical and economic choices but also by a set of actions and material devices involved in the conception of the good, its appropriation and valuation. Practices of conception are concomitant to appropriation and valuation, and evolve in a dynamic way. These various elements (humans, non-humans, practices, ecology) guide data collection and analysis.

We study in detail two projects of commodification of management knowledge in a business school. We use a combination of two data collection methods to understand the commodification practices in the two cases: (1) 21 semi-structured interviews with representatives of all groups of actors involved in the projects; and (2) archival analysis (documents produced at different stages of implementation of the project).

First, whilst the literature on commodification focuses on the role of specific actors, the role of and interactions between heterogeneous actors (humans and non-humans) involved in the commodification process has received less attention. We highlight two different ecologies of socio-material relations with specific practices of conception, appropriation and valuation allowing management knowledge to become a marketed good.

Second, the commodification process is clearly non-linear and the practices of conception, appropriation and valuation simultaneously influence each other. Commodification is the result of a local work of alignment of actors and material devices.

Third, the practice of valuation is inscribed in several metrological chains. We identify economic, academic and pedagogical valuation practices. Management knowledge is a composite object. It exists and circulates in different metrological networks, in which material devices differ.

We observe a constant interaction between the elements of the context of production and those of the market in the process of knowledge transformation. During the process of commodification, we perceive the transformation of knowledge but also of the socio-material ecology. For instance, actors acquire new identities during the process. Teachers become entrepreneur, strategists or prestigious researchers. Consultants gain scientific skills with more robust methods.

We complement research on commodification by revealing the practices underlying the concrete creation of a space of exchange for academic product and by examining the elements participating to the commodification of management knowledge. Our main contribution is to uncover the micro-practices of valuation, conception and appropriation. We describe the complex interactions between social and material elements underlying two projects of commodification. We draw the complete map of the ecology of two projects. These maps lay out the social and material elements of the projects and the relations between them. They represent two specific space of commodification.

The process of commodification has a significant impact on the identity of the actors involved, their activities, their careers, their relationships and institutions. Based on a socio-material perspective, our research shows that the process of commodification of management knowledge can lead to very different ecologies of socio-material relations. These ecologies are composed of different metrological networks composed by specific devices. Related to the literature on calculability, we also show an entanglement between the economic process of valuation and an academic and pedagogical process of valuation.

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(De)construction of pharmaceutical industry reputation through material practices regulation

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In this empirical paper, I am looking at how individuals make reputational judgement of pharmaceutical companies when they prescribe a medicine, and, how the Mediator's scandal in France has changed rules, material practices and the institutional logic.

The literature review explores first the origins of corporate reputation in organization studies. It is defined as « a perceptual representation of a company's past actions and future prospects that describes the firm's overall appeal to all of its key constituents when compared with other leading rivals » (Fombrun, 1996: 67). However, studies on corporate reputation have mainly focused on the organizations efforts to communicate efficiently to an audience their past actions and their capacity to deliver values (e.g. Weigelt & Camerer, 1988; Rao, 1994; Fombrun, 1996; Rindova, Pollock and Hayward, 2006). Recently, scholars have argued that the concept of reputation has been misunderstood by embedding both antecedents and consequences of reputation within the reputation construct itself.

In an effort to understand deeply social interactions with material practices during reputation construction and deconstruction process, I believe that focusing my study in one major institutional field and especially in one practice would help to improve the knowledge of reputation construction and deconstruction process. This research inquiry is based on neo-institutionalism theories (DiMaggio et Powell, 1983; Scott, 1998, 2008; Suchman, 1995, 1998). Scholars claim that cognitive systems and social interaction between actors in the organization environment lead to new collectives' believe (Berger et Luckman, 1967; Goffman, 1973; Suchman, 1995, 1998; Deephouse, 2010).

Based on this reading grid, I use qualitative methods to collect data such as interviews, digital ethnography and archives, and perform a grounded theory analysis to deliver findings (Glaser, 1979). My research design could be qualified as inductive as soon as the findings and theorization guide the definitive theoretical framework. The major case study takes place in the pharmaceutical industry. I am focusing on the practice "prescribe a medicine".

Before 2011 (year of Mediator scandal), the whole process of prescription have been led by the pharmaceutical companies. Pharmaceutical activities include research, development, production, sell, supply, information and training, eventually network platforms, and sponsoring. They enter in relationship with other actors like for example government (both coercive functions, and client), General Practitioners (GPs) (indirect clients) and specialised physicians (researchers, opinion leaders), regulators (coercive functions), or patients (direct clients). They are sharing informations and resources together to make the right decisions when they prescribe a medicine (directly to patients, or indirectly when they give the green light to a medicine to enter the market). To make use of their choices, trust and reputation are efficient strategies to pharmaceutical companies. In fact they would rather manage their links with actors through reputation activities, also qualified as lobbying or/and influence activities to maintain their position in the market. For example, through physical artefacts representatives offer to GPs detailed information about medicines face to face, they deliver samples to them for free, invite them and their peers to the restaurants for lunch or dinner, or provide them free tickets for symposiums. It reveals that practices come through non-physical information artefacts (language, information, rumours, word of mouth), physical information artefacts (packaging, newspapers, rankings), and non-physical information artefact technologies (social media networks,

online press comments). Moreover, they have different status as soon as they have been created by the organization or not (Giddens, 1984, Orlikowski, 2007; Leonardi, 2012).

However, the whole process is controverted since medicines have jeopardized the life of many people. Scandals (Thalidomide, Vioxx, Mediator) make stakeholders completely disagree with the fact that pharmaceutical industry makes money with health. They were quiet few in the 90's. But regarding the new coercive and social rules, this group of opponents is getting bigger and bigger. To opponents, a GP should not have any affiliation with an industrial, he/she should be informed and trained with independent documents or organizations (Prescrire, Formindep), he/she won't receive any representatives or receive a present from them, and he/she would prefer to prescribe few medicines etc. Those new behaviours are natural for young as soon as they have considered this social rules as taken for granted in their practices. In fact, the youngest GPs have been taught to not consider any influence sources in their practice, but rather be more critique about it and be more scientific oriented. They do believe that new technologies such as Twitter, blogs and forums are making them better GP. They have changed their material practices, and have defined a new way to prescribe medicines and a new institutional logic (Friedland & Alford, 1991; Thornton and Occasion, 1999; Jones, Anthony and Boxenbaum, 2012). Institutional logics refers to organizing cognitive frameworks that provide social actors with "rules of the game" (Thornton & Ocasio, 1999) and that operate, often implicitly, as practical guides for action (Rao, Monin, & Durand, 2003). Since 2011, official coercive rules have changed the practice. But a small group of opponent hasn't wait for laws to show what is accepted or rejected in their everyday practices.

In this working paper, I hope to contribute to neo-institutionalism theories by illustrating how material practices are constructing and deconstructing corporate reputation. My expected findings result on typologies that identify inherent information used for reputation construct (physical, non-physical, with or without technologies). It would also figures out the importance of social rules and material practices in corporate reputation construction. Instead of seeing corporate reputation only as a strategic resource (capacity to differ with others); I would rather perceive - like cognitive legitimacy - as a constructive social judgement which is constructed by external stakeholders.

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Technological innovation, organization and work:

An exploration of the Italian context through the lenses of sociomateriality

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Over the years theoretical perspectives and empirical research on technological innovation have developed together with theoretical and empirical studies on organization (Orlikowski, 2000). Moreover, significant changes have led both academics and practitioners to reconsider technology and organization's roles and functions. In response to these changes, scholars started to investigate the implications of technological innovation for the organization (Cook and Brown 1999; Tushman et al. 1997; Ciborra 1996; Orlikowski 1996).

'Innovation' can be defined as the production or adoption, assimilation and exploitation of an idea or behavior that is new for the organization. It can be a new product, a new service, a new process, a new business model, a new technology, or a new administrative practice (Crossan and Apaydin 2010; Hage 1999). With specific reference to 'technological innovation', several authors define it as the development of new products and processes, or of substantial technological improvements in existing products and processes (Becheikh et al. 2006; Galende 2006). Particularly, when the innovation is not exclusively related to products, but refers to processes, it implies changes in organizational structures, in the organization of work, but also variations in techniques, tools and work practices. The latter, in turn, led to changes of the required skills and the professional roles (Blau et al. 1976; Davies et al. 1973; Meissner 1970; Blauner 1964).

Given these premises and regardless of the extent and comprehensiveness of the adopted definition, the importance that technological innovation has for organizations dealing with a constantly evolving environment seems undeniable. Nevertheless and as already noted by some authors (Mansell et al. 2007; Zammuto et al. 2007; Dewett and Jones 2001; Goodman et al. 1990; Huber 1990; Weick 1990; Rousseau 1979), although the process of technological innovation (Garud et al. 2013; Crossan and Apaydin 2010) and its results increasingly permeate the modern organizations, the link between technological innovation, organization and work seems still not sufficiently theorized and empirically analyzed. The need to investigate the connection between technological innovation, organization and work is also emphasized by some recent literature reviews (Orlikowski and Scott 2008; Zammuto et al. 2007). The outcome of these reviews shows that, after a great deal of attention devoted to technology in organization studies in the 50s of the last century, there has been a decline in the interest to this topic. Orlikowski and Scott (2008), for instance, show that from January 1997 to December 2006 more than 95% of the articles published by the so called top management journals does not take into account the role of technology in the organizational life. This lack of attention turns out to be problematic especially if one considers that the use of new technologies: a) changes both the structural and social aspects within organizations; b) mediates and influences the activities of firms, industries and economies (Zammuto et al. 2007).

This paper lies within a wider research aimed at understanding to what extent and how the technological innovation affects organizations, changing their structures, roles, decision-making processes, systems and logics of human resources management. Particularly, this paper aims to understand “how” technology, organization and work interact and change in organizations facing a process of technological innovation. For answering to these questions, a case study analysis is performed, taking into account a set of organizations - located in Italy and operating in different industries (manufacturing and services). In particular, the sociomateriality perspective is used as lens of analysis (Orlikowski 2007; Orlikowski and Scott 2008, Pickering 1993). This approach allows to see the innovation process as an ongoing dialectic of resistance and accommodation between material and human aspects. With its roots in a research field dealing with the mutual interdependence between social and technical elements (see e.g., Barley 1988; Orlikowski 1992; Monteiro and Hanseth 1995; Rose et al. 2005), the sociomateriality perspective underlines the extent to which social practices are mangled with technology materiality. Particularly, it views materiality as intrinsic to everyday practice and posits that organizations and technology exist only through “their temporally emergent constitutive entanglement” (Orlikowski and Scott 2008).

In order to explore the socio-material dynamics within organizations dealing with a process of technological innovation, through a case-study methodology, we relied on multiple sources of evidence and multiple data collection techniques. First, we used archival data sources, such as companies documents; second, we gathered the ‘life-stories’ and experiences of employees inside the organizations through semi-structured interviews. Moreover, we directly observed employees at work. The interviews were recorded and transcribed verbatim. Data analysis was articulated in two phases: first of all, we made a matrix of categories – recognized through the data analysis - and placed the evidences – extracts from the life-stories - within these categories; secondly we put the information into chronological order, focusing the attention on what the actors did before and after the implementation of the technological innovation. Actually, the life-stories interviews revealed how technologies, organization and work interacted and changed over time. This research tries to address the gap represented by a lack of studies linking technological innovation, organization and work and empirically validates two key concepts of the sociomateriality perspective. In fact, it confirms as the notion of ‘sociomaterial assemblages’ (Orlikowski and Scott 2008) emphasizes the inseparability between organization and technology. Furthermore, it also underlines the concept of ‘performativity’ (Barad 2003), namely as the idea that technology is not ready-made, but shaped by humans situated in a context characterized by specific features, relations, values and artifacts.

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Track 15 - Practice, space and materiality

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Room: 118

Affordances and constraints of rules on material agency of a collaborative IS

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The emergence of collaborative information systems in organizations represents a new wave of change in IT usage (Aaron et al, 2010.). Indeed, individuals interacting with these information systems develop new usages and appropriation behaviors. The existence or the absence of rules to structure and control these practices is an important factor in this process of adaptation and appropriation. As a matter of fact, rules (or non-existent rules) can be a constraint or an opportunity, depending on how individuals perceive them. Although new technologies tend to be more flexible, customizable and adaptable to user needs (Leonardi, 2011), individuals can still be constrained in how they use a system. In fact, IS usage is generally subject to rules, which can be explicit or tacit, external or internal, and created by the organization or by users. These rules, when accepted, constitute a framework within which individuals operate. But, users can also seek to extend this framework, to transform it or to overcome it.

Many studies have examined the factors affecting IT usage and IT adoption (e.g. Davis 1989, Agarwal and Karahanna 2000, Venkatesh 2000). However, IS research has paid scant attention to how rules influence work practices, especially sociomaterial practices related to IT usage. As Orlikowski and Scott (2008, p. 456 ; 2013, p. 79) point out, « *sociomateriality is in its infancy* » and « *in the early stage of development* », therefore offering new and various approaches to re-examine the established dichotomy between the social and the material (Orlikowski & Scott, 2013, p. 77).

This research aims at furthering our understanding of the role played by the existence or the absence of rules on sociomaterial practices. More precisely, we will observe how official rules imposed by organizations and tacit rules established by users change sociomaterial practices related to collaborative technologies. To investigate this research issue, we anchor our analysis on Leonardi's Affordances Theory (2011, 2012, 2013).

Affordances theory was initially developed by Gibson (1977), who based his analysis of perception on the relationship between a living individual (whether this individual is a human or an animal) and her surrounding environment. He particularly focuses on individuals' adaptation to their environment, which is structured by the interactions that can occur between these two elements. Paul Leonardi applies this ecological theory to sociomateriality, and doing so, offers to researchers an original approach to study the relationship between individuals and collaborative technologies. Sociomaterial practices emerge where human and material agencies imbricate (Orlikowski, 2010 ; Leonardi, 2012, 2013). Those imbricated agencies mutually shape each other to set up a structure within which individuals and technologies evolve.

The imbrication metaphor recognizes human and material agencies as two distinct phenomena which are « *fundamentally interdependent* » (Leonardi, 2011). Leonardi (2012, p. 37) notes that a material agency « *is a construction that depends, in part, on materiality but also depends on one's perceptions of whether materiality affords her the ability to achieve her goals or places a constraint upon her* ». The chosen term of « imbrication » acknowledges the specificities of both human and material agencies. As Sassen (2006) states, « *they work on each other but they do not produce hybridity. Each maintains its distinct irreducible character.* » (cited in Leonardi, 2011, p. 151).

The construction of this structure is therefore based in part on material agency, and is defined and shaped by the materiality of the artifact and the constraints and opportunities of the environment in which it is built. The rules enacted are both related to the materiality of the artefact (what it allows or does not allow to do) and to the environment (what the organization allows to do). Furthermore, this structure is based on the human agency, and in our case on what individuals consider acceptable or feasible.

We have selected this conceptual framework, based on sociomateriality and affordances, to analyze the data gathered in a French telecommunication company. This setting has offered us the opportunity to conduct a case study where different types of data have been collected (i.e. internal documents, interviews, statistics). Our principal methodology is qualitative since we decided to conduct semi-structured interviews with users and non-users of a collaborative platform implemented in the company. Four years ago, a corporate social network was deployed in that company in order to "create more links between employees" as explained by the chief project manager. This collaborative tool provides online spaces where people can create online communities in order to share information and documents and to collaborate.

The implementation of the corporate social network was done simultaneously with the revision of the Internet usage policy. This charter reminds users of their rights and obligations, when they express themselves on internal and external networks. The company also has a charter of best practices online. These two documents are relatively short, and do not specifically refer to the collaborative platform.

Every user is supposed to read these policies when first registering on the company intranet. In fact, it appears that very few users read or knew about these policies. Some users assume that these policies exist, but they are not sure. The first dozens of interviews conducted on the field suggest that the existence of these policies -with rules and guidance issued by the company - do not impact sociomaterial practices. However, the tacit rules seem to play an important role. Indeed, the users that were interviewed base their practices on a personal ethics rather than on "official" rules. They explain that they know personally what they are allowed to do and what is forbidden. However, this understanding of what is acceptable or not differs between individuals. For instance, users' perception of what should be shared or published on the collaborative system is very different. Users who are the most active on the platform, almost exclusively use the social network to work, and sometimes share elements that are more personal than professional. Other active users consider these practices as not appropriate on a corporate social network: they perceive the collaborative system as being the company's resource. One user explained that some elements of her personal life were published without her being notified. In their practices, users seem to attach more importance to their perception of what feasible or acceptable, rather than on a clear, defined and official policy.

To complete our study, we performed a comparison of the two IT policies of our research setting with external policies from other companies, namely the *Social Media Guideline* from Intel and *Internet Postings Policy* at Cisco. Results of this analysis will be presented at the workshop. Most policies that we found online and analyzed are brief and rather restrictive: they evoke certain legal obligations for users without imposing a specific code of conduct. They seem to be written more to support and help users, than to restrict their usage use of information systems. This qualitative study is ongoing and should be finished in April 2014. The next interviews should allow investigating further the role and impact of tacit rules on sociomaterial practices. This research aims to contribute to clarify the role of rules in the constitution of sociomaterial practices. In addition, this research will offer managerial

contribution to companies by providing a thorough understanding of collaborative system usage and user appropriation of collaborative technologies

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Agency, practices of leadership, and the roles of computational objects

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Research Topic

Globalised and networked organisations are characterised by interactions between people and technology that are foundational to their existence and outputs. Here, this study addresses a critical gap: the relationship between computational objects (COs) and leadership practice (LP) in organisations (Avolio, Walumbwa and Weber 2009; Zammuto et al. 2007). This research explores this relationship in terms of the presence and deployment of COs and their projections, and the enacted practices of those in leadership positions as well as those who are not.

The study also addresses a gap at the intersection of human-computer interaction (HCI), information systems (IS), and leadership, evidenced by the particular challenges and opportunities presented to organizational leadership and their responses to these (Grint 2010). By examining the interplay between LPs and COs in present-day organizations, new understandings will emerge.

To achieve this aim, I have undertaken fieldwork that relies primarily on shadowing and observation (Czarniawska 2007; Nicolini 2012) and is also supported by interviews (Alvesson 2011; Charmaz 2003), as well as a variety of virtual methods (Boellstorff et al. 2012). Through these methodologies, the research provides grounded empirical data from which analysis of relations between LPs and COs can be undertaken, enabling possibilities for ‘breaking new conceptual ground, resolving existing theoretical puzzles, envisioning organizing processes, and revitalizing old concepts.’ (Barley and Kunda 2001, p. 76)

Contribution to the Workshop

The research relates closely to a number of the workshop topics through an exploration of material LPs and their relationship to COs. For example, on the topic of new vocabularies to overcome the social-material dichotomy, the research draws on the work of Karen Barad, whose agential realism includes not only novel terminology such as intra-action, agential cuts and apparatuses of bodily production, but more importantly, a relational ontology described by Barad as one between specific material (re)configurings of the world through which boundaries, properties, and meanings are differentially enacted (i.e., discursive practices, in my posthumanist sense) and specific material phenomena (i.e., differentiating patterns of mattering). This causal relationship between the apparatuses of bodily production and the phenomena produced is one of agential intra-action. (Barad 2007, p. 139)

The implication of Barad’s ontology is a reconception of Newtonian models of cause and effect, impacting notions of agency and the emergence of phenomena. Kaut and Jensen describe her perspective as viewing matter as a substance in its becoming, where matter refers to the materiality of phenomena as the primary ontological units, not to a fixed property of abstract independently existing objects . . . [where] performativity is understood as the iterative intra-activity within a phenomenon. (Kautz and Jensen 2012, pp. 91-92)

Thus, Barad’s ontology may be a useful lens not only through which to unpack the relations that are the focal point of my research between LPs and COs while also serving as a means to address some of

the issues raised in recent debates regarding the rise of ‘sociomateriality’ in academic research (c.f. Kautz and Jensen 2013; Leonardi 2013; Mutch 2013; Scott and Orlikowski 2013).

Acronyms

CO computational object

HCI human-computer interaction

IS information systems

LP leadership practice

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Projecting space: how organizational members project themselves in an upcoming space?

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Topics addressed:

- Rules and their relationships with material artifacts in organizations, and more generally, organizational space and time;
- Performativity and normativity in organizations;
- The entanglements or imbrication between the material and social dimensions of organizational practices;
- The affordance of materiality and space in organizations;

Introduction

Space reconfiguration and architecture is an important element for organizations (Berg & Kreiner, 1992). Thus, a new/building office inauguration is always an important moment of organizational life. It implies great changes and provide a great opportunity to scan organizational culture as long as space translates an organizational *habitus* (Gagliardi, 1992)⁸. Indeed, many studies explore space appropriation, or culture redefinition through a new building or working space (Hofbauer, 2000), but to our knowledge no one got interested into whatever happens before moving. As a matter a fact, in most of the cases, a relocation is something cautiously prepared for organization members to anticipate the upcoming move. So the questions that we will address here are:

-How can a future relocation shape present organizational life?

-How organization members project themselves in an upcoming space?

An innovative view on organizational space

Adopting a Lefebvre perspective (1974) on space analyze, so considering that space is before everything a social construction, This approach can be applied to organization sciences (Tyler & Spicer, 2007). Hence, we will consider space as social construction, which could be analyzed at least on three level: space as distance, space as a materialization of power relation and space as a lived experience. Even if those views opens many perspectives for organizational research, we will adopt an innovative approach in order to understand how can an organization project itself in a new space.

Indeed, any company removal to a new environment is always something important and risky, which implies a strong evolution or change (Davis, Leach & Clegg, 2010). But the question that remains is what vision have the actors of their upcoming space and how could this common projection shape present practices.

Following Davis (1984) and Dale's perspectives (2005) on materiality, our position will be that buildings have an organizational control influence. But we can also say that buildings and materiality are an expression of the organizational culture (Gagliardi, 1992, Strati, 1992), which could be analyzed on an aesthetic way. So, in our approach, a new building can be considered as a way to

⁸ This methodology actually comes from Jean-Pierre vernant's study of ancient Greece (1969) exploring myths and culture through the city's spacial organization (Gagliardi, 1992, page 28)

reflect organizational culture change (van Marrewijk, 2009) and has a direct influence on organizational efficiency (Oldham & Brass, 1979). So, space conception by organizational members is a good way to analyze organizational culture.

Hence, space planning still is a fundamental part of any company move from one place to another (Steiner, 2005). Indeed, office interior design is a crucial point (Duffy, 2000), which impacts personal identity, creativity and mood (Elsbach & Bechky, 2007). So the question that we address here is how can organization members project themselves into an upcoming space and how this dynamic shapes present organizational life?

A case study

The fieldwork had been led as a participative observation, following an inductive methodology (Eisenhardt, 1989). This approach is justified by the fact that the researcher had to cope with several different kinds of sources. The enquiry is relative to a two-day workshop at the “pedagogy” service of a big international energy company. Those two days, initially designed as an “innovation design workshop” led to an unexpected office planning. Participants started to imagine a “model room” where they could actually work as shown in the picture below.



Fieldwork picture 1: A new office model design by the actors

From this initiative, they projected themselves in the upcoming office where they are to move in a few months. As an example, we clearly see that space modeling played a great role for actors' projection. The space planning project had immediately been approved and is now tested in order to be built as soon as the new building is ready.

The inquiry had been led on three times:

-first, the researcher attempted the two organizing meetings, which had been recorded and coded in order to define the initial dynamics of the event.

-Second, The researcher attempt to the event itself in a participative observation dynamic.

-Third, getting participants feedbacks through interviews and observation of the “test space”.

The core of the analysis is the event as initially thought and how the space analysis popped out as one of the most important organizational dynamics.

Prospective conclusions and debates

Considering the research led so far, we observe that as soon as organization members already know that they are moving, the upcoming space shapes present practices. Hence, we can think of a two ways approach:

-On the one hand, our fieldwork can be considered as a path to a corporate culture analysis by exploring a common view on an upcoming space

-On the other hand, the upcoming space shapes everyday activities by providing a concrete future perspective.

The construction and vision of this future space turns out to be an organizational issue scattered among organizational actors. Thus, this common perspective can be considered as a powerful analytical leverage to understand an organization culture. So, this projected space opens many theoretical possibilities for organizational space analysis as soon as it implies a common view embodiment.

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Trust Networks for Knowledge Management

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Knowledge creation processes include the creation of the specific time and space where interactions and interpersonal relationships, from which knowledge cannot be separated, take place (Nonaka, Konno & Toyama, 2001).

From this point of view the dichotomy between social and material can be easily overcome: studying knowledge sharing in organization through the analysis of the networks involved allow a new perspective on materiality of knowledge and on knowledge management practices.

In our work we focus on a particular type of networks that can be considered as crucial for the management of any kind of organizational knowledge: the aim of the study is to provide an insight into several aspects of trust networks, approaching them from different perspectives and analysing their characteristics by using both cognitive models and social networks analysis tools.

In knowledge management, usually, knowledge is considered as the most important organization's resource and as a strategy whose objective is to collect, manage and put knowledge in action, so that it circulates and develops continuously. Managing and diffusing an enterprise's knowledge capital determines the innovation of products, processes, organisational models and answers to the customers improving its competitive position. This kind of knowledge concerns creativity, problem solving, disposition to dialogue, uncertainty management and sensitiveness towards cultural context in which the organisation operates. Nonaka e Takeuchi affirm that knowledge creation core is the conversion of tacit knowledge in explicit one and vice versa. The knowledge distinction in tacit and explicit dates back to Polanyi (1967) who defined tacit knowledge as personal, peculiar of a context and therefore hard to be codified comparing it to explicit knowledge that is only the ice-berg peak of the whole knowledge corpus and can be on the contrary codified and transferred through a formal and systematised language.

In "high care" organisations members tend to bestow knowledge: they form a social network supporting the individual who is not afraid to ask help in performing his/her task because all members share "care" value and are accessible at every level. Members are indulgent towards errors (*idem*), because sharing the value of learning and developing new knowledge, important not for power gaining but for the satisfaction of a common goal: problem solving and task performing (Castelfranchi, 1998). In this view the relevance of trust in knowledge creation process is evident, even though not analytically explicated. In fact every such step of this 'knowledge conversion' requires trust. Sharing knowledge is a specific action, due either to personal purposes (for personal advantages) or to shared objectives and values (cooperation for common goals), or to role duties, or finally to habits and routines. In all these different motivational sets some form of either implicit confidence (in routines and habits, or in role playing) or of explicit trust evaluations (of the others and of the context) is always needed.

The relationship between trust and knowledge sharing is circular: in order to trust y, x must either have information about y, helping her to evaluate y's trustworthiness or having knowledge in common with him that encourages the establishment of a trust relationship so as values sharing; on the other hand, in order to share knowledge, it is necessary to have a trust relation or atmosphere. If we consider trust relationships at their macro-level we must deal with their structural relational features, looking at them as "channels" for knowledge circulation (Busch et al., 2001). In fact, trust is not only a mental

disposition founding decisions of reliance, delegation, collaboration: it also is an action and an established (or attempted) social relation.

Trust relationships around an individual within a given community connecting her with other members creates a sort of trust-sociogram, that we call trust network. Let us characterise the main features and properties of such a network. First of all, links in the net can be unilateral and asymmetric, or bilateral. They can be more or less strong/weak depending on the strength, intensity of trust. Links can also be more or less permanent, stable, since this sociogram can either characterise a temporarily social situation: an agent can rely upon somebody or choosing somebody for cooperation, or it can characterise a structure of acquaintance, of stable social relations.

A general characterization of trust networks allows an expansion of the theory of links, by adopting a less local and unilateral view. Links can be (1) unilateral (x trusts y but y does not trust x), (2) bi-directional (x trusts y and y trusts x) or (3) unbalanced (a link is unbalanced when the trust of x for y is perceived as quite broader or stronger than y's trust in x; on the contrary, it is balanced when their trust is of similar force). Bi-directional trust relationships can be distinguished in various kinds: (i) bilateral: x trusts y and y trusts x in a completely independent way (each of them might even ignore if and how the other trusts her); (ii) reciprocal: x trusts y also because x believes that y trusts x; (iii) mutual: x trusts y also because x believes that y trusts x, and vice versa, and both of them assume this (Castelfranchi and Falcone, 2010).

Our claim is that trust network can be artefacts able to give us a map of the important "channels" along which private or implicit knowledge becomes common and explicit, i.e. the channels along which knowledge is shared and circulates. The larger the channel the bigger the flux of knowledge and its rapidity. Furthermore, the more channels are bilateral and balanced the more uniformly shared knowledge is. This is also a measure of a trust atmosphere: a poor net (few links), subtle channels, unilateral attitudes proportionally reduces knowledge passing and accepting, thus the building of a collective capital (Marzo and Castelfranchi, 2013). The analyses we plan to conduct aim to test several hypotheses on both cognitive and structural aspects of trust networks for knowledge sharing, with the purpose not only of providing theoretical advances but also of developing practical advices to manage such networks and to promote trust atmosphere in organizations.

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Practising organizational spaces

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Abstract:

Scholars now acknowledge space as a central element of social and organizational life that cannot be reduced to an abstract 3-dimensional frame. This article aims at developing this perspective by analysing how organizational spaces are shaped by multiple daily practices. Indeed, building on Lefebvre and de Certeau's analysis, space can be understood as being fundamentally practised through an on-going process of social production. The framework offered by practice-based studies will allow exploring further the underlying dynamics of these practices of organizational spaces. An ethnographic study of a psychiatric department in a teaching hospital will offer an enriching empirical perspective leading to discuss the implications of this practice approach to space in terms of embezzlements, control and power plays.

Keywords: Space, practice, practicing, practising, locus, Lefebvre, de Certeau

For a few years now, there has been a call for scholars to acknowledge that space is a central element of organizations that cannot be reduced to simple rational areas of production (Sundeeep 1997; Kornberger and Clegg 2004). Therefore, more and more studies are focused on the multiple, subtle dynamics of organizational spaces as a context for work and communication (Jones, McLean and Quattrone, 2004; Halford and Leonard 2006; Fayard and Weeks 2007). In the first section, following the idea that space is a social production (Lefebvre 1974), our article adopts a practice perspective inherited from de Certeau (1990). In this approach, organizational spaces are considered to be practised by actors whose “*thousands ways of poaching*” constitute the normal process of interaction with their environment (de Certeau 1990: XXXVI). Therefore, embezzlements and appropriation will not be seen as deviant or counterproductive but as the inherent dynamics constitutive of organizational spaces.

Acknowledging the process-oriented perspective in organization studies, the second section builds on Antonacopoulou (2008) idea of the “*practise of practice*” and focuses on how de Certeau (1990) uses this central concept to study interactions between agency and structure. Therefore, this article aims at answering a simple, yet subtle, question: what are the dynamics underlying the multiple practices of organizational spaces? Two main forces will be considered as essential to this matter of space: *practicing* and *practising*. On one hand, practices are seen as recurring ways of doing that have been stabilized in the organization. They emerge as procedures and routines through the process of *practicing* – a term purposefully built on the noun *practice* in order to emphasize the ideas of sedimentation and reification. On the other hand, practitioners develop during their experience, an ability to improvise, to cope with the uncertainty of every situation. In doing so, they become able to operate what de Levi-Strauss (1962) calls *bricolage*: the capacity to do with whatever is at hand. This process is called *practising*, using the verb *to practise* in order to state the on-going process of production involved in this “*art of utilization*” (de Certeau, 1990). These two dynamics, *practicing* and *practising*, can be seen as putting every practice in constant motion between a fixed procedure and an improvisation. Consequently, practices of organizational spaces follow the same logic through formal, informal and even untold dynamics.

In order to explore, and enrich, this tension between *practicing* and *practising* organizational spaces, it is confronted in the third section to an ethnographic field study of a psychiatric department. Spending six months immersed in a French public hospital, studying primarily diagnostic practices, provides a fine-grained understanding of the multiple encounters of practitioners inside and around the department. In doing so, it was noted that, even though most areas were meticulously defined, there always were agreements and arguments around them. Obviously, some areas are dedicated for specific professional expertise (medical, psychological, nurse-related, administrative, etc.). However, in certain times, a break room can become an office in order to see a patient and a hallway can host the following debriefing. Therefore, data will be synthesized through the *practicing/practising* dynamic in practices of organizational space. This will lead to discuss the tensions that exist in these stable but always re-explored areas and how hierarchical and regulatory elements interfere with practical, expert and professional arrangements. Organizations are spaces of work, spaces that offer stages for hierarchical power to be exercised, but also for resistances and subversions to exist. This will allow to establish connections between the practice and the power perspectives, and to discuss the question of organizational control.

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Track 16 - Sociomateriality... so what?

Stefan Haefliger (*Cass Business School, London*)

Room: 210

The expansion of community banks in Brazil and what we have learnt from a sociomaterial lens

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Over the last two decades, microfinance has been recognized as a social inclusion mechanism and a poverty-alleviating development strategy (Easterly, 2006). What started as small-scale, isolated, microlending experiments rapidly became a fast-growing, global practice. Following the success of microcredit organizations such as the *Grameen Bank* in Bangladesh, *Bank Rakyat* in Indonesia, and *Banco Solidario* in Bolivia, wealthy nations and international agencies have been providing billions of dollars to support microfinance projects (Woller and Woodworth, 2001; Lavoie and Pozzebon, 2011). They eventually started to finance projects replicating these successful models and their respective methodologies and tools in order to expand microcredit “best practices” around the world (Diniz et al., 2013). However, these initiatives did not always provide good results.

In fact, the host countries often needed to significantly adapt the original methodology so it could be implemented in a sustainable way in their own context, or, in other cases, the replication and implementation of the foreign model simply could not be achieved (Lavoie et al., 2011). A number of scholars undertook to investigate the question of microcredit methodology replication but, in spite of these initiatives, the theme remains poorly understood. In this paper, we attempt to shed some light on conditions enhancing social inclusion by investigating the expansion of local community banks in Brazil based on one specific organizing model – *Banco Palmas*.

The model called *Banco Palmas* has been spreading throughout the country since 2005, when the Brazilian government decided to provide resources for the creation and consolidation of new community banks (Jayo et al., 2009). Created in 1998, Banco Palmas is a community bank whose initial mission was to offer microcredit loans to residents of the neighborhood.

Working under the principles of solidarity finance and dealing with the territory to which they belong, community banks such as Banco Palmas have as their main goal the building of local networks of a solidarity economy through the articulation of local producers and consumers. This association of local producers and consumers strengthening local economies creates networks of “*prosumers*”. Economic resources for those networks come from microcredit lines for production and local consumption and alternative instruments, such as social currencies. As part of Banco Palmas’ methodology, three instruments were designed to be used in combination with the microcredit issued by the bank. These instruments involve a social currency, a map of local production and consumption, and intensive professional training to trigger small business initiatives.

In 2006, Instituto Palmas becomes partner of Banco do Brasil, the biggest commercial bank in the country, which starts to introduce the correspondent banking model into the Banco Palmas project, empowering the growth of their microcredit operations. Developed to offer a cheap alternative for banking outreach, regulation for correspondent banking in Brazil had been evolving since the year 2000. The rapid growth in the number of correspondent banking outlets, that surpassed five times the number of regular branch banks in 2010, helped Brazilian Federal Government to expand the delivery of social benefits and at the same time to allow commercial banks to operate in locations with poor infrastructure (Diniz, 2013).

The new partnership not only brought Banco Palmas enhanced new ICT technology and an improved microcredit operational model, but also permitted Banco Palmas' credit portfolio to be expanded, offering bank branch's similar services to a bankless community, providing services such as open and managing banking accounts and payment of bills. Prior to this partnership, the scale of the microfinance project at Conjunto Palmeiras, was constrained by Banco Palmas limited access to funds and technology.

Giving the positive results that Banco Palmas methodology started to show, other community banks began to be created in poor regions of the Northeast of Brazil. Following this trend, in 2010 and 2011, governmental resources were invested, allowing the creation of the first national policy for solidarity finance in Brazil. These efforts contributed to expanding the number of community banks to other regions. In November 2013, the Brazilian network of community banks listed 103 community banks taking part in the network (Instituto Palmas, 2013).

Our paper revisits the emergence of Banco Palmas and the expansion of community banks across the Brazilian territory from a sociomaterial lens. Our lens is influenced by three theoretical streams: social constructivism, socio-technical approaches and critical thinking. By analyzing our empirical material from a lens that expresses the inseparability of different levels of analysis – micro and macro – and the inseparability of the material and social aspects of a phenomenon, we show how the interplay among material artifacts – ATM terminals, social currencies and prosumers' maps – with evolving roles, rules and partnerships helps to partially explain and understand the expansion of the Banco Palmas model.

Our contribution to the workshop is to showcase an impressive Brazilian social innovation as an empirical example in discussing the possibilities of a sociomaterial lens for improving our ability to understand such social innovations and, even more, to be able to act in the field in order to help their “re-application”.

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Unfolding practices with unfolding objects: standardization work in global branding

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Standardization represents a key concern in global branding. Global brands emerge and thrive through the development and control of common rules that assure consistency, integrity and coherence (Dimofte et al. 2010; Douglas et al. 2001; Ozsomer and Altaras 2008). Uniform brand image across borders underlies a strong identity, which in turn enables a brand to stand out in the crowded global market place (Cayla and Penaloza, 2012; Whitelock and Fastoso 2007). Convergence of consumer tastes all over the world and the growing emphasis on low-cost through economies of scale means that standardization is also an economic imperative (Levitt, 1983; Backhaus & van Doorn, 2007). For over half a century now, marketers have examined the antecedents and outcomes of standardization (Katsikeas et al. 2006; Ozsomer 2012).

Although significant efforts have focused on the question how the standardization of global branding works, very little research concerns standardization work i.e. how actors, objects and practices come together in the development and control of standards (see Chabowski et al. 2013). Whilst branding offers detailed advice on the normative notions such as the need to deliver a consistent and integrated brand (Douglas et al. 2001), practical understanding how these aspirations come about is largely missing (Fastoso and Whitelock 2012). Marketing practices are rarely examined (Araujo et al. 2008; Simakova 2010) and all too frequent discrepancies between aspirations and international branding realities remain unexplained or dismissed as “implementation issues” (Fastoso and Whitelock 2012). By offering values-free normative guidelines, absent from marketing discussions is the contested nature of standardization practice. Yet, the development and control of standards involves power relations, negotiation and conflicts between competing visions and outcomes (Lyytinen and King 2006; Nickerson and Muehlen 2006). The complex standardization practice revolves around objects (D'Adderio 2011). Surprisingly, tools and are technologies of standardization are also absent from marketing literature. Although digital objects, such as websites, social media or sales management systems are omnipresent and enthusiastically adopted by international marketers (Morgan-Thomas and Bridgewater, 2004), there seems a paucity of studies that consider the confluence of digital objects and practices, including standardization practice.

The current study focuses on the entanglement of global branding and digital artifacts. The project explores how digital objects are co-instituted and co-implicated in the generation, stabilization and control of international marketing practice. Our specific focus is on brand standards; we examine how digital affordances mesh with practices to enable and constrain standardization work.

The philosophical stance taken here is that of sociomateriality, an approach that does not privilege neither the deterministic nor the constructivist view of digital objects (Orlikowski 2007; Orlikowski and Scott 2008). The theory of practice specifically Schatzki's (2002) notion of practice in sites, provides the theoretical foundation for this study. Using practice lens to study digital objects means focusing on marketing practitioners and their activities with close examination of everyday marketing rituals and routines. Practices, that is doings and sayings that are underpinned by practical understandings, rules and teleoaffective structures, are interwoven with multiple digital objects, which are characterised by incompleteness (Garud et al. 2008; Kallinikos et al. 2013). Rather than examine a particular technology, this study takes an affordance ecologies stance (Lindberg and Lyytinen 2012)

and explores how configurations of affordances are enacted through multiple digital objects within practice.

The setting for this examination is a large higher education institution in the UK. Higher education provides an ideal site of global branding practice. The combined effects of the large scale of the organization (6200 employees), its heterogeneity and service nature means that the development and maintenance of brand standards represent an ongoing challenge. The sector has been subject to significant resource cuts and internationalization is a key strategic imperative. The higher-education marketplace is both global and highly fragmented with multiple participants competing for the attention of young consumers. Strong brands as well as digital artifacts, such as websites and social media, represent important facets of the competitive struggles.

Following other studies on situated practice (Prasad 1993), the project employs multi-method approach to data collection. Semi-structured interviews are complemented with the analysis of documents (meetings minutes, jobs descriptions, formal rules and procedures, online materials) and participant observation (shadowing). Data collection occurs at multiple levels of analysis: individual, team and organization. Data analysis follows established procedures (Glaser and Strauss 2011) with continual, iterative cycling between pre-existing theory, the data and emerging theory until the point of saturation.

This study hopes to contribute to our understanding of technology and organization in several important ways. The examination reveals self-referential and self-perpetuating nature of objects and practice. A key contribution here concerns effects of digital objects on practice's teleoaffective structures. In addition to shaping the more observable rules and activities, the development of objects affects macro-level shared perceptions of desirable ends, oughtness, acceptability, that is deontic aspects of practice (von Wright, 1951). These shared understandings then influence localized enactment of practice. The macro-level phenomena exert an overarching influence over the technology choices and implementation processes.

The study offers an account of unfolding practice with unfolding objects where both the practice and the objects are always unfinished and ever morphing, producing continually adjusting interactions. Organization develops as heterogeneous assemblage of digital affordances and practices (DeLanda 2006). The fluid nature of practice with digital objects calls for a major shift in conceptualizing and managing standards (Kallinikos et al. 2013).

The study's straddling over multiple levels of analysis shows how the unfolding nature of practices and objects is subject to power struggles and how standards emerge out of competing interests (Leonardi and Barley 2010). A key finding here is that normative guidelines and best practice approaches are frequently violated by powerful actors elsewhere, whose interests and attention do not concern the specifics of standardization work. Failure of standardization is thus a facet of power struggle and not an implementation problem, as suggested in international marketing literature (Fastoso and Whitelock 2012).

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Seeking legitimacy with ‘best practices’ for ICT in higher education facilities projects

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Information and communication technologies have had an ongoing impact on the material conditions of higher education at all levels for many years. Not only is this process documented by scholarly work (Dutton & Loader 2002; Dutton et al. 2004; Temple 2008; Jamieson et al. 2000), but its results are made visible by the increasing presence of ICT artifacts in the form of projectors, screens, computers, Wi-Fi routers, Ethernet access points, power outlets and all the mobile computing carried by students and teaching staff alike. The emerging pedagogical practices based on new technologies have pushed higher educational institutions to adapt their traditional spaces of learning such as classrooms, lecture halls and shared campus areas. New building projects on university campuses incorporate a strong consideration for ICT-supported learning activities. This is an important point given that billions of US Dollars are spent annually on building or renovation projects by higher education institutions around the globe (universitybusiness.com). The stakes for getting it ‘right’ are very high from an industry perspective.

Although localized institutional constraints are fundamental to the shaping of new physical spaces for learning in higher education, external competitive forces drive many - if not most - renovation or building projects. Amongst these forces are the evolving and ever-increasing demands from staff, students and academics for advanced information and communication equipped facilities. Some of these demands can be directly translated into objectives for facilities projects, however most of the time, higher education institutions turn to what they consider to be the ‘best practices’ in their industry for guidance on how to produce new higher educational spaces incorporating new technologies. This process of seeking to align with industry ‘best practices’ can be best explained by the quest for legitimacy. Eventually, it can be from these industry ‘best practices’ which emerge industry standards. These standards are not only institutionalized, but also formalized with the creation of organizations and bodies tasked with the maintenance, documentation and communication of these industry standards (Besen & Farrell 1994).

The objective of this contribution to the workshop will be to examine how a higher educational institution has sought legitimacy by following industry ‘best practices’ for ICT in a facilities renovation project. Indications of how this process can lead to the establishment of industry standards will be explored as well.

This presently proposed contribution to this workshop will be developed within the framework of an ongoing thesis project on the relationship between higher educational space and information and communication technologies. This thesis project is a multiple case study of three university environments dispensing management education. Each of these institutions has recently undertaken building or renovation projects that have taken into consideration requirements for ICT-based learning. The results of initial fieldwork on the first of these cases – Université Paris-Dauphine will be the basis of the proposed contribution. This university has already renovated four of its language classrooms with a strong emphasis on technology. It is currently putting together plans for a 100 million euro renovation program beginning in 2015. These plans are already taking into account ‘best practices’ on ICT-supported learning from elsewhere and have been touted as a manner to ‘improve the institution’s image’ (from an interview with the Facilities Manager).

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Diffraction and Imbrication Lenses for Understanding Sociomaterial Constitutive Entanglement: E-service of Land Records in Bangladesh

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Understanding entanglement between the social and the material is a central metaphor of sociomateriality, a recent theoretical and philosophical strand in study technology and organization (Jones, 2013). Study of technology and organization as well as IT for development has evolved into two distinct and ever contrast streams: technological determination and social constructivism. The former seeks that technology shapes the organization and human behaviors. Conversely, the latter, social constructivism finds society and organization shapes IT. However, sociomateriality has been emerged as a middle ground of these two contrast steams in study of technology and organization. It argues that materiality i.e. the material property of technology and social practices surrounded technology cannot be separated either chemically or centrifugally or socially (Barad, 2007). It opines that technology and organization; technology and human beings need to be understood through their relationality, incapability and entanglement. Pioneer of sociomaterial thinking, Karen Barad (2007), a physicist and professor of feminism, applies diffraction analyses to understand entanglement between social and material. On the other hand, Intorna and Hayes (2011) and Avison and Zorina (2011) apply imbrication to understand sociomateriality. This paper argues that diffraction and imbrication analyses are complementing to understand sociomaterial constitutive entanglement.

A greater understanding of constitutive entanglement is (IS) discipline. However, so far this understanding has remained obscure and jargon. We have illustrated how diffractive and imbrication analyses with a case study of land records in Bangladesh with a view to enhancing the understanding of constitutive entanglement. We have conducted an interventional and longitudinal study along with action design ethnographic research. This study findings show that the diffraction analysis is a potential lens to understand how constitutive entanglement shifts dynamically and how the aperture of diffraction moves from one area to another. We have presented the significance of the diffraction analysis to investigate how infomediaries and informal intermediaries are dynamically entangled and disentangled with the land records service in Bangladesh. Therefore, we argue that diffractive analysis is a suitable approach to understand a ceaseless process of constitutive entanglement. Moreover, a diffraction analysis can be applied as a potential lens in Information Systems research in the complex contexts of developing countries as a powerful theoretical tool.

This paper focuses on constitutive entanglement of infomediaries and intermediaries in land records related services in Bangladesh. The concept of intermediary is widely used in IS literature especially in the context of developing countries. Notably there are various forms of intermediaries: formal and informal. Although the concept of intermediary is heavily studied in IS research, the role of informal intermediaries has not yet received attention. The informal intermediaries are involved in the practice of middleman and brokering with an inherent tradition through their knowledge, skill and networks over a long period of time in developing countries. Conversely, formal intermediaries are mostly involved in bridging the digital divide, connecting between service providers and citizens and facilitating citizens' access to services and information through employing ICT (Sein and Furuholt, 2012; Díaz Andrade and Urquhart, 2010). Thus the formal intermediaries can be seen as infomediary; in other words they can be seen as the information workers (Sein and Furuholt, 2012). They mediate citizens' access to information and services through ICTs. This paper, in line, explores how informal

intermediaries and infomediaries are continuously entangled and disentangled. In order to understand the constitutive entanglement a sociomaterial lens have been applied illustrating with a case of E-service of land records in Bangladesh. In particular, we have applied Barad's diffractive analysis to understand the constitutive entanglement of infomediaries and informal intermediaries (Barad, 2007). The paper outline consists of conceptualizations of infomediary and informal intermediary in the context of developing countries. Thereafter, we discussed precisely methodology and background of the case in section two. Since Sociomateriality is an umbrella approach and has many streams, this paper focused on Barad's diffractive analysis to understand constitutive entanglement (Barad, 2007). Section three gives a theoretical framework of constitutive entanglement. Finally, section four analyzes the process of constitutive entanglement and disentanglement of infomediaries and informal intermediaries in E-service of land records in Bangladesh.

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“Regulating a Masterpiece:

Management of Materiality and Organizational Change in Public Museums”

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Contemporary organizations are confronted with the necessity to define internal regulations (Jackson & Adams, 1979) and, at the same time, they result immersed in environments where rules are set by external institutional actors to address actions, procedures, routines and relationships. The ability to manage and act upon these controlling and limiting features has become a fundamental skill for many organizations (Sullivan, 2010).

At the same time, organizations are demanded to relate with their material components, constantly interacting with each other and with all other aspects of the firm (structure, culture, resources): in this sense, organizations' scholars as well as practitioners are asked to consider that “the social and the material are constitutively entangled in everyday life” (Orlikowski, 2007: 1437) and that the material aspects of an organizations are to be regarded with the same accuracy and attention that is reserved to other characteristics of a firm. A managerial and organizational evidence corroborating the advocacy for a more integrated analysis of organizations as both social and physical, that is of the fundamental relevance of materiality is, in fact, constituted by the recurring presence, in firms, of regulations and rules particularly addressed to ease and control the interaction occurring between immaterial and material aspects of the organization.

If it is important to note that the extent to which the material component can condition a firm and the nature and diffusion of correlated practices of rules definition vary in respect to the characteristics of the organization's industry, field, structure, inter-organizational and institutional network, then, at the same time, it is important to stress the pervasiveness, across organizational fields and forms, of the crucial interconnection between social and material features.

In this paper, I will present the case of an organization whose material component constitutes the very reason of its existence and where regulations (often issued by external actors) are mainly defined to control and preserve the very materiality of the organization.

By proposing a case study of an Italian public museum, I will engage with the analysis of the relationship between material artifacts and uniqueness (in that the museum's collection is constituted by works of art or other kind of heritage objects that are irreplaceable and that feature immaterial, cultural, social, sense-making qualities, see also (Pels, Hetherington, & Vandenberghe, 2002)) and with the consequences, in terms of regulations, that this relation can have on the organizations interacting with them.

In particular, the purpose of the research is to verify the connection between the materiality of an element (in this case the collection) that is part of an organization – or, in this case, whose material conservation and management is the main purpose and core mission of the organization – and the compliance of the same organization to external regulations defined to protect the physical integrity of the collection – with particular reference to the definition of internal regulations absorbing the limitations imposed by external institutions and to the effects in terms of organizational roles (the creation of professional figures specifically devoted to the management of objects and the acquiescence to external rules).

Museums have been (and still are) founded with the explicit purpose of protecting a community's heritage and, possibly, of allowing its fruition without compromising its preservation and transmission to future generations. In this sense, they represent a paradigmatic example of the entanglement between social and material objects (Engeström & Blackler, 2005) within organizations. Material

objects conserved by public museum institutions are part of the heritage of a nation (or more locally, of a community): in this sense, they are protected by laws that are external to museums themselves even if their management and conservation are activities designated to the single organization. This condition generates the necessity, for museums, to define procedures and rules complying with externally defined limitations, making them part of their own system of regulations. From the simple conservation of works of art, to their transfer to other institutions for loans and exhibitions, public museums are in the constant position to necessarily follow procedures that are externally induced. This is requested not only to respect existing legislation, but also to match up with the social role of “heritage preservers” that has been assigned by society and institutions: in this sense, the compliance to external regulations – and the well-timed advertisement of their strict observation – can be also considered part of a strategic choice to guarantee themselves continuous support and legitimacy from institutional actors that are usually also public museums' main financial resource holders.

This condition have determined the definition not only of internal systems of rules receiving the external regulations, but also of organizational roles dedicated to the correct definition of all bureaucratic procedures related to the conservation, loan and transfer of objects from a collection – the Registrar.

The study of this specific kind of organization will offer a particularly poignant record of the effects that the material nature of some elements within an organization can have on the definition of internal rules and, more broadly, on the organizational structure of the firm at stake.

The research will analyze the impact of the preeminent material component of an organization on the whole system of regulations and roles that operate within it: this will constitute a significant contribution to the debate on the necessity to consider the material elements of an organizations as significant as all other features and to the discussion on the relationship between material artifacts, regulations and institutional legitimacy.

While proposing a research that responds to the advocacy for more consideration to the materiality in organizations, the research will bridge the analysis on regulations and rules applied to material artifacts with that on the intra-organizational effects of external institutional pressures on structures, procedures and survival through legitimacy.

Keywords

Materiality, Artifacts, Institutional Regulations, Institutional Constraints, Organizational Structure, Organizational Rules, Routines, Organizational Behavior, Organizational Change, Museums, Heritage, Culture, Registrar

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