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## Organizational experiments and the change of meaning

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### ABSTRACT

The present paper advocates for a bolder use of real life experiments in and with organizations. We illustrate how real life organizational experiments can lead to interesting and wide organizational changes by creating new meanings and change sensemaking, which makes it possible for a company to address its challenges from a new position. Furthermore, we argue that having a Dionysian perspective when using organizational experiments makes it possible to envision and execute experiments inspired by high ambitions and visions to test new ways of organizing in an explorative manner. New meanings are accepted thanks to sense-giving and to the willingness to forget prior experiences and regard them as examples of hypotheses that can be challenged and replaced with new ones as the organization gets new experiences from playful learning.

*Keywords:* types of experiments; organizational experiment; meaning; change; apollonian experiment; dionysian experiment.

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### INTRODUCTION

Research on organizations and knowledge management have showed that organizational structure influences innovation processes and the sharing of knowledge. (Conway and Steward, 2009) Most organizations are operating with quite stable forms based on functional departmental structures, although evidence points to the need of having more flexible and networked organizations (Birkinshaw, 2012).

Both formal and informal elements are important in organizations (Simon, 1976). Social networks, organizational structures, and design of physical spaces play an important role for knowledge creation and transfer, which consequentially influences innovation (Henry and Pinch, 2000). It is also well known that boundary-spanning, boundary-spanners, and boundary objects contribute in various ways to knowledge sharing and the fostering of innovation (Conway, 1997). In these situations, the organization might retain a classical structure that might not be suitable for radical innovation. In the literature, we find other structures that could facilitate radical innovation, such as ambidextrous and autonomous experimental units (O Reilly and Tushman, 2004). However, these are mostly only designated parts of the organization, not the whole. What could happen if all the structure – not only a segment - is disrupted?

The objective here is to discuss: how can managers use experiments to radically change the structure of the organization to facilitate the emergence of radical innovations?

Our claim is that there is a need to further explore how organizational experiments could facilitate and explore new ways of organizing and facilitating new flexible and networked innovative approaches.

We will illustrate the discussion by using a well-documented case: Oticon. Analyzing the case, we are not looking at organizational experiments from a methodological perspective – using experiment to test the success of the change, but from an epistemological perspective – understanding how the vision of a manager was translated into organizational changes and how the employees made sense of them and how the sensemaking changed due to the sensegiving (the ability to shape the way others make sense (Schwandt, 2005) provided from the CEO of the company. The CEO's vision thus represents what has been described as a 'professional gaze' that is a deeply embodied and pre-reflective engagement with the context, spontaneous, but also partial and guided by his personal interpretations and interests (Styhre, 2010).

To propose this unconventional approach to experiments, we suggest looking at them as a contrast to the classical view on experiments (testing a variable) metaphorically associated with Nietzsche's juxtaposition of Apollo and Dionysus in the Birth of Tragedy. The departure from this philosophical viewpoint has been used in management and organizational studies to analyze the field of strategy-based practice (Morell, 2011); thus, we extend it to the analysis of organizational experiments.

To answer our research question, we suggest that the managerial ambition can be achieved through a

Dionysian organizational experiment that facilitates a change in meanings to renew and develop an innovative organization. The manager set a vision, which is translated by disrupting the present perceived reality and the current organization and its meaning, starting a process of sense-giving for the acceptance of the new meanings. Sensemaking helps people in the organization to construct a more or less stable meaning that enable employees to keep acting in the present and the future, staying in touch with the constant flow of experience, “inventing a new meaning (interpretation) for something that has already occurred during the organizing process, but does not yet have a name has never been recognized as a separate autonomous process, object, event” (Magala, 1997)

However, the presentation of the experiment from an academic perspective is in between the Apollonian and the Dionysian, as we embrace the practice-based perspective as we cannot escape the rationality in presenting the analysis. Therefore, the experiment in the organization is Dionysian in its nature because it is playful and emerging but the academic reasoning and the rationality of language in analyzing it is Apollonian.

Prior research on the Oticon case has used various theoretical lenses to analyze the changes with regard to: measurement of effectiveness of the form of organization; effects on knowledge creation; and effects on building dynamic capabilities and leadership. In this paper, we focus on how the innovative experiment changed the meaning of organization, and thus moved it towards a networked organization.

Building on James G. March’s writings, we claim that a Dionysian playful and foolish approach (March, 1982) is needed to explore new realms, as our experience is limited by too few samples to learn from (March *et al.*, 1991). Besides, ambiguity hinders organizations to pursue rationality, as it involves guesses about uncertain future consequences and preferences (March, 1978). Analyzing Oticon from a Dionysian perspective, means focusing on the playful deconstruction and reconstruction of organizational meanings through sense-giving. We discuss how this Dionysian playful and foolish approach leads to further exploration and inspiration, rather than testing a theory in a confined laboratory: having a Dionysian perspective on organizational experiments can facilitate the execution of aspiring experiments based on grand ambitions and visions for something differently. To achieve this objective, it seems necessary to be willing to forget past experiences, and regard them as examples of hypotheses that can be altered, exchanged and replaced with new ones, as the organization gets new experiences from playful learning (March, 1982). This means to move away from the rational epistemology and embracing a practice-based one. Differently from design theory (Hatchuel *et al.*, 2017), engaging with creative spaces as in ‘in-vivo’ experiments, explained below here, refers to

the whole organization, not only to the team or the space intended as a mental concept.

Thus, the present analysis contributes to the literature on organizational experiments in several ways. Firstly, we propose a new perspective on organizational experiments. The Apollonian perspective is based on the rational and positivist epistemology, in which models are used to test a reality. The Dionysian perspective is based on an epistemology of relations, in which reality is co-constructed, emerging and subjective, therefore it is not possible to test a phenomenon, but to create it. We provide an example of a playful Dionysian approach based on a much-researched case, but from a new position. Second, the analysis shows how real life experimenting with organizational structures and focus facilitates changes in the meaning of organizing based on sensegiving. Third, we show that experiments can be a strong vehicle for introducing radical changes. The literature on organizational change has focused much on external factors as vehicles for change. Individuals in organizations learn by adapting to changes in the environment, by adapting the representation to what they know, their mental schemes (single loop) or changing the representations that govern their actions, thus changing the underlying assumptions (double loop) (Argyris and Schön, 1978). We suggest a third way, proposing a change in meaning of the organization by the introduction of an experiment that makes it possible to relax and question the existing assumptions within the playful frame of an ‘experiment’. Once the employees make sense of the new meaning created through the experiment, they learn how to act meaningfully accordingly to the ‘new rules’ within the experiment. If the change of meaning is disruptive, it is necessary to adopt a playful approach to facilitate the sensemaking. The playfulness allows organizational members to engage in their own interpretation of the experiment.

The paper is structured accordingly. First, we present some theoretical views and examples on experiments in an organizational context. Second, we present the method, then the analysis of changes of meanings, and some conclusions and suggestions for further research.

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## THEORETICAL BACKGROUND

In the Oxford dictionary an experiment is defined as: “a test or trial done carefully in order to study what happens and gain new knowledge.” Others refer to the two views on experiments, as quoted from Shady’ *et al.*’s book on design of experiments:

*“ 1a) A test under controlled conditions that is made to demonstrate a known truth, examine the validity of a hypothesis, or determine the efficacy of something previously untried’ 1b) The process of conducting such a test; experimentation. [or] 2. An innovative act or procedure: “Democracy is only an experiment in government” (Shadish *et al.*, 2002).*

We will refer the first part of the above definition as a 'classical' view on experiments, while the second part of the definition is focusing on the innovative approach itself, the act of doing something else, something new, and relaxing the requirements of strict control over the variables as 'classical' experimental behavior requires.

Lately, experiments have been divided into three types: 'in vitro' – as in a classical controlled laboratory setting - rather than 'in vivo' - as in a real-life setting (Callon, 2009) - and as 'platform' experiments. These three types are characterized by Muniesa and Callon primarily by their degree of openness.

The in vitro experiments are happening in confined laboratories.

*"The laboratory is a controlled environment on a certain location that is well-known for its confinement. At the opposite end, real-scale experiments (which we can also call "in situ experiments" or "in vivo experiments") abolish this distance between the "inside" and the "outside.""* (Muniesa and Callon, 2007).

In the laboratory it's all about control, confinement and making a distance between the inside and the outside. In the real-scale experiments there is little or no control over the various actors - human and non-human - that interact in experiments.

Classical experiments require a manipulation, i.e. intervening in the situation, stimulating the independent variable to observe the effects on the dependent variable (Bryman and Bell, 2011). The subjects participating in a classical experiment are often divided into groups, which represent different independent variables. Experiments can take place in laboratories to investigate a phenomenon by observing the dependent variable. A central feature of the experiments is comparison, in order to measure what happens and what is the variation of the variable when a difference is introduced.

These concepts have also been transferred to studies of organizations, in particular in the field of organizational behavior. However, they are often focused on either treating organizations as laboratories or to design an experiment having a researcher or group of researchers that are observing a phenomenon on a distance or sometimes in the form of action-research addressing a certain issue in the organization (O'Grady, 2013).

Platform experiments are more open, inviting various actors to participate in an experimental collective as described by Muniesa and Callon:

*"The platform is a device conceived to favor hybridization and confrontation of interests, skills, and projects as a way to induce robust compromises. It is thus open to researchers and engineers from various disciplines, but also to other actors (consumers or users, economic actors of many kinds, actors from the political or juridical sphere). In this sense, plat-forms favor "research in the wild" (Callon and Rabeharisoa, 2003).*

This implies the recognition of the analytical complexity of the objects subjected to experimentation, instead of focusing on reduction and purification. Muniesa and Callon present the platform experiment as

a hybrid form that come from the area of high-tech and bio-medical R&D collaboration where multiple firms, laboratories, universities, clinics, patients etc. work on issues in a flexible manner, and in this setting surprises are regarded more a resource than a problem (Ciborra, 1996). This typology of experiments has been previously described as "quasi experimentation" (Grant and Wall, 2008) and as field experiments (Harrison and List, 2004).

An often-used example of in vitro organizational experiments is the research at AT&T's Western Electric Hawthorne plant (Roethlisberger and Dickson, 1939) known as the "Hawthorne Experiments." These were a series of studies into worker productivity performed at the Cicero plant between 1924 and 1932 aimed at studying the relationship between working conditions (like light intensity, structure of breaks and payment incentives) and worker efficiency/fatigue. The hypothesis - which was first confirmed - was that improved lighting/incentives/conditions would yield higher productivity. A later alternative critical interpretation, of some of the observations was that women that were participating in the experiment shortly increased their productivity because of the attention that was given to them, not because of the changes in the environment.

One reported grand scale in vivo experiment is the one carried out at the chocolate factory Cadbury around 1912 by Edward Cadbury (Cadbury, 1912). Cadbury wanted to demonstrate that by providing better employee-oriented incentive systems, better education and pensions and living and working conditions with more direct involvement for workers would benefit both production output and employee's well-being. Cadbury deliberately designed the organizing principles to fix some of the flaws he recognized in the Scientific Management approach proposed by Frederick Winslow Taylor (Taylor, 1914). Taylor had a strong belief in a hierarchical, structured, technical, optimized top-down managed organization which left little room for employees' discretion, debate or social consideration, since the focus was on setting goals, planning, standards, and controlling the tasks of each employee (Cadbury, 1914). According to Pruijt (1997) "Taylorism" is considered a management strategy that separates thinking from doing, as managers think and planning, and workers execute orders.

Cadbury considered that the main problem with the Tayloristic thinking was the focus on the strict definitions of what should be done by everyone within a pre-defined time-frame, and Cadbury provided his detailed account of his organizational experiment, explaining his reflections on how he implemented alternative principles of industrial organization, and what others could learn from his new approach. The Cadbury case can be considered an in-vivo real-life experiment, containing a number of in-vitro experiments within the real-life (e.g. various forms of collaboration, wage-systems and education for employees).

The in vivo experiment can be considered relevant for organizations that strive for more than making minor adjustments or continuous improvement, but also to experiment with alternative ways of organizing, willing to take higher risk as uncertainty increases, facing ambiguities rather than decreasing them. In management, there is a large set of knowledge on how to learn by experimenting in “real-life” (Shani *et al.*, 2007) using various forms of collaborative action research projects. Thus, real life in-vivo experiments’ variables are not defined or known before, and are potentially endless as new actors might emerge during the experiment (Muniesa and Callon, 2007).

We propose this approach to organizational experiments, in which there are no variables to test, nor a method to follow, but a vision that with the introduction of uncertainty and ambiguity, the making of meaning becomes a collective process, challenging the notion of what a company should be.

Extending these definitions to the organization of CERN, it can be considered a (huge) platform experiment, having multiple ongoing laboratories and more closed (in vitro) experimental settings and a few (to our best knowledge) open-ended real life (in vivo) experiments, like the launching of this new journal the reader is presently interacting with.

We propose to divide the methodological experiments and the organizational experiments into two dialectic opposites: a methodology for studying changes versus a process to facilitate changes – and that those resemble the distinction introduced by the Nietzschean perspectives of Apollonian and Dionysian. The main difference between these two typologies is that with the mediation of the researcher, there is a need for a methodological approach and therefore necessary an Apollonian behavior with clearly defined protocols and variables to measure. In the Dionysian experiment an organization - or manager - challenges and deconstructs the reality and its meaning. The researcher and the academic reasoning is involved after the project has happened, to analyse how it emerged and made sense. It is clear that, doing this, the process appears as rational mostly because there has been a rational posteriori analysis, and the academic researchers, who by training are apollonian, are constructing it. In the following paragraphs, we clarify what we mean with Apollonian and Dionysius.

#### *Apollonian experiments*

Apollo in the *Birth of The Tragedy* (Nietzsche, 1871/1993) is described as the God of light shaping all energies; he is the soothsaying god, rational, in which reasoning, order and rigor dominates over the world of fantasies. Experiments in this category are based on the scientific method, built on a scientific analysis based on the

*autonomy of scientific endeavor preserved in the testing of ‘analytical adequacy’ that is conducted through modelling and laboratory experimentation depends upon an idealistic*

*view of science which maintains the idea that pure scientific thought exercises a logic and rationality that is assumed to be transcendental and supra-historical, objective and bias-free (O’Doherty, 2007)*

Indeed, most work with behavioral and economic experiments *in organizations* would lie in this category. Such experiments have been conducted by cognitive and behavioral psychologists and economists to capture economic activities, e.g. pricing, and are characterized by repetition. Experiments applied by researchers with this rational epistemology based on hypothesis and testing can provide a more direct way of studying the relation between individual and aggregate behavior. Since the objective of the experiments is to understand the phenomena by manipulating the variables, the laboratory space is heavily controlled, (Guala, 2001) and the maintenance of relatively simplified assumptions regarding the actions and motivations of participants as economically rational actors.

#### *Dionysian experiments*

Dionysius is fantasy, freedom, drunkenness, irregularity, and within this freedom, there is the possibility of exploring unexpected situations. The Dionysian approach to experiments would be based on the observation that reality is a co-construction among those who participate in the experiment:

*In contrast to the ‘whittling down’ of conceptual mediation that submits to a faith in pre-existing reality—or to the average ‘lowest common denominator’ pragmatism of collective agreement secured amongst self-elected specialists—theorizing pushes the consequences of the possibility that reality cannot be relied upon as a form of ontological backstop or reassurance for which stringent epistemological rules and procedures can access and confirm. Instead, theorizing acknowledges that ‘reality’ has to be made and un-made as part of a contested and politicized struggle, and in this struggle theorizing attempts to open up and take us into different possible worlds that allow us to see or experience the world we think we inhabit in different ways. (O’Doherty, 2007)*

In this perspective, experiments are analyzed as the creation of an emerging reality in the experimental setting. Experiments are evaluated by their interpretative power and ability to generate new interpretations and suggestions. Translating from methodological to empirical observations in the Dionysian approach, decisions are not pre-given, but emerging during the experiment, from a problematizing process (Callon, 1986), which in turn constructs the participants understanding and the perceptions on the experiment (Latour and Woolgar, 1979), making sense of the decisions based on the powerful vision rather than a well-defined and precise project’s plan.

In this paper therefore, we understand as Dionysian the approach of the manager to communicate his visions and translate them into a new organization, and how the vision challenged old meanings and created new ones.

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## METHOD AND DATA

This case is an historical case based on how Oticon, a hearing-aid company, became one of the major players in the medical device market. For decades, Oticon was a leader in the industry, but in the 80s it failed to update the technology (from analogical to digital) and the function of the hearing devices (from behind the ear to in the ear, which became the standard preferred by the customers). The shares collapsed from 14% to 9% in 18 months. The new CEO, hired to save Oticon from the decline and economic losses, decided to do an experiment and transform the organisation into a fluid project-based organisation, to cope with the technological and market dynamics (Cattani et al., 2015, DeFillippi and Lehrer, 2015).

On New Year's Day 1989-90 the CEO - Lars Kolind - announced a new project: 'Project 330', with the title "The Vision. Think the Unthinkable" that summarized the challenges he considered the company was facing and what he suggested to be changed (Kolind, 1998). In the subsequent 10 years, Oticon became famous for its radical experiment (Foss, 2003). The "spaghetti organization," as it came to be called, was explicitly conceived to scrap all formal job titles; remove the desks, bring employees out of their 'rabbit holes', provide transparency, reduce 95% of paper; decrease the hierarchy, and increase the skills of each employee. Research has mentioned the Oticon case as an outstanding example of a radical project-based organization (Ravasi and Verona, 2001, Verona and Ravasi, 2003). However, the organizational structure was looser than a project organized company, as the projects were expected to be emerging and being negotiated, and not top-down managed or with an extensive middle management layer.

Not everybody facing the changes might have recognized it as an interesting experiment, but would rather regard it as an organizational change process, where the CEO gave new guidelines and orders on how things should work in the company. Informal and later open resistance towards the changes became evident after some months. However, from personal communication with the CEO, we have knowledge that Kolind considered the changes as potentially reversible, and therefore looked at it with an experimental understanding. This does not mean that the case is characterized by its reversibility, but the narrative of reversibility was used as a psychological "safety belt" to encourage the employees to adhere to the "extreme" organizational experiment: if it would have failed, they could return to the old organization. Indeed, when asked if this was not a very risky experiment for the company's future the CEO answered:

*"Why? I had all the previous organizational charts and guidelines in my drawer. Those could easily be reinstalled".*

This is what we understand as an experimental view on organizational change.

There are many thick descriptions of the Oticon case, produced by journalists, PhD thesis's and articles in academic journals and in leading peer-reviewed journals. The CEO - Lars Kolind - has himself identified more than 1.000 separate 'documents' about the Oticon case. Our methodology is based on the analysis of selected peer reviewed journal articles. Documents were screened, read, coded by themes and then linking the emerging themes into theoretical constructs to illustrate the changes in the various areas as discussed in the next section below here. Thus, for coding the information from the articles to address the research here, we took inspiration from research in organisation studies, (Morelli, 2011) and applied a reinterpretation of the organizational experiment from a Dionysian perspective rather than an Apollonian one.

After screening and some of the 1.000+ articles and papers on Oticon eight academic peer reviewed articles were selected for the present analysis based on journal ranking and relevance (Birkinshaw & Mol, 2006; Cattani, Ferriani, Frederiksen & Täube, 2015; Fillippi & Lehrer M, 2015; Foss, 2003; Gioia, Schultz & Corley, 2000; Kjærgaard, Morsing & Ravasi, 2011; Larsen, 2002; Verona & Ravasi, 2003;). The focus of these articles when published was on the effectiveness of the form of organisation, on knowledge creation, building dynamic capabilities and leadership through the experiment, and on the reactions and perceptions of employees. The analytical themes in our coding were: problematization of how the employees were perceiving the changes, interpretations of the changes, meaning of the organisation (during the different periods) and of how the meaning of organising changed over the period.

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## CREATING NEW MEANINGS IN OTICON

In this section, we analyze how the experiment changed the meaning of central notions about organizing, drawing on data from the eight chosen sources of information.

In the 1980s, Oticon was designed as a bureaucratic machine that was functioning by compiling paperwork: most of the exchange were formal and based on intensive flows of reports and whitepapers between levels and units. Focus was on plans, top-down resource allocation with detailed plans, budgets and project proposals and evaluations, although the actual R&D investments were not huge and results sparse. The CEO announced the new vision as 'Project 330': the present organization should be demolished, job titles eliminated and functions eradicated. Kolind decided to "think the unthinkable" (Larsen, 2002) and to create:

*[T]he paperless office. The paperless company. The transparent organization. The multi-functional employee. The mobile office. The daily job exchange. (Kjærgaard, et al., 2011)*

All formal job titles were scrapped. No employee had a fixed desk or office of their own, or a well-defined and pre-imposed role: they should choose one or more from a list of projects on a bulletin board. Office hours were not fixed but flexible according to the chosen task. If an employee did not like the project or the task, he/she could switch to something they thought more appropriate. Staff could take on as many different projects as they wanted, and were expected to pick up new skills along the way. Projects were not managed in the usual administrative way - the few leaders left became mere coordinators, and the teams took a project through from start to finish by themselves.

The meaning of organizational structure changed dramatically in the experiment and it was approached in a Dionysian way. The Dionysian perspective embraces the experiment from a playful perspective, analyzing the organizational experiment as a force - or opportunity - for viewing an organization in new ways, changing the meaning of its elements through an experiment, re-shaping its organic forms and consequently treating an organizational experiment as a way to problematize the organization. Thus, the case is approached dialectically compared to prior literature, wanting to capture the changes in meaning and the stabilization of the experiment.

The new organization started to be referred in the media news as the “spaghetti organization”.

*The nickname "spaghetti organization" reflects the complex, informal, and almost anoxic characteristics of the project organization, as it was initially implemented at Oticon. A project manager in the company defined it as: "The dynamic use of the total work force mental capacity across professional borders in no formalized order." (Larsen, 2002)*

To reinforce the change and signal the break from the previous organisation, the company also moved to a new location with open spaces, paper shreds to emphasise the need of having a paperless organisation working on informal and email communication, rather than bureaucratic paper-based. This also created a new meaning of what constituted knowledge and knowing: in the old organization, knowledge was based on routines, procedures, paperwork; it was formalized and objective. In the new organization, employees were encouraged to embrace the new situation through the sense-giving proposed by the CEO - and his assistants. Sense-giving is the ability to shape the way others make sense, by framing meanings and complex situations so others can make sense of them in a guided way. It happens to a process of sensemaking, which is not just a matter of reasoning, but also about senses and emotions (Grinde, 2012), thus Dionysian. It has been demonstrated that leaders use sensemaking through discursive practices to shape and direct stakeholders (Whittle et al., 2015). This sense-giving resulted in accepting building knowledge from the practice, knowing became more important than knowledge, emphasizing the new meaning of what constitute an innovation: an idea that is emerging from a

dialogue and relations among the persons, and mediated by IT rather than being subject to forms. To encourage the informal communication and dialogue around new ideas and projects, the organization went through a conspicuous update of the IT system, that for the 90s was very advanced: communication should be open, oral rather than written, unless it was an information that everyone should know and then it was made public via email and databases. Before the experiment, communication was formal and hierarchical following formal procedures. After the initialization of the experiment, communication was intended to be paperless and centrally stored on the server. The resources that were made available from cutting the overhead costs of the functions were invested in the R&D budget and in industrial PhDs. The organisation moved to a new headquarter, a refurbished former brewery. Here, the employees did not have a desk, but a trolley that they used to move around their things to the different desks where projects were taking place, symbolically indicating that the project was more important than the person. This became meaningful to reinforce the concept that the employees were not working for a function anymore, but on a project, they were accountable for. Competences were not associated to a job title or a function, but to a person and a project task.

**Table 1.** Analysis of the meaning of organizational structure before and during the organizational experiment in Oticon, as reported in the papers that analysed the case, using the lenses of the Dionysian perspective to analyse it.

Before	During the experiment
Stability and clear lines is good	Temporal - ad-hoc is good.
Action driven by plans	Action driven by not a priori projects, but emergent
Job is given by location in structure	Job are required by project and task at hand
Job is related to the function	Job is driven by problems and project-needs
Explicit hierarchical formal structure provides guidelines for authority, responsibility and room for many middle managers.	Project based organization with only a handful of managers, directs attention towards the tasks and projects, with interdisciplinary communication across the company
Stable and clearly identifiable departments and functions with established functional roles is what characterizes a company	It is not modern to have fixed locations and employees are grouped in teams and there is no need for personal belongings: It's all in the computer.
Paper based documentation is good and needed to prove a good job	Paper based communication is boring, slow and not modern (the big paper shredder).

The meaning of what constitutes management and a good manager changed dramatically during the experiment. There were no line managers or supervisors, as project managers was responsible for their individual projects. The project managers was chosen not by seniority, but because he/she had an idea he/she wanted to develop. However, he/she could take a different role in another project at the same time, in order to explore different roles and acquire new skills. Same for other tasks: for example, in a project a person could act as R&D engineer, in another one as responsible for sales to learn how to communicate with customers and to understand their needs. A manager was a project manager; an innovator; someone with an innovative idea that he was willing to try out. Three managerial roles were identified: 1. Project managers (with the overall responsibility for projects); 2. Senior specialists (providing professional expertise across organization) 3. Coaches (mentoring and other HR-related roles). The top management provided priorities to the projects although the traditional status symbols benefits (corporate cars, large offices, personal secretary) were removed.

**Table 2.** Meaning of management before and during the in-vivo experiment in Oticon, as reported in the papers that analysed the case, using the lenses of the Dionysian perspective to analyse it.

Before	During the experiment
Stable structure and functional managers as gatekeepers.	Projects and project managers as gatekeepers.
Management by managers - and their plans	Management by projects
Rewards and promotion follows functions	Rewards follows project success and promotion is difficult: but you can get a new project.
Objectives from plans and department	Objectives driven by project goals
Performance is predefined, planned, prepared and carefully monitored	Performance is what makes a relevant difference with respect to products, customers and processes

The changes also involved a radical new way of evaluating performance. The system prior to the experiment focused on departmental measurements and a bonus system - managed by the HR department (that was dismantled during the experiment) (Larsen, 2002) - related to explicit company targets and local performance goals. During the experiment, the performance criteria focused on the number of successful projects, on the delivery of new products and on the overall sales numbers. The responsible was not the division manager, but the project manager, who needed to report the progress and the achievements to the (small) top-management team. The abolishment of the prior organizational structure and performance system dismantled a system with more focus on keeping actions

on the planned track and manipulation to meet targets, rather than on technology and products, as explained by March (1981):

*"Performance measurement also leads to exaggerated concern with accounts, relative to product and technology. Measured performance can be improved either by changing performance or by changing the accounts of performance. Since it is often more efficient, in the short run, to devote effort to the accounts rather than to performance, a bottom-line ideology may over-stimulate the cleverness of organizational participants in manipulating accounts."*

Moving to the spaghetti organization was not without debate, and some employees, including several reluctant middle managers, initially openly resisted the changes in writing and by outspoken opposition. Those that were not convinced left the company. There were meetings and committee in which people expressed their opinions and voiced their concerns: with the experimental approach, that they were going to lose their benefit plans, their status's symbols (cars, secretary) and their offices, and by removing established leadership positions. Those that remained had to change with the organization. Another concern was related to the lack of structure and ambiguity about performance and what constituted success. The ambiguity about success also introduced a new view on knowledge: from a predefined certainty to a more collective process of identifying knowledge.

**Table 3.** Meaning of knowledge before and during the in-vivo experiment in Oticon, as reported in the papers that analysed the case, using the lenses of the Dionysian perspective to analyse it.

Before	During the experiment
Knowledge is based on deep insights	Knowledge is practice-based and what's relevant
Experts - in their defined area	Knowledge based on its application and related to cross functional problem solving
Knowledge in 'containers'	Knowledge generation in processes
A good employee is a specialist	A good employee is flexible
Related to department	Related to task and project at hand
Profession determines what is knowledge	Project determines what is knowledge

The meaning creating process was managed by being un-managed, by disrupting what the previous organisation was, providing a vision (no job titles, project-driven) but then the translation was made within the organisation, so it was a plan without a plan: only the objectives were stated, but not how to reach them. Indeed, the choice of location, the office outlet, the way in which things emerged where the results of active involvement and actions by workers in the organisation. People playfully translated the vision into new meanings, although the CEO had some assistants and a 'change



facilitator' employed from around 6 months into the experiment.

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## DISCUSSION AND CONCLUSIONS

Oticon, the spaghetti organization, shares many features described in prior research as an adhocracy that adapts to heterogeneous and dynamic environments (Mintzberg, 1979); organizations based on extensive use of projects (Packendorff, 1995); network-based companies leading to flexible firms that can adapt to changes in markets, consumer preferences and new technologies (Birkinshaw, 2012). These different organizational forms can support the 'camping on seesaws' that metaphorically looks at the organization as a tent, highly adaptable, movable and lighter than having solid massive concrete structures (Hedberg et al., 1976). This paper suggests that to organize things managers should think in ambiguous situations as if they did not have rules. This could be applied also to CERN: what would happen if the organization would be completely changed and disrupted? Would it be possible to imagine such a type of experiment to foster radical innovation?

Oticon's approach can be regarded as a Dionysian experiment, because the CEO decided to play and relax the structure of the organization to the point of removing existing structures, prescriptions, rules, performance criteria, hierarchy, and middle managers. The CEO did not want to test the reality or minor adjustments, nor were researchers involved in collaborative research. He had a vision that he wanted to translate into a new organization with new meanings. This vision showed the ambition that he wanted to reach. How to reach it was not planned in detail but emerged during the change process. We do not claim that the organization nor the manager are Dionysian, since organizations and managers normally search for rationality in their decision making and behavior, but the organizational experiment was Dionysian in its approach for initiating change. Therefore, with playfulness the ambiguity about what an organization is - or should be - increases. This is more challenging than 'normal' organizational development or change management as the experiment challenges the exiting order and allows new meanings about organization and organizing the processes to be introduced. Drawing on the insights from Durkheim, we regard the human psyche, its preferential structures and motives as influenced and shaped by social institutions and based on process of collective meaning making:

*"...individual consciousness comes to reflect social conventions and the collective consciousness (shared understanding) that develops to make sense of conventions."* (Dobbin, 2009).

Thus, when the prior collective meaning making is announced as being outdated and scrapped by the CEO and his vision and sought replaced with a new set of values, a process of sense giving and sense making

begins to fill out the 'empty space' (Laclau and Mouffe, 1985). The past normally represents a reservoir of shared experiences from where employees can draw their lessons and guidance for actions, which is suddenly of no value. To give new meaning after the initialization of the Oticon organizational experiment, employees - on all levels - was confronted with ambiguity about the sensemaking of things. We do not analyze the individual processes, but the changes in meanings as reported produced by the vision of the manager and the processes that followed. This has not before been analyzed with respect to the present case of Oticon.

Using the Dionysian approach brings therefore two contributions. Firstly, the experiments are considered organizational experiments rather than methodological experiments. In fact, the manager disrupted the previous adhocracy organization (leaving no control variable) and created a new organizational reality with new meanings of what constituted the organization. Second, considering the reality emerging rather than objective allows to focus on the change process rather than on the resources that were available before and after the change process. Therefore, we suggest that the experimental process is based on a "emergent" process, in which the new organization are "invented" during the change process, which starts with a vision rather than a plan. However, a process analysis can be done in multiple ways and is beyond the scope of the present paper (van de Ven and Poole, 2005).

Therefore, having a Dionysian approach to an organizational experiment allows one to create breakthrough changes, because the organization, backed by politics and power, can/must change its view on reality and begin play with new flexible and dynamic forms. Hence, the two presented alternatives represent various forms of rationalities. The Dionysian approach is suggested to be used for exploring, radical changes and playful learning, while the Apollonian approach is incremental and for carefully testing minor improvements.

<i>Apollonian</i>	E x p e r i m e n t	<i>Dionysian</i>
To test		To explore
Reducing varians and external interference		Driven by vison and desire to learn
To understand the role of few factors		To explore options and expand as much as possible

**Fig. 1.** Visionary experiments that introduces suggestions for new understanding and meaning does not need detailed plans or change management, but is guided by visions and a desire to explore and learn while experimenting. The Apollonian experiment seeks to control and reduce risk, while Dionysian experiments regards ambiguity as a potential resource.

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## IMPLICATIONS AND FUTURE RESEARCH

As there are not many reported and analyzed in-vivo organizational cases available we propose two interpretations: First, companies are reluctant to use in-vivo experiments, as it involves risk, and fear of losing face to in- and outsiders if it fails. Second, managers seem to stick to what is known, and the role of organizational structures and prescriptions is to provide predictability, signal authority and order, and therefore in-vivo experiments are introducing ambiguity. These two suggested objections should of course be investigated empirically. Furthermore, it would be interesting if it would be possible to introduce a number of organizations, maybe using some methods or approaches used in creativity laboratories, like the IdeaSquare@CERN, to actually investigate how organizational experiments in their specific context could be used. CERN Ideasquare could help participants to engage in visionary - Dionysian - reflections to re-think how organizations presently are organized and design ways that could provide organizations with learning from doing these experiments. On a group and team level, this could also be used to re-think how teams address various challenges given to them, and e.g. ask teams to address tasks using different approaches, as a structured planning approach versus an emerging approach. This all could be done in scientific organizations and teams as well.

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