Multiplizieren

The experiment assemblage. Transforming healthcare through three versions of the experiment

Peter Danholt, Morten Bonde Klausen und Claus Bossen

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

Experiments and experimentation are no longer associated solely with the laboratory and natural science. Today, experimentation is part and parcel of organizational change and is connected with any form of organizational thinking that seeks to promote and facilitate continuous renewal, innovation and agility in organizations (Castells 2003b, Chesbrough 2007, Rose/Miller 2008). This chapter focuses on an organizational experiment carried out in the Danish healthcare system. Our concern is to investigate the different ways in which 'the experiment' is perceived and practiced. We draw chiefly on the field of science and technology studies (STS) and organizational studies, because experiments are central to scientific practices and thus a central concern within STS (Hacking 1983, Latour/Woolgar 1986, Gooding et al. 1989, Rheinberger 1997, Knorr-Cetina 1999, Schaffner/Shapin 2017). In actor-network theory (ANT), the production of facts or technologies is studied and analyzed as an 'association between heterogeneous elements,' implying that the practices of developing technologies or producing knowledge are at best understood as messy and complex, because they entail the dovetailing of concepts and theories, a multitude of material and technological objects and artefacts, elements which are themselves particular with respect to temporal, spatial, social, cultural, political and economic constraints and conditions (Latour, 1987, Law 1991, Law/Hassard 1999, Law/Mol 2002, Mol 2002). In this light, experiments are contingent and heterogeneous events composed of multiple spatial and temporal elements (Law 1991, Serres 1995, Rheinberger 2010). The experiment is, to paraphrase Donna Haraway, a material-semiotic knot, in contrast to the positivist empiricist understanding of experiments as controlled environments for hypotheses testing and deduction. This is because, as STS has shown, many experiments and their products do not obviously resemble controlled environments when scrutinized.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

We believe that the notion that experiments are contingent, heterogeneous and messy also reflects the way in which experiments and experimentation are perceived and used in organizational studies. In the field of organizational studies and organizational change management, the traditional bureaucratic Weberian organization is often contrasted with the innovative, adaptive, agile, and experimental organization. From this perspective, the former is associated with an outdated and rationalistic organizational form of industrial societies; while the latter recalls a novel, innovative, contemporary form which is necessary in the information society (Castells 2003a, Von Hippel 2006, Chesbrough 2007). The bureaucratic type of organization is characterized by the fact that it rests on an ontology of the world which is predictable and governed by rules, whereas the agile, experimental organization relates to a processual and transformative world. In much of the literature stressing the importance of transforming organizations into more agile, learning or experimental entities, the term 'experimental' is regarded as a quality which is required if organizations are to continuously reinvent and reconfigure themselves and thereby "survive" (Morgan 2016). For similar reasons, projects are now commonly perceived as a form of organization signaling innovation and change (Packendorff/Lindgren 2014). In this respect, experiments and experimentation are associated with innovation, novelty, and 'open-endedness' in an exploratory sense.

Our methodological and analytical approach is constructivist. We adhere to heuristics related to hermeneutics, symbolic interactionism, and actor network theory. In their different ways, these approaches imply that, as researchers, we cannot and should not attempt to approach a given phenomenon, situation or event as something which can be separated from other actors, practices and networks—including ourselves as researchers. This implies that the object of our attention must be investigated as something which is intrinsic to the practices we study, something that has been constructed in and through these practices. Consequently, the way in which actors engage with and refer to the object in question must be taken seriously. In relation to symbolic interactionism based on pragmatics, the main point is that actors create meaning in and of the world through symbolic, embodied and practical interaction (Corbin/Strauss 1993, Clarke 2005, Star/Griesemer 1989). In relation to actor-network theory, inspired by ethnomethodology among others, the methodological shibboleth is "follow the actors"—emphasizing that the role of the researcher is to do their best to describe how the implicated actors compose and produce

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

objects, knowledge and worlds (Latour 1987). The role of the researcher is *not* to impose his or her theoretical apparatus on the field of study or explain the actions of the actors with reference to a given theory. In our case, what we studied *and* intervened in was referred to as 'an experiment' by many of the actors involved and independently of each other. In accordance with the methodological principles outlined above, we have taken this seriously because the actors made sense of the project and performatively contributed to its construction as an experiment. Consequently, we also refrain from imposing a specific standard or definition of what an experiment is or should be—instead, we are interested in what the projects articulated and performed as an experiment enacts and enables.

Following an understanding of experiments derived from STS, we propose that not only can we regard experiments as heterogeneous assemblages of elements. We can, moreover, regard such assemblages as a means of achieving organizational change. Consequently, in this chapter we present a case of organizational change in the healthcare sector in Denmark which was often referred to as an 'experiment'.

Case and method

In 2014, the Central Region Denmark (hereafter referred to as 'the Region') launched a three-year project which was often referred to as 'an experiment' by those who initiated it as well as by those who contributed to and participated in it. The aim of this experiment was to develop a novel way of governing the healthcare sector, and it was entitled: *New Governance in the Perspective of the Patient* (hereafter referred to as 'New Governance'). The object of the experiment was to try out a new way of governing the healthcare sector, and stipulated the quality of treatment for patients as its primary goal. The Region, and especially the politicians behind the experiment, promoted it by contrasting it with the existing governance paradigm, which was based on a system of diagnosis-related groups (DRG). The DRG system links patients with the cost of treatment and has been used for the last 20 years in the Danish healthcare sector as a financing and productivity benchmark. Initially developed in the U.S., the DRG system creates transparency as regards spending in the healthcare system by assigning a financial value to healthcare procedures (Mistichelli 1984, Fetter/Freeman 1986). Over the years, the system has become fairly complex in terms of how value is decided and reimbursement occurs. The DRG system implies a focus on productivity, and has recently been the target of criticism for producing the wrong incentives: Incentives

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

for healthcare providers to prioritize the healthcare procedures that ensure optimal financial gain, instead of those that ensure optimal efficiency and quality for the patient. Accordingly, and as we shall see, the New Governance project is regarded, among other things, as shifting the focus from productivity based on the DRG system to quality based on the development of new indicators. To achieve this goal, nine wards were included in the project. They were exempted from the DRG system and asked instead to develop their own indicators to measure and account for quality and value for the patient.

We, the authors, were invited to be part of a research group including members from various academic disciplines (social science, science of public health, information studies). We and the other researchers were asked by the Central Region to produce a research-based evaluation of the project. We were given complete liberty to design our investigation and conduct our research as we thought fit in accordance with our research traditions.

Our part of the research project was designed as a qualitative and ethnographic study of the project, so we were field researchers and not actual participants in the project or conductors of the experiment. However, given our research approach and as mentioned above, we clearly intervened in the project by our presence and through our conversations with the healthcare professionals and the project managers involved. This will also become evident in the analysis which follows. In more concrete terms, our research consisted of document and website research on the project, fieldwork involving observing and attending meetings between the nine wards and the Region, and qualitative semi-structured interviews with ward management, healthcare professionals, Region officials and project managers. We conducted 37 semi-structured qualitative interviews lasting between 45 and 120 minutes, and attended and observed 12 meetings. The interviews were transcribed and coded using principles of grounded theory and the software platform Dedoose (Clarke 2005, Glaser/Strauss 2009).

In the following sections, we point out how the project was perceived and practiced as an experiment in three different ways: (1) as an experiment which was an unbounded, open-ended journey into space; (2) as an experiment which was a vehicle for governance reform; and (3) as an experiment involving a scientific evaluation of organizational change. Together, we argue that these three versions of the experiment compose a heterogeneous yet highly capable political machine of organizational transformation, not in spite of, but due to its heterogeneity.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

The experiment as a journey into space

Approximately a year after the project was initiated, but when it was still in its infancy, the Region deemed it necessary to gather and present the overall vision to representatives from the selected nine wards, administrative and technical staff and management. At this meeting, the Region's head of healthcare depicted the project as 'a journey into space'. On a whiteboard, he drew a spaceship heading into space and explained that he saw the experiment as being an exploration of the unknown. An exploration whose destination was not predefined or clearly designated, but would have to be discovered and invented along the way. The project was accordingly often referred to as 'an open-ended experiment' in the sense that it was exploratory and without clearly defined criteria for success, and therefore not a hypotheses-deductive experiment. It was also referred to as an experiment seeking to 'set the healthcare professionals free' from a type of top-down bureaucratic style of governance, leaving wards free to define their own criteria for healthcare quality based on their expertise and knowledge.

The wards were given a free hand to develop and implement the new treatment paradigm focusing on value and quality from the very start of the experiment. We regard the event involving the head of the Region and his spaceship metaphor as emblematic of this. However, this way of perceiving and practicing the project was also perplexing and somewhat frustrating for the wards involved, because it implied that management did not provide much guidance or state clear expectations. This undoubtedly 'set the wards free', but it also allocated the main responsibility to them. In addition, the ward personnel felt that they had limited time and support to invent and implement the quality criteria and indicators expected of them.

In conclusion, the experiment was framed as an exploratory exercise granting healthcare practitioners the autonomy to define what qualifies as good healthcare quality in their specific practice. In this respect, it follows the kind of egalitarian organizational model that is typical of Scandinavia, where inclusion and trust in employees and their competences are highly regarded. The invitation from top management to the wards to be part of the experiment was difficult to disregard, and the time and resources required for the practices to develop quality standards and initiate the experiment were not sufficient. This experiment was not based on classical principles of hypothesis and deduction, with certain specified ideas about what to expect being defined in advance. It was experimental in the sense of an open-ended exploration

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

as simply trying something out without any stringent or specific predefined criteria for success.

The experiment as governance reform

An entirely different articulation of the New Governance project was as an experiment into reforming the governance structure of Danish hospitals. The existing governance regime focuses on production and activity based on the aforementioned DRG system, which essentially means that hospital budgets are conditional on the number and kind of treatments they carry out (Møller Pedersen 2006). The Region's head of finance, who was influential in initiating the project alongside the head of healthcare, problematized the existing governance regime and advocated the transition to another regime which focused on quality in the following manner:

> The close relationship between activity measured using the DRG system and funding provides strong incentives to maintain and continue to organize patient treatment in a way that ensures a high DRG value. The focus must now be shifted toward the quality agenda. There is a need for a new governance regime that focuses on incentives to keep patients healthy or treat them outside the hospital. There must be more focus on patient trajectories containing only the necessary and adequate treatment, sector transition, quality and patient quality. In Central Region Denmark, our intention is to provide the best possible health for the money... Our governance regimes must provide financial incentives that support hospitals in the quality agenda. For the hospitals, the focus must be on planning and carrying out treatment to provide the best possible health outcomes for the resources available. Quality and finance should go hand in hand so that good quality pays off both financially and for the patient. (Minutes from directors' meeting—Author's translation from Danish)

In this respect, the experiment is articulated as a vehicle for organizational and governance transformation. A greater societal concern constitutes the premise for the experiment: There is a perceived need to transform the governance system of healthcare. The experiment is a means to an end, namely the development, testing and promotion of another type of governance. In this sense, the experiment is something entirely different than a journey into space. Here, the experiment is the promotion and testing of a new governance model whose objective is clear: To change an existing governance model considered malfunctional, and replace it with another model that incentivizes efficiency and quality.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

The experiment as an object of scientific inquiry

A third version of the project was as an object of scientific inquiry. With the initiation of the project, invitations were generously extended to various academic disciplines at Aarhus University. We, the authors, were invited and included as part of the group of academics who received funding from the Region to monitor and evaluate the project as we considered best. The other researchers came from the fields of healthcare economics and social science, whereas the authors of this chapter were invited as researchers interested in studying technological infrastructures and organizational aspects. Each of the different research groups developed their own research designs for the experiment. We, the authors, focused on how the project was received and integrated or translated by the specific wards, and we adopted a qualitative approach, as explained above. The healthcare economists created a research design concerned with quantitatively measuring the effect of the experiment in terms of various indicators (readmittance, length of stay, mortality rates etc.) in an effort to discover whether any differences could be measured between the effect of the DRG regime and the New Governance regime (Søgaard et al. 2015). The political scientists conducted interviews with the wards and produced a questionnaire. The questionnaire was sent to the practitioners from the wards included in the experiment as well as a control group from other wards. The social scientists were interested in using the questionnaire to detect and measure the effects of the experiment with regard to changes in the motivation and organizational culture of the employees. In sum, the experiment was carefully observed and analyzed with respect to its implementation and effects. Scientists from different research disciplines monitored the experiment and used tools, methods and theories from their own disciplines in order to produce knowledge which was relevant for their research fields, in turn contributing to the enactment of the project as a scientific object.

Concluding discussion

The three different ways of articulating and practicing the experiment presented above make it possible to reflect on organizational experiments in general. We propose that the New Governance project is composed of different 'experiment' versions. The first version was open-ended and exploratory and conducted in a spirit of egalitarianism and trust in the healthcare professionals. Second, the project was an experiment whose intention was to break away from an existing governance regime and enable a transition

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

of healthcare with the main objective of delivering quality and efficient financial governance. And third, the project was an experiment in the sense that it was an object of inquiry by a group of researchers—an object of scientific research.

One could argue that these different versions of the experiment make the project ill-defined and multifaceted, perhaps even contradictory and inconsistent, and thus more likely to fail. But we would suggest instead, as shown in STS, and in accordance with the idea of the experiment as an assemblage, that heterogeneity is actually what realizes objects and brings them into existence (Rheinberger 1997, Latour 1999, 2000, Stengers 2000, Jensen 2004). Close empirical scrutiny of apparently simple objects reveals complexity. As Donna Haraway has argued throughout her work, existence is premised by multiple and partial relations (Haraway 1990, 2016, Strathern 2004).

The three versions of the experiment thus form a partial and heterogeneous assemblage. If we try to relate them to each other, we may learn how they (despite their different characteristics) come together as a heterogeneous 'whole', with each of the versions helping in different ways to realize the project. First, describing the project to the wards as a journey into space, thus presenting them as the agents of innovation, serves as an eloquent effort to motivate the wards. No grand expectations, requirements and specific goals are stated, but full autonomy is granted with regard to defining quality criteria. In many respects, this approach presents the task as something which demands very little of the wards, with the wards being regarded as fully competent and trustworthy (although, as mentioned, the freedom was also experienced as frustrating). Second, referring to the experiment as a vehicle for governance reform speaks to a broader societal issue concerning efficiency and quality in public healthcare and the obvious value of focusing on healthcare quality without considering the financial implications. This is a way of promoting the experiment in relation to broader societal matters of concern. Third, regarding the experiment as an object of scientific inquiry is yet another way of realization and making it relevant. The academic world is an important part of contemporary society that may help the project both by disseminating knowledge about the project, and as a means of approving the project and granting it authority and credibility. Overall, the three versions of the experiment which were articulated and performed during the project address different concerns and parts of society and thereby performatively help in realizing the project. By way of 'the experiment', the project becomes relevant to various actors and

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

these are thereby mobilized and associated with the project (Latour 1987).

Apart from focusing chiefly on how the three versions of the experiment combine to form a strong assemblage, it is also worth pointing out that this assemblage has certain potential weaknesses. For instance, as indicated above, the downside to regarding the experiment as a journey into space was that the wards did not feel that they were given sufficient support, time and resources by the Region to take on the project. In addition, our fieldwork showed that many of the healthcare professionals did not share the Region's rationale and argumentation for breaking away from the existing DRG governance regime, although they did share the agenda of harmonizing concerns with productivity and quality for the patient (Bonde/Bossen/Danholt 2018).

Another important point to make is that we do not mean to suggest that the three versions of the experiment constituted a deliberate managerial strategy which was somehow masterminded by the Region. Rather, we suggest that the three versions *emerged* as the project developed. We see them as growing out of the project—a practice in which various features are added gradually. Having said this, we still think that the concept of the 'experiment' lends itself particularly well to such an emergent, growing practice. Because, in the common use of the term, experimentation connotes both open-ended exploration *and* scientific authority, procedure and knowledge. These two aspects taken together make it an elastic and inclusive term and boundary object (Star/Griesemer 1989).

In conclusion, we maintain that the different versions of the experiment intrinsic to the project may fruitfully be considered an assemblage despite the inconsistencies involved. We argue that in social, organizational and societal issues what matters is not whether things are coherent and create a consistent whole from a specific analytical point of view. What matters is "what might happen?"; "what might the organization evolve into?"; "what would "we" like to be in the future?" These are concerns that are both inherently pragmatic *and* imaginative. We hope that this chapter can help to increase the focus devoted to such heterogeneous assemblages and the processes by which they are formed, because the ability to understand and appreciate these formations in organizational/societal/social practices increases our abilities to intervene and create novel practices and organizational formations.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

Literature

Barry, Andrew (2001): *Political machines: governing a technological society*. London; New York: Athlone Press.

Bonde, Morten; Bossen, Claus and Danholt, Peter (2018): "Translating value-based health care: an experiment into healthcare governance and dialogical accountability", in: *Sociology of Health & Illness*. Online: 10.1111/1467-9566.12745 (accessed August 20, 2018).

Castells, Manuel (2003a): *Internet galaksen: refleksioner over Internettet, erhvervslivet og samfundet*. 1. udgave, 1. oplag. Århus: Systime.

Castells, Manuel (2003b): *The Internet Galaxy: reflections on the internet, business, and society*. Reprinted. Oxford: Oxford Univ. Press.

Chesbrough, Henry W. (2007): *Open innovation: the new imperative for creating and profiting from technology*. Boston: Harvard Business School.

Clarke, Adele E. (2005): *Situational analysis: grounded theory after the postmodern turn*. Thousand Oaks CA: Sage Publications.

Fetter, Robert B. and Freeman, John L. (1986): "Diagnosis Related Groups: Product Line Management within Hospitals", in: *The Academy of Management Review* 11 (1), p. 41.

Glaser, Barney G. and Strauss, Anselm L. (2009): *The discovery of grounded theory: strategies for qualitative research*. 4. paperback printing. New Brunswick: Aldine.

Corbin, Juliet M. and Strauss, Anselm L. (1993): "The Articulation of Work through Interaction", in: *The Sociological Quarterly* 34 (1). pp. 71–83.

Gooding, David; Pinch, Trevor and Schaffer, Simon (1989): *The Uses of experiment: studies in the natural sciences*. Cambridge [England]; New York: Cambridge University Press.

Hacking, Ian (1983): *Representing and intervening: introductory topics in the philosophy of natural science*. Cambridge [England]; New York: Cambridge University Press.

Haraway, Donna J. (1990): *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: Routledge.

Haraway, Donna J. (2016): *Staying with the trouble: Making kin in the Chthulucene*. Durham NC: Duke University Press.

Jensen, Casper B. (2004): *Researching partially existing objects: What is an electronic patient record? Where do you find it? How do you study it?* Århus: Science Technology Society.

Knorr-Cetina, Karin (1999): *Epistemic Cultures: How the Sciences Make Knowledge*. Cambridge [England]; New York: Cambridge University Press; Harvard University Press.

Latour, Bruno (1987): *Science in action: how to follow scientists and engineers through society*. Cambridge MA: Harvard University Press.

Latour, Bruno (1999): *Pandora's hope: essays on the reality of science studies*. Cambridge MA: Harvard University Press.

Latour, Bruno (2000): "On the partial existence of existing and non-existing objects", in: Lorraine Daston (ed.): *Biographies of scientific objects*. Chicago: University of Chicago Press.

Latour, Bruno and Woolgar, Steve (1986): *Laboratory Life: The Construction of Scientific Facts*. Princeton NJ: Princeton University Press.

Law, John (1991): *A Sociology of monsters: essays on power, technology, and domination*. London: Routledge.

Law, John and Hassard, John (1999): *Actor network theory and after*. Oxford [England]; Malden MA: Blackwell/Sociological Review.

Law, John and Mol, Annemarie (2002): *Complexities: Social Studies of Knowledge Practices*. Durham NC: Duke University Press Books.

Mistichelli, Judith A. (1984): *Diagnosis related groups (DRGs) and the prospective payment system: forecasting social implications*. Washington DC: Kennedy Institute of Ethics, Georgetown Univ.

Mol, Annemarie (2002): *The body multiple: ontology in medical practice*. Durham [et al.]: Duke University Press.

Møller Pedersen, K. (2006): *Incitamentsstyring i sygehusvæsenet: virkningen af øget takststyring og tilhørende incitamenter*. Odense DNK: Syddansk Universitetsforlag.

Morgan, Gareth (2016): *Images of organization: 30th anniversary edition*. Place of publication not identified: Sage Publications.

Packendorff, Johann and Lindgren, Monica (2014): "Projectification and its consequences: Narrow and broad conceptualisations", in: *South African Journal of Economic and Management Sciences* 17 (1), pp. 7–21.

Rheinberger, Hans-Jörg (1997): *Toward a history of epistemic things: synthesizing proteins in the test tube*. Stanford, CA: Stanford University Press (Writing science).

Rheinberger, Hans-Jörg (2010): *An Epistemology of the Concrete: Twentieth-century Histories of Life*. Durham NC: Duke University Press.

Rose, Nikolas and Miller, Peter (2008): *Governing the Present: Administering Economic, Social and Personal Life*. Cambridge [et al.]: Polity Press.

Serres, Michel (1995): *Conversations on science, culture, and time*. Ann Arbor: University of Michigan Press.

Schaffner, Simon and Shapin, Steven(2017): *Leviathan and the air-pump: hobbes, boyle, and the experimental life*. Princeton, NJ: Princeton University Press (Princeton classics).

Søgaard, Rike; Kristensen, Søren Rud and Bech, Mickael (2015): "Incentivising effort in governance of public hospitals: Development of a delegation-based alternative to activity-based remuneration", in: *Health Policy* 119 (8), pp. 1076–1085.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

Star, Susan Leigh and Griesemer, James R. (1989): "Institutional ecology, 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39", in: *Social studies of science* 19 (3), pp. 387–420.
Stengers, Isabelle (2000): *The invention of modern science*. Minneapolis: University of Minnesota Press.
Strathern, Marylin (2004): *Partial connections*. Walnut Creek, CA: AltaMira Press.
von Hippel, Eric (2006): *Democratizing innovation*. Cambridge MA; London: MIT Press.

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -

https://doi.org/10.14361/9783839446386-013 - am 13.02.2026, 20:28:47. https://www.inlibra.com/de/agb - Open Access -