



UiO : TIK – Senter for teknologi, innovasjon og kultur
Det samfunnsvitenskapelige fakultet

Studying life «in and out» of the life sciences



Tone Druglitrø, 22. august 2024

Overarching questions

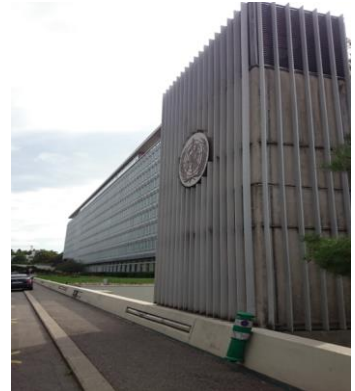
- How is knowledge about life and life processes made? With what tools and what infrastructures (material, ethical and legal)?
- How are these practices situated in and tied to societal and economic concerns?
- What forms of expertise and knowledge traditions are relevant?
- How do we regulate and administer life matters? Who are included in the “collective” and who are not?
- How and with what means do we value and care for nonhuman animals in science and society?



Life Science
UiO : University of Oslo



UiO strategy for the life sciences



Animal Welfare Act.

Chapter 1 General requirements

§1. Scope.
The extension of this Act is to promote good animal welfare and respect for animals.

§2. Scope.
This Act applies to conditions which affect welfare of a request for mammals, birds, reptiles, amphibians, fish, decapods, squid, insects and honey bees. The Act applies equally to the development stages of the animals referred to in cases where the welfare appears to be equivalent to the developmental level of living animals.

The Act applies, subject to the limitations allowed for by agreement with foreign nations or organizations, to Norwegian land territory, territorial waters, the Norwegian economic zone and Norwegian ships and aircraft, on installations located on the Norwegian continental shelf, and to Svalbard, Jan Mayen and the dependencies. The King may by regulation issue specific requirements for Svalbard, Jan Mayen and the Norwegian dependencies, taking into regard local conditions.

§3. General requirement regarding the treatment of animals.
Animals have an intrinsic value which is independent of the value which they may have for man. Animals shall be treated well and be protected from danger of unnecessary stress and strain.

§4. Duty to help.
Anybody who discovers an animal which is obviously sick, injured or helpless, shall as far as possible help the animal, if it is impossible to provide adequate help, and the animal is domestic or a large wild animal, the name of the species shall be stated immediately.

If it is obvious that the animal will not survive or recover, the person who discovered the animal may kill it at once. However, animals from holdings

u Anna Marie

RETTIGHETSNAKROEN FOR DYR 1972 ○○○○○○ RETTIGHETSNAKROEN

Erklæring om dyrenes rettigheter

Vil gratulerer Karlend denne erklæring om dyrenes rettigheter. Vi vil at ettersom menneske og enhver annen menneskegjort art er bevisstløs, er dyrene ikke i stand til å forstå menneske og menneskegjort art. Derfor er det ikke etisk å betrakte dem som objekter, men som personer med egne rettigheter.

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Frie Dyrevelforeningens Fellestad,
medskriver Torleif Bull Nym, president



Approaches: Ethnography, archive studies, document studies, interviews



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ORIGINAL RESEARCH

Nonhuman Primates in Public Health: Between Biological Standardization, Conservation and Care

Tone Drøglite 

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Abstract
 By the mid-1960s, nonhuman primates had become key experimental organisms for vaccine development and testing, and was seen by many scientists as important for the future success of this field as well as other biomedical undertakings. A major hindrance to expanding the use of nonhuman primates was the dependency on wild-caught animals. In addition to unreliable access and poor animal health, prevention of wild primates involved the circulation of infectious diseases and thus also public health hazards. This paper traces how the World Health Organization (WHO) became involved in the issue of primate supply, and shows how by the late 1960s concerns for vaccine development and the conservation of wildlife began to converge. How did the WHO manage public health and animal health? What characterized the response and with what implications for human and animals? The paper explores how technical standards of care were central to managing the conflicting concerns of animal and human health, biological standardization, and conservation. While the WHO's main aim was to prevent public health risks, I argue that imposing new standards of care implied establishing new hierarchies of human and animals, and cultures of care.

Keywords: Nonhuman primates · Biological standardization · Care · Conservation · Vaccines · Public Health · The World Health Organization

In 1971, the World Health Organization (WHO) organized an international symposium in collaboration with the University of Berne and the Swiss Serum and Vaccine Institute about the handling of primates for laboratory use. The Berne symposium was one of several meetings that would be organized by the WHO in the coming decades that addressed the problems of supply, health hazards, breeding and use of nonhuman primates in the context of the continuous decline of natural

Source in Context 27(2), 133–157 (2014). © Cambridge University Press 2014. The online version of this article is published online in Open Access immediately subject to the conditions of the Creative Commons Attribution licence (<http://creativecommons.org/licenses/by/3.0/>) available at www.cambridge.org/core.

Building Transnational Bodies: Norway and the International Development of Laboratory Animal Science, ca. 1956–1980

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Argument

This article adopts a historical perspective to examine the development of Laboratory Animal Science and Medicine, an auxiliary field which formed to facilitate the work of the biomedical sciences by systematically improving laboratory animal production, provision, and maintenance in the post-Second World War period. We investigate how Laboratory Animal Science and Medicine co-developed at the local level (responding to national needs and concerns) yet simultaneously transnational in orientation (responding to the scientific need that knowledge, practice, objects and animals circulate freely). Adapting the work of Tsing (2004), we argue that national differences provided the context “frictions” that helped drive the formation of Laboratory Animal Science and Medicine as a transnational endeavor. Our analysis engages with the themes of this special issue by focusing on the development of Laboratory Animal Science and Medicine in Norway, which both informed wider transnational development and was formed by above. We show how Laboratory Animal Science and Medicine can only be properly understood from a spatial perspective; while it developed and was structured through national “centers,” transnationalism was constituted through international networks through which knowledge, practice, technologies, and animals circulated.

More and better laboratory animals are today required than ever before, and this demand will continue to rise as it is key part with the growing interest of biological and sensory research. The provision of this living experimental material is a large local problem, local, that is, to the research institution. It has become a national concern, and, in some of its aspects . . . even international. (Wilson-Lane Centre 1972, 248)

Writing in 1957, William Lane-Petter, a leading British expert on laboratory animal production, provision, and management, identified three formative and interrelated demands that had shaped and sustained the rapid growth of the biomedical sciences during the years immediately following the Second World War: more laboratory



Article

“Skilled Care” and the Making of Good Science

Tone Drøglite 

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Abstract

This article investigates the construction of laboratory animal science as a version of “good science.” In the 1950s, a transnational community of scientists initiated large-scale standardization of animals for biomedicine, which included the standardization of care of laboratory animals as well as the development of guidelines and regulations on laboratory animal use. The article traces these developments and investigates how the standardization work took part in creating laboratory animal as compound objects of care—and laboratory animal science as being an epistemically ethical practice—as good science. Importantly, the analysis shows how technological development is inseparably accompanied by ethics, as it is the result of complex social organization involving multiple ethical commitments. By investigating the development of laboratory animal science historically, it is possible to tease out how values, norms, and standards have been made integral to specific practices in the first place and how they have developed and been sustained over time. The article contributes to current concerns in science and technology studies about how life is made, valued, and ordered at the intersection of science and society and in biomedicine.

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 18(2), 484–520, 2017
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OPEN ACCESS

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Abstract
 Animal research has always been debated on moral and ethical grounds. Nonpersonhood or organizationality respectively mitigate the lack of autonomy and transparency around the use of animals in science. In response to the moral objections and transparency issues, the most important decade has emerged in new ways in systems and practices of housing animal research in the US, institutionalized and conceptualized by a “humanistic framework” for housing systems to increase the animals’ empirical and utilitarian and balancing between “harm” and “benefit” on one extreme to foster a culture of care.

Keywords:
 Science and Technology
 Higher Education
 Healthcare Practice

The research is a product of all care elements from between science and society, science and policy, and human and animal. Long-held academic to be loosely played by systems that can be traced into learning practices. Performing human-health animals in this context can suffer “prevention care” while providing care is meant to improve conditions in animal research. A key theme is animal welfare that through practice, yes, prevention care is a given position to bring together types of care and more deeply engage with the relationship among them. Conceptually and methodologically, prevention care calls for the study of care in the administrative and legal domain.

Introduction

Animal research has always been controversial. Accordingly, since the second half of the nineteenth century, governments in Europe have sought to regulate the use of animals in science (Ladd, 2006, p. 90; see also 2000). Being deemed both a morally problematic and socially necessary practice for biomedical knowledge production, generating animal research has proved to be complex. In Norway, this article’s empirical case, significant changes have been made to the licensing system in the past decade. This development must be seen as a

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Article

Experimenting with care and cod: On document-practices, versions of care and fish as the new experimental animal

Tone Drøglite ¹ and Kristin Aisla ²

Abstract

A key ambition in care studies has been to study care in practice and on practice. By tracing concrete practices, care studies has revealed visible and acknowledged important work that is not captured through looking at formal procedures or official and written materials, such as policy documents and medical protocols. In the literature, document materials and the written have often been seen as unable to demonstrate and address the ‘specificities of care’ (Prid et al., 2010, p. 79). We challenge this view by showing how pragmatically-oriented approaches can be extended to the procedural and formalized aspects of care practices. We draw upon feedback in the life sciences—comparative immunology—investigated through experiments on Atlantic cod (*Gadus atlanticus*). How to care for fish as a contested domain, every concentration around how to care for fish as that legal requirements are met. We ask: How are existing legal and ethical principles and procedures put to work to cod immunology and animal research? By what document-practices and document-tools is care for cod in research negotiated and settled? How does the cod stand out as an object of care in the life sciences? Our article answers these questions by empirically tracing out how scientists negotiate the terms and arguing for the importance of bringing the document-based realities of animal research into analysis. We do this by delineating three different versions of care: procedural care, skilled care, and disposition care.

Keywords

care studies, document analysis, animal research, fish, laboratory studies

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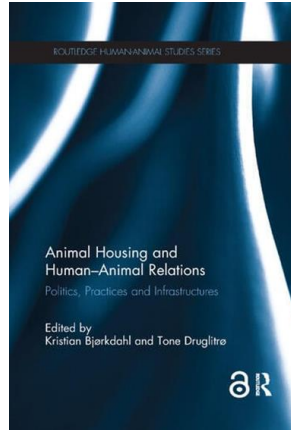
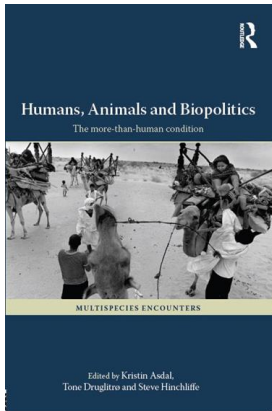
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Tracing Data Flows in Norway and Austria: A Comparative Study of Vaccination Data Governance

Tone Druglitra

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Abstract

The increased importance of datafication in different domains of society, and health in particular, has generated much attention in STS, specifically in the Nordic context. While much of this literature tackles newly emerging forms of data governance, we focus on a historically established and mundane data practice: that of recording vaccinations in vaccine registries. We mobilise the concept of data flows to compare the link between registry practices and governance in two countries: Norway – a data intensive welfare state – and Austria, which we label ‘data hesitant’. We ask: What is the role of registries in vaccination governance? How do data practices shape and reflect relations between citizens, health providers and the state? We show that the governance of immunity is interlocked with the material and political circumstances that make data flow. The paper makes visible the benefits of doing situated comparisons for better understandings of data practices across countries.

Keywords: Registries, Vaccination Governance, Data Flows, Norway, Austria

Introduction

The COVID-19 pandemic revealed the immediate relevance of immunisation data for vaccination governance. For many national immunisation programs, data registry practices appeared insufficient for providing an accurate account of vaccine coverage or target risk groups, and to make prioritizations as to who should be vaccinated and when. One example is Austria, where in January 2022, the parliament passed a new law by which

COVID-19 vaccination became mandatory for residents above the age of 18 (with several exemptions). Yet amongst other things, it was unclear how those who had not been vaccinated could be identified and how compliance with the vaccine mandate could be monitored. It appeared impossible to link the newly established vaccine registry with the existing population registry and the epidemiological registry (which records people who

CHAPTER 6

When Authority Goes Viral: Digital Communication and Health Expertise on *pandemi.no*

Kristian Bjørkdahl and Tone Druglitra

Abstract One of the most pressing questions concerning pandemic preparedness and response today is how digital media can and will change pandemic communication: In a future pandemic, effective use of digital media could mean the difference between marginal and massive loss of human lives. In this chapter, we are interested in how medical experts can retain their status in an environment where many—partly because of digital media—have come to distrust mainstream expertise. We study the Norwegian health authorities’ emergency web page, *pandemi.no*, and argue that it failed to use the affordances of the medium to develop features that acknowledge the actual concerns and voices of the public.

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(Sustainable) life and innovation in the life sciences and the economy



Life Science
UiO : University of Oslo



UiO strategy for the life sciences



UiO strategy for the life sciences (2014)



Today the life sciences have an enormous field of application. DNA analyses have become a powerful evidence in court cases. Aquaculture is among Norway's prime sources of revenue as gaining new analytical instruments and tools. Synthetic bacteria can create designer 1 biodevel? DNA-based diagnostics are becoming increasingly precise, not least in the early effective new drugs developed with the input of the life sciences will soon become available accurate basis for personalized therapy and preventive health interventions. New experts can improve many people's lives. Politicians must continually discuss the ethical choices as us with. Climate impacts demand an understanding of ecology and interaction. Green Ind sciences. Both the OECD² and the US government³ expect the bioeconomy to grow and to international economy. Many sectors are affected by the life sciences. So far we have only the Life Sciences⁴. Illustration photos from colourbox.com.

Global challenges

Global challenges in our era are many and demanding – global warming, unequal access to energy, water and food, an ageing population, poor health and pandemics. The EU's 2009 Land Declaration affirms that research must focus on "The Grand Challenges." Similar recommendations are found in reports from the OECD,² EU's National Academy of Sciences,³ and the Massachusetts Institute of Technology.⁴ The Norwegian government's recent white paper on research⁵ adopted a corresponding perspective. If research is to contribute more effectively to solving such complex problems, we

must remove the rigid the solutions. Other approach renewal through enhance initiated by the research o leadership, further develo excellence and good actec knowledge institutions, as leading research. As many biological aspect, the life s key role in the future.

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Choreographies of co-modification: Instrumentizing cod for immunology and the bioeconomy

Abstract

Based on ethnographic fieldwork among an interdisciplinary group of scientists experimenting with the Atlantic cod, this paper takes up recent invitations to engage more directly with the social and economic contexts of experimental organisms (see Bolman, 2022a). The paper shows how equipping a species to do experimental work is not necessarily about having it perform only *one type of job* or performing in *one, and exclusively one, site* (Clarke & Fujimura 1992). On the contrary, an experimental organism may be promising and interesting due to how it can be put to work to perform both in and for science, and in and for the economy, simultaneously. In analyzing this double entendre, the paper draws upon *co-modification* (AUTHOR 2015) and *choreography* (Cussins 1996). These are analytical concepts that have been carefully crafted in close empirical studies of nature, science, and economy. Our analysis is organized around what we see as a co-modification of the inside and the outside of the lab and the work that goes into this. This is combined with putting the notion of choreography to work in observing the material arrangement that establishes the rhythm in managing the biological and the technological in a disciplined and controlled lab site. Together we refer to this as *choreographies of co-modification*. The experimental life of the Atlantic cod, which is our object study, serves here as an entry point for understanding a significant feature of contemporary life sciences, namely how scientists struggle to and are asked to contribute simultaneously to the advancement of science *and* the economy.

Key words: choreography, co-modification, experimental organisms, Atlantic cod, bioeconomy, aquaculture, immunology

Article

Experimenting with care and cod: On document-practices, versions of care and fish as the new experimental animal

Tone Druligro and Kristin Asdal

Abstract

A key ambition in care studies has been to study care in practice and as practice. By turning towards practices, care studies has rendered visible and acknowledged important work that is not captured through looking at formal procedures or official and written materials, such as policy documents and medical protocols. In this literature, document materials and the written have often been seen as unable to demarcate and address the "specificities of care" (Fol et al., 2016, p. 9). We challenge this view by showing how pragmatically-oriented approaches can be attended to the procedural and formalized aspects of care practices. We draw upon fieldwork in the life sciences—comparative immunology—investigated through experiments on Atlantic cod (Gadus Morhua). How to care for fish is a contested domain; many uncertainties arise around how to care for fish so that legal requirements are met. We ask: How are existing legal and ethical principles and procedures put to work in cod immunology and animal research? By what document-practices and document-tools is care for cod in research negotiated and sorted? How does the cod stand out as an object of care in the life sciences? Our article answers these questions by empirically teasing out how scientists navigate the terrain and arguing for the importance of bringing the document-based realities of animal research into analysis. We do this by delineating three different versions of care: procedural care, skilled care, and dispositional care.

Keywords

care studies, document analysis, animal research, fish, laboratory studies

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- (1) how researchers in the life sciences are being held accountable to society and the economy and what that practically means,
- (2) the work and means that it takes to sustain a career and a research environment, and
- (3) how the life of nonhumans in the life sciences are valued and cared for.

