Death, retirement or redeployment for unproductive farm animals? Dispositional tensions in organizational routines

François Charrier, Juliette Cognie, Genevieve Aubin-Houzelstein, Morgane Costes-Thiré, Vanina Deneux-Le Barh, Valérie Fillon, Victoria Fluckiger-Serra, Félix Jourdan, Aurore Kubica, Léa Lansade, et al.

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Abstract:	Human-animal relationships, including ethic of care relationships, are of growing interest to organisation studies, reflecting the substantial role of animals in organizing processes. While some scholars approach these as working relationships, almost no studies examine the organizational routines established to manage animals in the period after they have been retired (due to age, illness, or lack of productiveness). Through a multiple case study of four contrasting sectors in France (dairy ewes, horses, experimental animals, hens), we use dispositional analysis to examine variations in the performance of such routines. Our results show that death dispositives are the most common (animals other than horses are killed immediately on stopping work), but that operators often attempt to implement opportunistic dispositives to 'save' animals and guarantee them a decent retirement. The culling routine is highly conflictual and a source of mistrust and suffering, not least because the ethic of care relationships between operators (farmers, technical advisers, ranchers, animal carers, researchers, slaughterhouse employees, veterinarians etc.) is variable. The numerous conflicts between elements in the dispositive (actors, instruments, discourses, values, places, machines, etc.) allow us to discuss the stabilizing and/or dynamizing effects of

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Editors of the section Organizational behavior and Business Ethics
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Paris, the 22nd of July 2024

Dear Editors,

We are pleased to submit our manuscript entitled "*Death, retirement or redeployment for unproductive farm animals? Dispositional tensions in organizational routines*", for consideration for publication in the *Journal of Business Ethics*.

Living and working with animals is a recent scientific field in organization studies, which raises burning questions about how we organize our relationship to them. This issue has been addressed for example, in dedicated tracks in Organization Studies conferences (the 2023 EGOS Colloquium for instance), in the recent publication of the *Oxford Handbook of Animal Organization Studies* (2023), or even in several recent articles published in *Journal of Business Ethics* (for instance Clarke and Knights, 2021; Christensen and Lamberton, 2021; Tallberg and al., 2021). These are the reasons why we are convinced that your journal is the best forum to reach this emerging community of scholars working on this field of study, to increase visibility of the scientific issues at stake, and to enhance scientific advances and debates on these burning questions.

It is our ambition to participate to this scientific endeavour, as our study deals with an unthought dimension of our working relations with animals, especially in the case of farm animals: the management of the end of their working period. Indeed, building on seminal theorizations that consider the human-animal relationship as a working relationship, we wondered how operators manage the end of animals' labour and how recent surges of ethical issues dramatically questions livestock sectors organization. Our study was conducted by an inter-disciplinary research team (organization and sociology scholars, but also ethologists, animal scientists, lab technicians…) who wanted to question the animal production rationalization through the lens of these issues.

But above all, we wanted to question and challenge organization studies concepts and analytic grids on this uncommon thematic. That is why we built a theoretical framework aiming at questioning the concept and properties of organizational routines, especially through the ethical dimensions. As the management of the end of animals' labour is a highly distributed routine, performed by thousands of operators (farmers, veterinarians, scientists and animal caretakers, slaughterhouses…), and subject to societal controversies, it is a formidable research object to question the stability of a routine, its dynamic, ethics and finally, to highlight the real operators' agency. If our results call for societal debates on the kind of relationships with animal our societies want to build, analysing this routine through *dispositional analysis* enabled us to avoid universal explanations (such as bureaucracy, management logics, etc.), but to identify precise points of tensions between heterogeneous elements of the routine, hence opening ways to improve its performance, its structural organization, and making it less suffering for operators. At last, in order to strongly challenge our theoretical framework and analytic grids, our research design was made of four case studies *a priori* characterized by great differences in this organizational routine structure and execution (dairy ewes, old horses, experimental farm animals and hens).

This manuscript is an original work and has been read and approved by all of the authors. This manuscript has not been submitted to any other journal and is not currently being considered by another journal for publication. The authors declare no conflicts of interest. The study was presented through a communication at the *2023 EGOS Colloquium* and we wrote the manuscript considering the various commentaries that were made by the audience.

We thank you for the attention you will pay to our work, and hope you will be considering our manuscript for publication.

We are looking forward to hearing from you.

Sincerely yours,

Charrier François, Cognie Juliette, Aubin-Houzelstein Geneviève, Costes-Thiré Morgane, Deneux – Le Barh Vanina, Fillon Valérie, Fluckiger-Serra Victoria, Jourdan Félix, Kubica Aurore, Lansade Léa, Mouret Sébastien, Nivelle Charline, Raspail Alice, Tapie Suzanne, Porcher Jocelyne.

Death, retirement or redeployment for unproductive farm animals? Dispositional tensions in organizational routines

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Authors' contributions:

François Charrier contributed to the building of the theorical framework of the study, to the study design and execution, data analysis and interpretation, preparation, writing (major contribution) and final approval of the manuscript. Juliette Cognie and Geneviève. Aubin-Houzelstein contributed to the study design and execution, data analysis and interpretation, preparation, writing and final approval of the manuscript. Morgane Costes-Thiré, Vanina Deneux – Le Barh, Valérie Fillon, Victoria Fluckiger-Serra, Félix Jourdan, Aurore Kubica, Léa Lansade, Sébastien Mouret, Charline Nivelle, Alice Raspail, Suzanne Tapie and Jocelyne Porcher contributed to the study design and execution and final approval of the manuscript.

Compliance with Ethical Standards:

- **Conflicts of interest**: The authors declare that they have no conflict of interest/
- **Research involving human participants and/or animals**: This study did not involve animals; no personal or sensitive data were collected during interviews, in compliance with the European Union policy GDPR (General Data Protection Regulation).
- **Informed consent**: Informed consent was obtained from the individual participants interviewed in the study.

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ABSTRACT

Human-animal relationships, including ethic of care relationships, are of growing interest to organisation studies, reflecting the substantial role of animals in organizing processes. While some scholars approach these as working relationships, almost no studies examine the organizational routines established to manage animals in the period after they have been retired (due to age, illness, or lack of productiveness). Through a multiple case study of four contrasting sectors in France (dairy ewes, horses, experimental animals, hens), we use dispositional analysis to examine variations in the performance of such routines. Our results show that death dispositives are the most common (animals other than horses are killed immediately on stopping work), but that operators often attempt to implement opportunistic dispositives to 'save' animals and guarantee them a decent retirement. The culling routine is highly conflictual and a source of mistrust and suffering, not least because the ethic of care relationships between operators (farmers, technical advisers, ranchers, animal carers, researchers, slaughterhouse employees, veterinarians etc.) is variable. The numerous conflicts between elements in the dispositive (actors, instruments, discourses, values, places, machines, etc.) allow us to discuss the stabilizing and/or dynamizing effects of the performance of the routine at multi-organizational level, revealing the lack of agency of the operators who directly work and live with animals. As the concretization of a technology that governs our relationship with animals, this routine must be collectively questioned so that we can exit the ethical blindness associated with it and move instead towards a form of ethical foresight.

Introduction

The ethical basis for livestock farming, and particularly industrial farming, is currently a topic of heated debate. Meanwhile, in the field of organization studies, the business, management and organizational aspects of the human-animal relationship have attracted growing interest (Anthony, 2012; Connolly and Cullen, 2018; Tallberg and Hamilton, 2023) while the development of an ethic of care framework has extended stakeholdership to animals in organizing processes (Tallberg et al., 2022). Although organized animal labour is viewed as a working relationship by some schools of thought (Porcher, 2017; Peterson, 2021; Tallberg et al., 2022), it generally concludes with the violent killing of the animal. Indeed, the killing of domestic animals is the main way to manage termination of animal labour in many sectors, including livestock farming, leisure and animal experimentation (Rémy, 2006; Wilkie, 2010). Killing is even viewed as 'routine', an essential element of the zootechnical rationalization of livestock farming and, more generally, of activities involving animal labour (Wilkie, 2010; Hamilton and Taylor, 2012). This 'routine' has not escaped criticism from both members of the public who are conscious of its violence against animals and farmers who themselves feel emotional distress at the process. Some studies have highlighted efforts to avoid the suffering caused, and a handful of joint initiatives have emerged to ensure that animals are not killed immediately upon completion of their work (Rollot, 2022). The exit of domestic animals from labour is thus an interesting issue, in that it allows an interrogation of the concept of the organizational routine (Feldman and Pentland, 2003). This concept has been extensively studied from a number of angles, both to explain the discrepancies between an action's rationalization and its regular execution, and to improve organizational coordination and efficiency (Becker, 2004). It is highly pertinent to this stage in the life (or death) of animals, which is strongly framed by regular cognitive and operational patterns, while involving a diversity of actors whose behaviours may vary in the execution of the routine or its sub-routines (see Moulin et al., 2000) on the culling of farm animals, for example). The routine exit of farm animals from labour, when they become too old, sick, or insufficiently productive, is essential for farms to survive (Fetrow et al., 2006). As an operation, it is regular and repetitive, guided by technical, cognitive and organizational patterns. Performed by tens of thousands of people from different organizations (farmers, agricultural advisors, slaughterhouse employees, etc.), this routine is potentially highly variable in its performativity. It is a source of conflict, suffering, emotion, ethical issues, and dissatisfaction for the operators involved (Baran et al., 2016; Hannah and Robertson, 2021), while also being a potential driver of ethical blindness (Palazzo et al., 2012;

Kump and Scholz, 2022) or processes of 'adiaphorization' (Clarke and Knights, 2022). It thus provides an interesting case study through which to question the dynamics of routines, to explore the interdependence of their components (Kremser et al., 2019), and to attempt to explain why it is so difficult to break out of a schema that leads to the death of farm animals.

In our analysis, we shall treat this organizational routine as a 'Dispositif', in Foucault's sense (Foucault, 1980). This allows us to highlight the conflicts and tensions between the constraints and freedoms (Collier, 2009) that are expressed through the interactions of the routine's very diverse elements (1). We first carried out the dispositional analysis (Raffnsøe et al., 2019; Villadsen, 2021) of a multiple case study comprising four domains of animal labour: sheep dairy farming, scientific experimentation, hen egg production and the keeping of leisure/sport horses (2). To map the Foucauldian dispositive[1] for each case, we identified the networks of organizational patterns that traced out the many different ways of performing each routine. An analysis of the interactions between elements both within and between dispositives identified multiple conflicts and allowed us to infer that routine operators had only limited agency (3). These results led to a discussion of ways to combine micro and macro perspectives in approaching organizational routines, and of the interaction between the forms of ethic of care relationships, described in Connolly and Cullen (2018), that underlie the performance of the routine (4). This dispositional approach to a potentially unethical routine allows us to identify key elements and relationships that must be addressed collectively if we seek to change how we earn our livelihoods with working animals.

1. Theoretical framework: the organizational routine as a 'Dispositif'

We first discuss the considerable difficulties that can arise when seeking to combine micro and macro perspectives in the study of the dynamics of routines, drawing, in particular, on Foucauldian approaches to the study of management (1.1.). We then propose a 'mapping' of the different performances of the routines discussed here, through the lens of 'dispositional analysis' (1.2.). Last, we discuss the usefulness of this framework to tackle the question of the management of the end of animals' working lives (1.3).

1.1. Organizational routines: from micro to macro perspectives

Much has been written on the concept of organizational routines since the founding work of Nelson and Winter (Nelson and Winter, 1982). Feldman and Pentland's (2003) work introduced

[1] We have elected to use the English term 'dispositive' in this paper, see Section 1.2.

an important turn by considering routines to be highly dynamic rather than static. They proposed a definition of organizational routines as '*repetitive, recognizable patterns of interdependent actions, carried out by multiple actors*' (Feldman and Pentland, 2003, p. 93). They reframed routines as evolving products of action and as potential drivers for the processes of change and stabilization in an organization. These processes would be driven by the relationships between three aspects of routines: the ostensive dimension, represented by the conceptual schema of action; the performative dimension, manifested by the routine as it is practised, i.e., the way specific people act, in specific places and at specific times; and the artifacts that support the material execution of the routine (tools, computers, etc.). By focusing on the socio-materiality of routines (where actions are carried out by a socio-material ensemble that includes humans and non-humans), Feldman and Pentland (2003) explain how routines can be seen as scripts for action (or schemas to reach an organization's goals), that also have the potential to introduce change. The part played by the agency of individual operators has subsequently been explored, ranging from strict compliance with the rules to adaptive and creative behaviours (Becker, 2004; D'Adderio, 2008; Pentland et al., 2012).

The patterns, recurrence and formation-transformation effects of organizational routines lead theorists to characterize them as processual, operating as coordinators, driving consensus, 'truth' and learning, and stabilizing uncertain situations (Becker, 2004, 2008). Bringing an interactionist perspective to the theory of routine, the analysis of agents in action (or the action itself, in the case of Pentland et al. (2012)) allows us to explain modifications to the ostensive dimension of a routine and, by extension, changes in its associated artefacts and organizational structure (Leonardi and Barley, 2008). Pentland et al. (2012) thus argue that '*the macro-level dynamics of routines emerge from the micro-level relationship between specific actions and patterns of action*' (p.1485).

Although the agency of routine operators has been a central object of study, Labatut et al. (2012) have pointed out an apparent gap in the literature with regard to the shaping of practices by wider social processes, described as 'higher-level entities' (Salvato and Rerup, 2011) or institutional logics (Charue-Duboc and Raulet-Croset, 2014). Drawing on Salvato and Rerup's (2011) multi-level approach to bridge the micro and macro analysis of routines, Labatut et al. (2012) sought to bring this aspect of Foucauldian studies into management research. They followed Moisdon (1997) in framing routines as the expression of a managerial technology describable as a dispositive, made up of a technical substrate (techniques, models, databases, rules etc.), a managerial philosophy (conceptual system subtending management

rationalization, e.g., optimization, modelization) and an organizational model (roles, division of labour, shared scenarios, etc.). Labatut et al. (2012) demonstrated that Foucauldian approaches '*contradict both the ideas that managers will determine how a routine should work, and that actors have a large ability to create, alter and transform routines independently of prescribers* […]' (p 65), and that they allow us to go further in the analysis of the 'how' of power. If we take routines to be manifestations of disciplinary power that can be both repressive and creative (constraint vs freedom), then the Foucauldian concept of the 'Dispositif' is an appropriate lens through which to map the different performances of a routine, allowing an understanding of the relationships and interdependencies between the widely diverse elements that constitute the routine (Kremser et al., 2019), and to explain its dynamics.

Last, Kump and Scholtz (2022) have demonstrated that organizational routines may also be direct sources of unethical behaviours and ethical blindness. Drawing on Palazzo et al.'s (2012) definition of ethical blindness ('*the decision maker's temporary inability to see the ethical dimension of a decision at stake'*), these authors argue '*that unethical behavior may be deeply ingrained in an organization's routine procedures, including its related artifacts'* (p. 5), as operators do not (or are unable to) question the ethical dimension of their repetitive actions and habits. They cite two main characteristics of organizational routines that are sources of ethical blindness. First, their semi-automatic habit-based nature allows operators to improve task performance by economizing on their cognitive resources when no unexpected events interrupt operations. As it takes conscious effort to deviate from habits, they argue that strongly habit-based routines with little variation in their performance conditions are more likely to be a source of ethical blindness than routines that exhibit variety. Second, routines in complex operations (involving multiple operators in different organizations for example) are distributed in nature. For the operators, substantial effort is required to get the 'full picture' (and to perceive ethical issues), while responsibility is diffused amongst the multiple operators, creating a collective responsibility gap that is reinforced if the system allows no opportunity to raise and process ethical issues or to evaluate the routine on an ethical basis. Last, they point out the role of material and digital artefacts (e.g. standard operating procedures) where ethical issues are not represented, but they also see the production of new artefacts (e.g. codes of conduct) as a way to improve the ethics of a routine. This work suggests that we could consider, in our own dispositive-based approach, how ethical elements are incorporated or not into the complex arrangement that forms the performance of the routine.

1.2. Dispositional analysis of the sedimentation processes of routines

Interdependencies between very disparate elements, be they human or non-human, discursive or non-discursive, lie at the heart of what Foucault (1980) termed a 'Dispositif.' We have accordingly chosen to follow a number of readings of Foucault's work (Raffnsøe, 2008; Collier, 2009; Raffnsøe et al., 2019; Villadsen, 2021) in analysing our routine as a 'Dispositif', that is, as '*a thoroughly heterogeneous ensemble consisting of discourses, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions – in short, the said as much as the unsaid. Such are the elements of the [dispositif]. The [dispositif] itself is the system of relations that can be established between these elements*' (Foucault, 1980). No English word captures the richness of Foucault's Dispositif.

The above readings of Foucault's work employ dispositional analysis to study precisely how networks of heterogeneous elements are constituted, asserted and objectified in the quest for organizational order, and how each dispositive operates a '*sedimentation of social relations*', forming '*a relational entity that is distinctive precisely by virtue of a well-defined relationship between its isolated parts*' (Raffnsøe, 2008). This Foucauldian mapping can be usefully applied to routines, allowing identification of those elements and relationships that contribute to a routine's mechanisms of change or stability.

French scholars working on management dispositives have, moreover, revealed these to be incomplete due to the bounded rationality of managers (Hatchuel and Molet, 1986; Moisdon, 1997; Barbier, 2007). Because of this incompleteness, operators undergo a process of subjectification, becoming subjects and building meanings for their actions according to their own evaluation of the situation in which they perform the routine (Aggeri, 2017; Raffnsøe et al., 2019). Changes in a routine can, then, be seen as changes in the disposition of the different elements of the dispositive (termed '*reconfiguration*' by Collier, 2009). Such reconfiguration mechanisms thus offer a way to study the agency of operators, framing them as a nexus of relations whose dynamics derive from what Collier (2009) calls a '*topology of power'*. Indeed, seen through the prism of dispositional analysis, where agency is considered to be distributed and co-produced through multiple forms of subjectification (Raffnsøe et al., 2019), routines would be co-produced by a multitude of interacting agents, becoming sites of conflicts and tensions. This hypothesis contradicts the view that routines are drivers of coordination between

operators, or drivers of 'truth' (Becker, 2004), especially those routines that are strongly bound up with emotions, as in the relationship between humans and farm animals (Wilkie, 2010).

1.3. The culling of animals: an ethically questioned and disputed inter-organizational routine

Within the wider livestock sector, the killing of animals can be viewed as an organizational routine and, from a Foucauldian perspective, as a governing/managerial technology that raises urgent questions about its ethical foundations (Anthony, 2012), up to and including its legitimization of cruelty towards animals (Christensen and Lamberton, 2022). Recent studies on human - farm animal relationships have pointed to the numerous emotional problems and organizational issues that accompany the routine killing of animals (Mouret and Porcher, 2007; Mouret, 2012a; Wilkie, 2010; Baran et al., 2016; Hamilton and McCabe, 2016), even when professionals are appointed to oversee slaughterhouse activities (Mathy, 2020). But the culling of animals, that is, their exit from productive work, need not necessarily lead to their killing. Indeed, scholars have recently developed a view of the human-animal relationship as a working relationship, or partnership (Mouret, 2012b; Porcher, 2017). These studies describe farmers' perceptions of their animals and the emotions involved in the acts of breeding, rearing – and killing – animals. They report on practices that avoid the immediate slaughter of animals on completion of the productive period of their lives and suggest that preserving an animal's life can be framed as part of an exchange of gifts between animal and human, or as a reward (Mouret, 2022).

The study at farm scale of culling as a routine excludes consideration of such alternatives to animal death or the relationships between the different elements of the routine, in particular between the organizations involved. In fact, the management of the end of an animal's working life involves a wealth of knowledge and many organizations, tools, and strategies etc. The list of elements is long, including technical advisers (who use various indicators to guide farmers' selection of animals to be culled), slaughterhouses, animal transportation, market grids (to assess the animal's value) and dealers, health evaluation grids and professional practitioners (veterinarians, government officers), etc. Since this routine is performed by thousands of people, is semi-automatic (as it is repeated every year), and highly distributed amongst a diversity of stakeholders (farmers, technical advisers, veterinarians, animal caretakers, researchers, animal shelters…), we could consider it to be a routine source of ethical blindness (Kump and Scholz, 2022), or moral indifference (developed through a process of 'adiaphorization', see Clarke and Knights, 2022), whose performance is a site of ethical tensions.

The routine of culling thus fits the profile of a complex Foucauldian dispositive, varying greatly according to the relationships between the different elements, and leading to either death or continued life for the animal. When considering the animal-human working relationship within this framework, the animal can be viewed as an individual stakeholder (Tallberg et al., 2022), and the agency of the 'animal-human' dyad in the dispositive can offer an explanation for the variability in routine performances. Equally, with regard to the issue of 'care' in this relationship (Connolly and Cullen, 2018; Tronto, 2020; Tallberg et al., 2022) a dispositive approach can reinforce the argument made in Tronto (2020) that concrete forms of care are usually undertaken by the less powerful in society, '*where the work* is *often undervalued and demeaned*' (Connolly and Cullen, 2018).

Most important, though, from a dispositional perspective, is the fact that the ethical aspects of this routine may be founded on a conflictual interaction between the four characteristic care forms in the ethic of care framework proposed by Connolly and Cullen in their 2018 literature review. The authors' framework sheds light on the ways that relationships with animals are framed in organizational studies. The four forms of caring relationships are :

i) 'No Care'(largest category): a largely instrumental value is placed on relationships, and humans perceive the animals in abstract terms. They are framed as commodities, a source of disease, research tools, marketing tools, etc.

ii) 'Contractual Care': instrumental value again predominates, but the humans and animals interact directly (concrete relationship). This is the typical case of care relationships on farms and ranches.

iii) 'Care about': the relationship is abstract (objective distance between humans and animals) but animals are valued intrinsically (for their feelings, agency or stakeholdership). This type of relationship is encountered in studies on animal advocacy, public attitudes to animals or ethical consumption.

iv) 'Care for': typical of workers and animals in shelters and humans with their companion animals, characterized by a concrete relationship (of proximity) and humans value animals for their intrinsic qualities.

Hence, as end-of-life routines involve a wide range of operators, our dispositional approach is likely to reveal substantial differences in their ethics of care towards animals, and ethical tensions between the various elements of the dispositive. For example, Clarke and Knights

(2022) describe the tensions between veterinarians' '*ethical code, promising to protect the welfare of the animal "above all else"'* and *'the financial demands of clients*' (p 673). Also, in the culling of dairy ewes for instance, we would expect to encounter 'contractual care' relationships (farmers, veterinarians), 'no care' relationships (technical advisers, slaughterhouse workers, transportation), 'care about' relationships (animal protection associations, vegan movements) and 'care for' relationships (farmers, again).

Our research question to be applied to the exit of animals from labour, can therefore be stated as follows: which dispositives can be characterized to describe the performance of the routine, and what forms of subjectification are in operation via the conflictuality of the relationships between dispositive elements, especially those that concern the nature of the human-animal relationships to be found within the routine?

2. Materials & Methods: Four case studies

To test our hypothesis in a variety of situations, we conducted a multiple case study (Yin, 2002) drawing on four different sectors (2.1). We conducted semi-structured interviews with a diverse selection of routine operators, applying an analytic grid to identify the various elements and relationships in each dispositive (2.2.).

2.1. Four case studies (CS)

Corsican ewes (CS1): the need to renew the productive flock

Corsican ewes are raised for milk production and cheese processing. To produce milk, an ewe must first give birth. Therefore, all a farm's dairy ewes produce one or two lambs each year. Some are immediately sold, and some ewe lambs are kept and reared by the farmer to renew the dairy ewe flock. The ewes that are replaced, generally those that are less productive, are known as 'cull ewes'. They are replaced by the female offspring of the more productive ewes. Each farming system thus has a 'turnover rate'. Productivity is the main criterion for culling but other criteria such as disease susceptibility can be considered. Cull ewes, male lambs and some ewe lambs leave the farm, usually to be slaughtered. For this case study, we conducted 5 interviews with members of livestock sector organizations and 19 interviews with farmers.

Laboratory animals (CS2): procedures to avoid death

Animals used for scientific purposes are usually supplied by breeders and are housed under strictly controlled conditions (Directive 2010/63/EU, 2010). Each step of their use is tracked and traced, regardless of the duration of their stay at the research facility. At the end of the

experiment, it is common practice to euthanize the animals, either for scientific reasons, for organ or tissue harvesting, or for economic and logistical reasons, when animals are unsuitable for human consumption and to free up space for further experiments. When they are not euthanized, farm animals suitable for consumption are slaughtered before being sold into the food chain.

As a result of the advocacy of animal protection associations, the practice of rehoming laboratory animals - i.e., the adoption of animals by private individuals via an intermediary association - has developed, allowing researchers to consider an alternative destination for their animals. Some laboratory employees at INRAE (French National Institute for Agricultural Research), the research organization studied, have set up direct rehoming systems without intermediaries, but an official note from INRAE requires that an intermediary association and the State veterinary services be involved to ensure animal protection. For this study, we conducted 23 interviews with animal welfare associations, animal handlers, technicians and scientists involved in the decision to euthanize, slaughter, and/or replace animals.

Hens (CS3): moral entrepreneurship

The company Poule House (PH) was set up to raise laying hens without slaughter once their laying days were over. Farmers contracted with the company to modify their production systems. Based on three successive cycles of production (36 months) instead of one (18 months), the 'PH' production system allowed hens to live far longer than in market-dominant industrial systems. When a hen's productive life was over, it was to be transferred to a retirement farm until its natural death. The system was funded by selling eggs at a higher price, targeting the vegetarian market. For this study, we conducted 9 interviews with farmers.

Retirement of old horses (CS4)

Since the end of the 1970s, the human-horse relationship has shifted in France from a utilitarian vision of ownership to a less invasive form of horsemanship involving a greater understanding of the animal and a rapport between horse and human. We have excluded horses bred exclusively for slaughter from the analysis, focusing on other types/forms of animal labour such as tourism, draft work, racing, etc. These sectors face several challenges, including the ongoing movement to change the legal status of horses (from domestic animals to pets)[2] and the management of 'old' horses. Slaughter as an ethical end to a horse's life is increasingly considered unacceptable and the idea that a retirement should be provided to these animals has

[2] https://www.assemblee-nationale.fr/dyn/15/textes/l15b0828_proposition-loi#

gradually taken hold within these professions (Deneux-Le Barh, 2020). For this study, we conducted interviews with 27 professionals (5 riding instructors, 8 breeders, 2 retirement facility managers, 6 animal traction professionals, 3 equestrian show professionals and 3 racing trainers) to understand the practices and conditions of horse retirement.

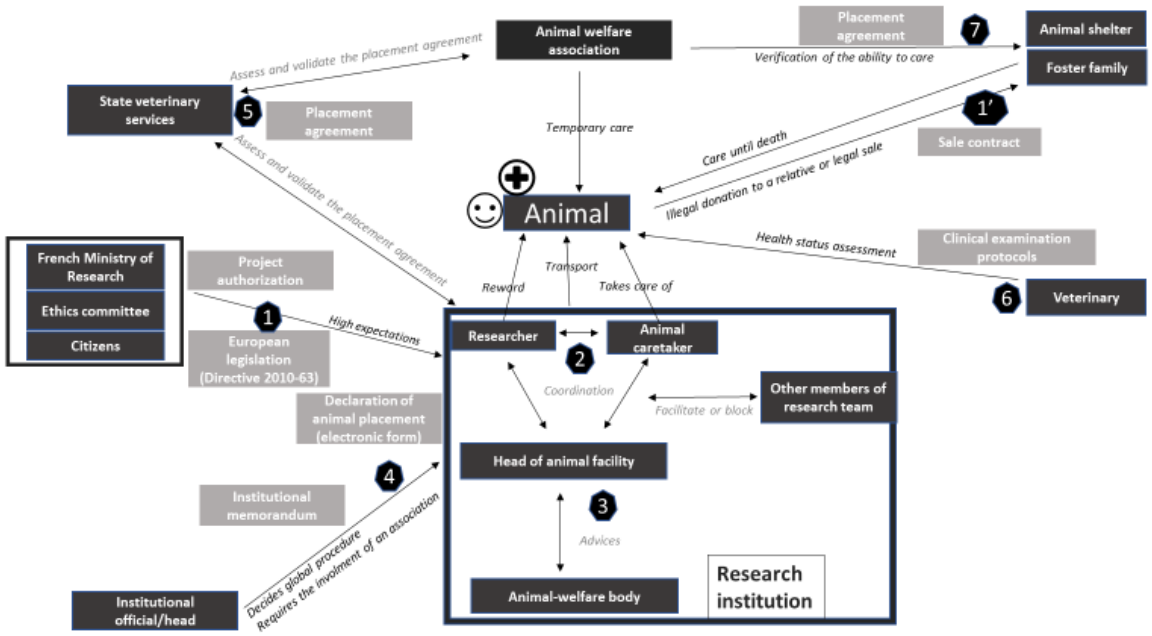
2.2 Dispositional analysis

For each case, we conducted semi-structured interviews with various actors (Romelaer, 2005). Each interview was transcribed and analysed using a qualitative and thematic approach (Miles and Huberman, 2003)[3]. Thematic analysis was used to identify relevant dispositives and to describe the elements 'disposed' in the routine (tools, objectives, operators, symbolic resources such as rules, etc.). First, the 'exit-fate' of the animal (sale, death, donation) allowed us to identify and differentiate several dispositives. Then, for each dispositive, we sought to identify:

- the elements that are configured within it: actors (farmer, technical adviser, knacker, dealer, private individual, etc.), instruments (regulations, calculation methods, zootechnical objective performances, etc.), elements of discourse (in practical sheets, memoranda, internal charts, etc.), animals and their characteristics (productivity, age, etc.);
- the relationships between elements of the dispositive, for example: between farmers and their agricultural advisers, between lab technicians and experimental animals, between farmers and their animals, between sale price and the condition of the animals, etc.;
- We coded these relationships according to the interviewee's evaluation of the relationship (conflicts, compliance with rules, adaptations, etc.) and by themes characterizing the relationship: animal welfare, quality of slaughter tools, negotiation of sale prices, etc.

Last, the coded relationships allowed us to identify those elements in a dispositive that had 'weight' in the execution of the routine or were in tension within and between dispositives. They allowed us to interpret the degree of agency available to operators (farmer, animal handler, experimenter) in choosing a performance leading to a form of death or a form of survival for the animal. Figure 1. depicts one of the dispositives in the experimental animal case study (the 'rehoming' dispositive).

[3] For readability, we coded interview transcriptions as follows: AC: animal care giver/handler, ATL: animal care giver/handler and experimental team leader, AWA: animal welfare association, F: farmer, HP: horse professional, SC: scientist, T: technician.



Replacement procedure for laboratory animals: stakeholders, tools and actions

Key:

Interactions

Actions

Stakeholders/actors

Tools/instruments

Good animal health and welfare

Sociability and behavior

1. Regulation
1'. Direct replacement through an illegal process or legal sale
2. Preparation (project application, submit the project to the ethics committee)
3. Advice - Anticipation
4. Institutional procedure
5. Authorization delivered by the state veterinary services (to ensure of adopter' competence)
6. Clinical examination of animals before rehoming
7. Transfer of animals to the shelter or private individuals

Figure 1 : the rehoming dispositive for experimental animals

3. Results: Dispositional analysis reveals low agency for operators in the 'animal exit from labour' routine

Our dispositional analysis reveals a variety of routine dispositives representing different performances of the routine, some leading to death and others to the survival of the animal[4] (3.1.). Study of the relationships between the heterogeneous dispositive components highlights various conflicting relationships that illustrate multiple difficulties in performing the routine in all cases (3.2.). Last, specific elements are shown to be in conflict (personal values vs economic performance of the farm for example), weighing differently on operators' ability to choose how they manage the end of an animal's working life (3.3.).

3.1. Death and survival dispositives

Corsican ewes

We identified seven dispositives (Table 1, Figure 2) in operation, plus one that farmers would like to activate but do not. Those most frequently performed lead to the direct death of the animal. Animals are generally sold to livestock dealers from Sardinia: every year, these merchants contact Corsican farmers and enter an oral contract on quantities and the price grid for the animals' physical state. But most interviewees acknowledged that the truck journey to Sardinia is very stressful and causes the animals suffering. Some therefore prefer to shoot the ewes themselves on their own farms: '*They are killed with a rifle, they don't suffer as much*' (CS1-F12). These farmers assume responsibility for the illegality of the practice and for dispatching their animals themselves. We also identified three relatively rare 'survival' dispositives (sale to another farmer, donation to a private person and the keeping of a 'mascot' on the farm) that are often activated when the opportunity arises. Activation of these dispositives depends on a farmer's immediate social environment and on the chance mention of the subject in conversation.

[4] Many tables and diagrams were produced for this study. In order not to overload the article with illustrations, only diagrams from the ewe and experimental animals case studies are shown below.

Table 1:The different dispositives identified in the management of the end of an animal's working life (Corsican ewes)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositives	Sardinian market	Relationship with a visiting dealer from Sardinia after lambing. Selling prices are very low and depend on an evaluation of the animal's body condition (zootechnical/marketing knowledge). Farmers and elected officials from the sector coordinate the overall process. This is the most used option because there is no market in Corsica and the slaughterhouses are overloaded.	Very common/frequent
	Donation/sale (of live animals)	Relationship with individuals or butchers. One-off event, the animal is slaughtered at the slaughterhouse by the buyer. More profitable than the Sardinian market.	Occasional but regular
	Auto-consumption (on-farm slaughter)	Slaughter and processing on the farm. Parts of the animal are given/sold to butchers and individuals or consumed by family or friends.	Occasional but regular
	Unauthorised slaughter and disposal	On-farm slaughter. The carcass may be disposed of in a pit or in the wild, sometimes the renderer collects the carcass (rendering rules). The farmer refuses to use the 'Sardinian truck' and takes responsibility for killing: the Sardinian truck is legal but unjustifiable; shooting is illegal but justifiable.	Common
Postponement dispositive	Donation/sale to other farmers	Depends on relationships between farmers. Healthy animals assessed as still being productive are donated to compensate other farmers' losses through disease. More frequent in health crises (bluetongue), technicians are sometimes intermediaries between farmers.	Occasional, linked to health events
Retirement or retention dispositives	Donation to individuals	Depends on the relationship between farmers and their communities or friendship networks; the animal is given away to become a pet or to 'keep the grass down'.	Rare
	End of life on the farm	Depends on relationships between farmers and animals: farmer's reward to the animal for good work or use of the animal's skills to graze and maintain lands.	Rare
(Dispositives desired by farmers)	Sale to a local market	Stable and well-structured market, local slaughterhouse, value-added price, and provision of meaning for the animal's life (raised to feed humans)	Not in existence

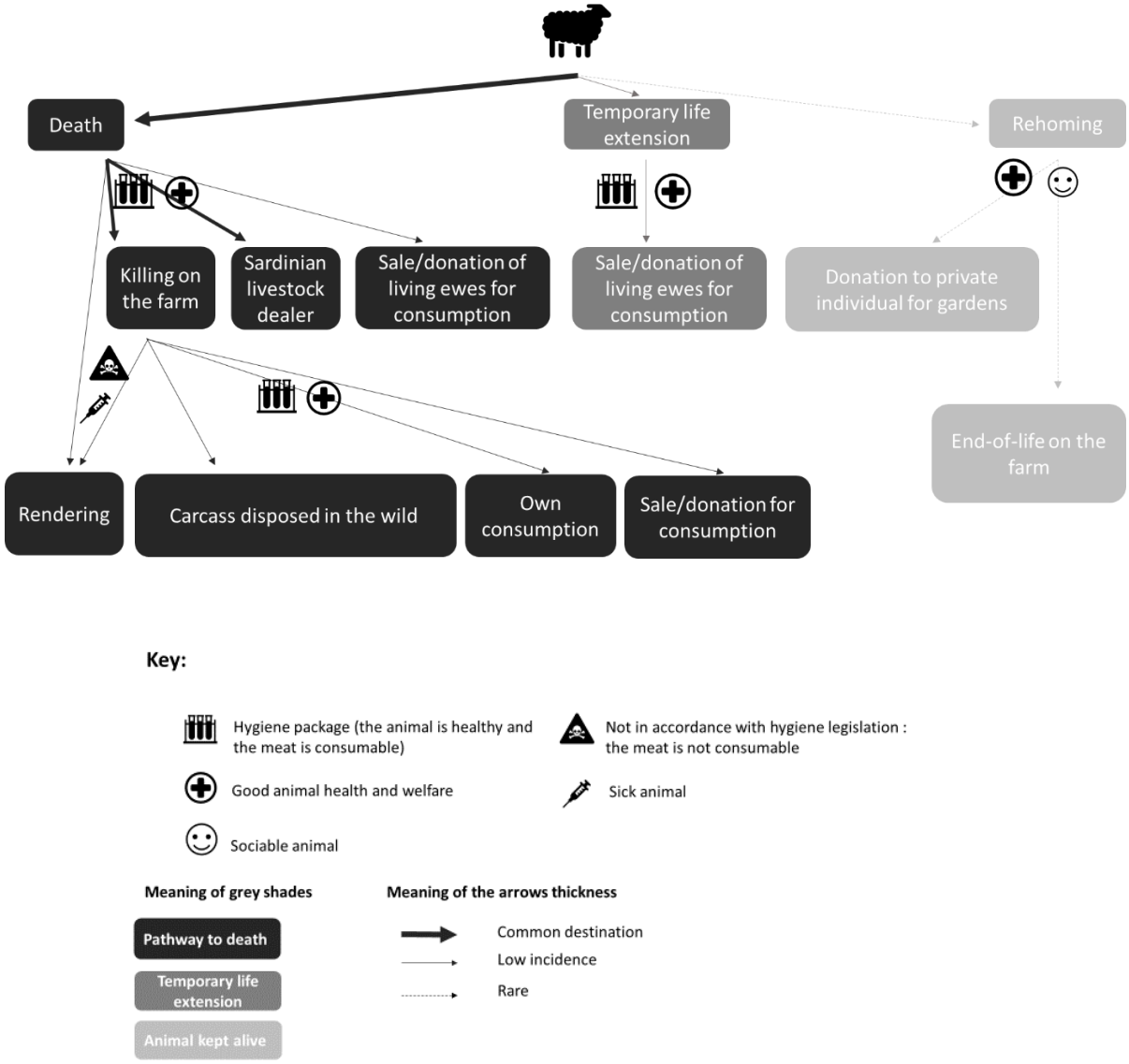


Figure 2: Exit of Corsican cull ewes from labour

Experimental animals

The experimental animals studied included hens, horses, rabbits and sheep kept in INRAE experimental facilities. For these animals, when euthanasia is not required as part of the experimental procedure, there are four possible dispositives: two 'death' dispositives, either euthanasia or slaughter for consumption, and two 'survival' dispositives, namely sale to farmers or individuals (which can be considered as a temporary life extension) and rehoming (Table 2 and Figure 3). Each possibility is strictly regulated. Euthanasia is mandatory if the animal suffers from poor health or welfare and cannot be treated. An animal can only enter the food chain if it is a livestock animal and if it complies with the regulatory European Union 'hygiene package'. And rehoming is only possible if a veterinarian certifies that the animal's state of

health presents no danger to public, animal or environmental health, and that appropriate measures have been taken to protect the animal's welfare. The routine of rehoming is characterized by its complexity, its strong regulatory framework and its administrative burden (cf. Figure 1). '*I didn't carry out a rehoming, I made a sale. So, there was an invoice, like a sale when you sell eggs. Rehoming is much more complicated*' (CS2-SC1). In actual practice, the two death dispositives are the most used.

Table 2: The different dispositives identified in the management of the end of an animal's working life (experimental animals)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositives	Euthanasia for experimental sampling	Euthanasia planned in the protocol (organ sampling) following an authorized method	Very frequent
	Euthanasia for health reasons	Euthanasia decided on by the veterinarian (or the person responsible for the protocol) during the protocol in cases where health is irreparably damaged	Occasional
	Euthanasia of cull animals	Euthanasia of breeding or supernumerary animals following an authorized method often adapted to the processing of large numbers.	Rare for farm animals, frequent for laboratory animals
	Slaughterhouse killing and sale to the food sector	Transport by a licensed company and slaughter in a licensed slaughterhouse of healthy animals which can be consumed (no potential chemical residues in the meat or in products).	Very frequent
Postponement dispositives	Sale to farmers or individuals	Transport of animals to a farm or an adapted property (qualified person and suitable infrastructure) to be kept for future consumption or grass control.	Occasional
	Reuse	If animals have not previously undergone an invasive procedure as defined in the protocol and following veterinarian checks, they can undergo a moderate procedure from another protocol. These conditions are clearly defined in European directive 2010-63.	Occasional
	Return to home institution	If the procedure has no impact on the animals, they can return to the home institution. In this case, they can be reused or slaughtered after being fattened for a time.	Frequent
Retirement dispositives	Legal rehoming	Adoption by an animal welfare association, then placement in a sanctuary or foster family. Complicated process involving government veterinary services.	Rare
	Illegal rehoming	Adoption by an animal's care giver/handler because of a special relationship with the animal. The process is locally accepted but is performed without traceability, rendering it much simpler.	Occasional

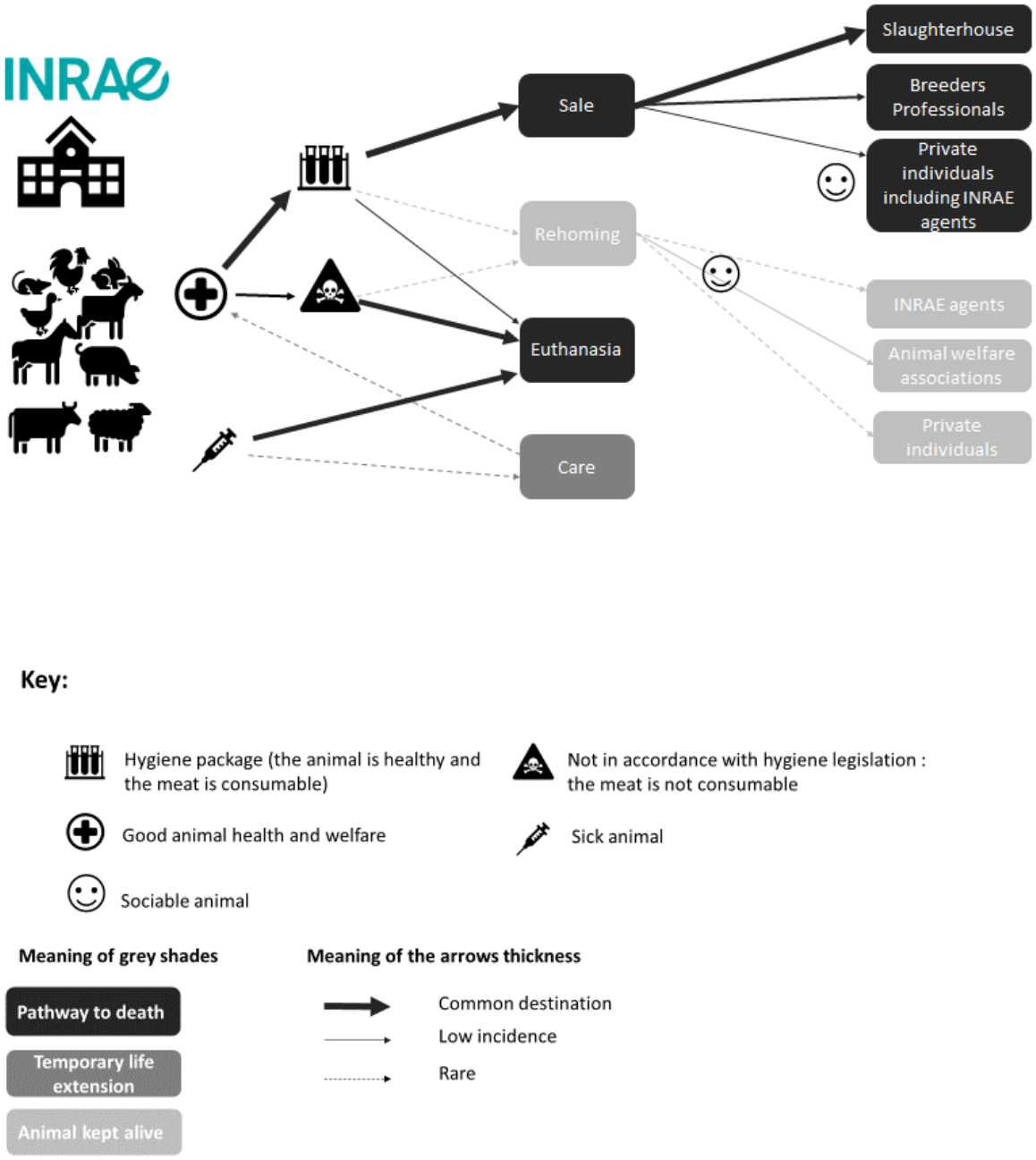


Figure 3 : Exit of INRAE experimental animals from labour/ Animals' fate on conclusion of experiments

Hens

For hens, the main purpose of PH was to provide only one outcome: a survival dispositive, where older laying hens would be retired following their last production cycle until they died naturally due to age. However, many hens did not reach this stage, more than 50% died during the 36 months of their productive lives, which turned out to be more arduous than PH's founders had anticipated. Thus, in practice, an unexpected death dispositive was created, that of the death from exhaustion of working hens.

Horses

In the case of horses, six dispositives were mapped: Four of these involved 'survival', including on-farm retirement: '*I have room here, I have what's needed, I have the land to keep her in the field during the summer, I have everything I need so that's where she is going to stay for as long as possible if her health allows it.*' (CS4-HP6), boarding in a riding club/stud farm, and sale or donation to an individual or a stud farm : '*The goal is to find them a retirement afterwards with private individuals who want to enjoy having carriage horses that are real all-rounders and know how to do everything* [...] *the plan is for them to have a long-term retirement and escape the knackers whatever happens'* (CS4-HP22); and two involved 'death' in the form of either euthanasia or killing at the slaughterhouse. Strikingly, in the 'survival' dispositives, horses may not be truly retired but continue working in a different way. For example, former racehorses can be used for recreational riding. In contrast to the other animals studied, the death dispositive for horses is usually not explicitly mentioned – it is assumed to be activated when the animal has a particular medical problem, is suffering or no longer enjoys life: '*There comes a time when they don't get up any more, they no longer eat, they no longer drink, so when there is too much suffering, there comes a time when it is better to euthanize them, that's for sure.*' (CS4-HP25)

Table 3: The different dispositives identified in the management of the end of an animal's working life (horses)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositive	Euthanasia	Criteria for euthanasia are a horse's state of health (terminal disease), loss of enjoyment of life or autonomy, and suffering. The owner is the sole decision maker and only the veterinarian can carry it out. But owners always listen to their veterinarians, whom they trust. The veterinarian performs the euthanasia and the horse is removed by the renderer. The owner pays all costs.	Rare
	Slaughterhouse killing	Although taboo, the entire horse industry sends horses to the slaughterhouse. The decision to cull horses depends on the sector (meat horse breeding; draught horses; equestrian sports, horseracing, etc.) and professional's age. Younger generations are increasingly reluctant to cull horses.	Uncommon
Redeployment/ retirement dispositives	Staying on the farm	Mainly small owners, who can provide food and space and afford expenditure.	Frequent
	Boarding	Owner pays a boarding facility to look after the horse.	Very frequent
	Donation	Sale at meat price, usually to a private individual (friend or client).	Frequent
	Second career sale	Sale at a working value to a private individual or a professional (animals between 7 and 12 years). 'Second career' for the animal. Involves finding a reliable buyer who will take good care of the animal.	Frequent

While it is easy to access the ostensive aspects of these routines (selection criteria for dairy sheep or experimental animals, Sardinian market regulations for Corsican ewes, etc.), by mapping the dispositives we can obtain information on their performative dimension and identify conflicting elements when the routine is executed. These conflicts are internal to the routine and occur between multiple elements of the dispositive, e.g. between a Corsican sheep farmer's animal-welfare values and the living conditions in the Sardinian truck, or the attachment of an experimenter to a laboratory animal destined for euthanization. These conflicts sometimes lead operators to activate illegal dispositives such as the on-farm slaughter of Corsican ewes or the unregistered rehoming of laboratory animals. In our case studies, whatever the degree of instrumentation in place for a 'death' or 'survival' dispositive (or the number of artefacts, such as official rules for example), the routine remains a seat of multiple conflicts.

3.2. Multiple conflicting relationships between elements in a dispositive

Our dispositional analysis revealed several types of conflict between the components of the various dispositives in our routines. We can distinguish four main types of conflict: between moral and technico-economic performance objectives (3.2.1.); between operators and the tools or artefacts that structure the routine (3.2.2.); between operators (3.2.3.); and between operators and animals (3.2.4.).

3.2.1. Conflicts between objectives within a production system

The diversity of ways a routine was performed revealed that operators sought to achieve several potentially conflicting objectives. These conflictual relationships were observed in the activation of survival dispositives as well as death dispositives. The most frequently encountered type of conflict involved tension between the objectives of high technico-economic performance and ethical behaviour.

Conflicts leading to an animal's survival

In the Corsican ewe case study, farmers were supposed to listen to their technical advisers when choosing ewes for culling. Animal productivity was the principal criterion, as technical advisers viewed the keeping of old ewes on the farm as '*outdated*': ('*[farmers] are not going to keep ewes that don't produce much or are useless. [...] You always have to think about productivity*', (CS1-T). But many farmers did not follow this advice, often keeping less productive ewes because of their good health and better behaviour, also holding on to one or two animals to 'reward' their work on the farm. This concept of 'reward', which can be described as a moral objective, is also encountered in the case of experimental animals, where research personnel recognize the value of their animals' work (providing scientific data) and sometimes want to reward them for it. Although the sale of animals to meat markets or farmers is a substantial income stream for research facilities, some scientists and animal caretakers believe '*they should be settled into a second life, they should do something else*' (CS2-AC1). This was even more important, given the fate of an animal after its experimental use: '*the only solution on offer was rendering, it was quicker to kill the animal and throw it in the bin. But for me, to kill it while it is still healthy and able to live was unthinkable (...) it's my responsibility to find them a way out afterwards*' (CS2-SC1). This moral imperative was also encountered in relation to horses, where equine professionals framed their gratitude towards the animals that earned them their living as a matter of principle: '*These are horses that have helped my career, that have made me money, that have made me work hard for my business because they were good horses, fine horses so I feel that at some point they are entitled to retire*' (CS4-HP23).

Conflicts leading to an animal's death

However, as described in section 3.1., death dispositives are predominant, largely due to the need for high economic performance. Hence, in the hen study, although the entire PH project was based on the idea of offering animals a well-earned retirement, the company was unable to cope with the financial burden involved (feed, space and care costs). Three years after the project launch, the company went into liquidation, leaving contracted farmers to revert to the

dominant production system. For horses, larger businesses (over 10 horses) find it hard to keep unproductive animals for lack of facilities and funds: '*Our set-up has about forty boxes, so if I keep all the retired horses, I can't acquire horses for work and I haven't enough boxes to keep my retired horses'* (CS4-HP2). And for experimental animals, a hierarchy of objectives emerges:

1) production of scientific knowledge: *'For me, if it fits into the experimental context as planned, in quotes "that's the job" and we do it.'*(CS2-SC5);

2) re-use of animals: '*I would prefer it, if an animal's living conditions were going to be worse than the ones we provide, that the animal should be reused in other protocols first. That way I wouldn't have to order the birth of another animal to carry out another protocol.'* (CS2-SC4);

3) sale of animals for consumption: *'Returning it to the food chain removes the sense of wastage'* (CS2-SC1);

4) rehoming animals. This dispositive is not prioritized: '*To sum up, what I think is that, in our facility, all our animals [rabbits] that can be used for food go into the food chain. And those that can't go to the rendering plant, and on the other hand, those that we buy from outside, the Fauve de Bourgogne or the Belier, why not rehome them, yes. Otherwise, the rest go into the food chain*.' (CS2-ATL3).

3.2.2. Conflicts between operators and the tools structuring the routine

Conflicts in survival dispositives

In the case of experimental animals, the rehoming dispositive is markedly characterized by conflicts. First, the communication tools are lacking to alert others to the possibility of activating this dispositive: rehoming associations do not communicate clearly (on space available or care capabilities, for example), internal communication within the research institution is mainly '*word of mouth*': '*At INRAE, there is little communication, we are not allowed to post on social networks* […]' (CS2-SC1). Second, the rehoming dispositive entails burdensome paperwork (see Figure 1). It comes up against a reluctance within the hierarchy to authorize rehoming for fear of negative publicity over the experimental activities at the site: '*There is also the issue of placement difficulties [caused by] regulations and internal blockages. The blockage is hierarchical'* (CS2-SC4). It sometimes causes research staff to bypass official channels: '*It was no problem to declare this animal dead, and to rehome it 'illegally', without*

going through the authorities or following all the steps required by law. So, in fact, it's nice that there is this chance to do it, even if it's not recognized and it's not recorded […] and we can't say we are doing it' (CS2-SC4). Third, research projects make no provision for the costs of rehoming, as animal shelter organizations are funded by private donations.

For hens, the PH 3-cycle production protocol (36 months instead of 18) caused difficulties in organizing farm work: '*You have to clear things out between two cycles, you have to remove everything and empty everything, it's complicated* '(CS3-F7). Also, to start a new laying cycle, farmers trigger an artificial moult to restore the hen's performance and egg quality, which deteriorates as the hens grow older. To do this, they must ration the hen's feed, which some farmers don't enjoy: '*I'm a big eater, I imagined I was them and I said to myself, "Shit, they really must be hungry"'* (CS3-F7). One farmer describes moulting as quite a '*violent*' process.

Conflicts in death dispositives

For the Corsican ewes case, the tools and artefacts in the death dispositives (slaughterhouse and markets) are criticized. As culled ewes are almost worthless on the Sardinian market (the only available sales outlet), farmers are critical of the whole production system: *'The lambs are thrown away, the ewes are thrown away, the wool is thrown away [...] I am disgusted nothing is done in Corsica*' (CS1-F17). Additionally, since Sardinian operators collect lambs and ewes from Corsica by truck, many farmers are critical of the conditions in which their animals are transported for slaughter in Sardinia: '*Just that journey in the truck! They [the sheep] are calm in the herd, we put them in a livestock trailer, we take them out of the trailer, we load them into the truck, there are 100 ewes around them they have never seen in their lives before. […], going on the boat, arriving at a slaughterhouse, squeezed together in big groups*' (CS1-F16). Feeling is sufficiently high that some do not hesitate to kill their ewes themselves, although this is legally forbidden: '*They are killed with a rifle, they don't suffer as much*' (CS1-F12).

3.2.3. Conflicts between operators

Many conflicts arose between routine operators in all cases. With horses, conflicts may occur when the veterinarian has to euthanize an old horse in front of the owner who can be shocked by the process: '*He just lets off the stuff directly and the horse starts trying to breathe and you can see that he is gasping for air [...] and then all of a sudden his nostrils tighten and he falls backwards... So that was the most horrific experience of my life*' (CS4-HP2). Conflicts also arise between owners and shelter organizations when owners simply abandon their horses, leaving the organizations to take on their care.

In the case of experimental animals, conflicts arise between members of research teams. These may concern decisions on the fate of the animals: '*When you think that after just one lactation the goat is on the scrapheap because we can replace it and speed up genetic development, then you have to say to yourself there's a problem. Some things are acceptable and others are not so acceptable*.' (CS2-SC2), or the work to be carried out on rehoming. Relationships between researchers and members of animal rescue associations may be also difficult; '*I may be a bit extreme, but I would like to make some people pass a certificate of aptitude for keeping animals, because we get all the grief on whether our farm meets the standards, while they go and put a rabbit in a canary cage*' (CS2-ATL3). Some interviewees also emphasize differences in sensitivity between operators: '*I think there are lots of researchers who carry out animal experimentation when they have no notion of an animal's experiences, its sentience, that it feels things*' (CS2-SC1).

More generally, conflicts may arise from differences in operators' perceptions of an animal, its purpose or utility. For instance, a Corsican ewe will be viewed only as a production unit by a technical adviser, while farmers consider other factors, such as their attachment to their animals. A laboratory rabbit may be perceived by some as a potential pet, while others believe there to be no such thing as a pet rabbit: '*its purpose is to be eaten, period.*' (CS2-ATL3). Assessment of an animal's physical state may also lead to conflict, whether this concerns its market valuation, or judgements of a colleague's work: '*Some farmers are still sloppy in their work and get bonuses they don't deserve*' (CS1-F3). Last, conflicts are frequent between experimenters and welfare associations, because of the public line taken by some associations: '*we don't go through them for the simple reason that they are against animal experimentation and that they are quite extremist. So, when they get animals from us, it's all "we did a rescue, the unfortunate victims", "the poor things" and we don't want that because it doesn't give us a good image and it's completely false. Generally, we don't go through the shelter*' (CS2-AC1).

3.2.4. Conflicts between operators and animals

An ambivalent relationship between operators and their animals can be observed in each case study. On the one hand, operators describe their relationships as a 'working relationship' or a 'partnership' ('*They work for me, I work for them*' (CS1-F3)), and even one involving of emotional attachment ('*When I make my rounds in the henhouse, I like to take a hen in my arms*' (CS3-F1)). On the other, they stress the necessity of getting rid of animals once their main function has been fulfilled. In the case of Corsican ewes or animal experimentation, for

example, unproductive animals are described as '*embarrassing*'(CS1-F7). Likewise, some horses are simply abandoned by owners who are unwilling to pay for the medical attention and care needed by aging horses and consider them a burden.

This ambivalent relationship causes unhappiness in most operators that can manifest itself through two attitudes or behaviours. The first involves psychological self-protection against the violence of slaughter or euthanasia. Operators '*try not to get too emotional*' (CS1-F9), often using rationalizations relating to their profession ('*It's part of farming*' (CS2-ATL3)), even sometimes choosing to butcher their animals themselves ('*When it has to be done, I'd rather do it than let someone else do it wrong* '), or on the contrary, feeling that ' *farmers are not capable of euthanising animals anymore*'(CS2-AWA1). The second behaviour is to express failure to understand how things work, or even anger. Some operators dislike the idea of killing animals that are doing well and have no health or behavioural problems: '*we tell ourselves it's stupid to kill hens, fine hens in the slaughterhouse*'(CS3-F5).

The mapping of these conflicting relationships demonstrates that the execution of the 'taking animals out of labour' routine depends on numerous elements and relationships within and between dispositives. Other conflictual relationships, not reported here, were observed between tools, or between tools and animals[5]. Above all, this mapping shows that the routine is fraught with numerous conflicts and dissatisfaction and reveals the limited agency of operators.

3.3. Limited agency of routine operators

Other than for horses, we can see that, despite the existence of 'survival' dispositives and their 'activation' by operators, their implementation remains difficult. These dispositives, whether heavily instrumented (rehoming of laboratory animals, see Figure 1) or not (donation of ewes to private individuals), emerge as recurrent opportunities with no real strategic planning. Some 'death' dispositives, like some relating to 'survival' (PH, rehoming), are characterized by 'rigid' relationships (procedures, rules, dedicated instruments) while others involve more 'flexible' relationships. For example, the on-farm slaughter of cull ewes is a kind of 'flexibilization' of the slaughterhouse death dispositive; a certain degree of freedom is exercised by the farmer who, in doing so, steps outside the law. Moral values (the desire to reward an animal for its work, giving meaning to its death etc.) and the nature of the relationships between primary

[5] For reasons of space, we have refrained from reporting on other types of conflicts, such as conflicts between tools (e.g., between rehoming procedures and research authorization procedures for experimental animals) and conflicts between tools and animals (e.g., use of euthanasia protocols not adapted to certain species or to particular development phases in experimental animals).

operators (farmers, animal care-givers/handlers, horse owners) and animals can combine to activate survival dispositives and drive the flexibilization of certain other relationships within the routine, enhancing the agency of the operators involved. However, the activation of these dispositives must often rely on the availability of an opportunity to part with an animal in a way that leaves these values, or any implicit moral or working contract with the animal, intact. Our mapping of the dispositives thus reveals the dependence of these main operators on other elements, whether operators or instruments. In the Corsican ewe case, the gift of old ewes or lambs to neighbouring households to keep the grass down, for example, largely depends on a farmer's social network, and on a chance request. In the experimental animals case, the lack of communication tools and the bureaucratic burden of the rehoming procedure also give the animal a low chance of survival. Survival dispositives hence appear to be a deviation from a standardized routine that is organized mainly around the death of the animal. For horses, though, the opposite holds: killing a horse is the less normative dispositive. A part of the socio-professional system has created a retirement route delegating the care of old horses to non-professional owners who have both the will and the means to pay.

Thus, the agency of operators is ultimately limited by the 'weight' of certain elements in the dispositives we have described. Indeed, even if some operators do not abide by the rules, or even the law (for example, in the case of on-farm slaughter or unregistered rehoming), the need to part with these animals (which would represent an additional cost for the farm) weighs heavily as operators strive to meet technico-economic performance goals, while there is no satisfactory dispositive available to secure an ending other than death : '*As long as INRA[E] has greater financial interest in selling the animals to working farmers than in rehoming them in sanctuaries, we will not succeed*' (CS2-AWA2). Many animal owners express regret about how they must dispose of their animals: '*Well, I have to do it because I have no choice*' (CS4-HP3), or the desire to activate alternative dispositives, that could 'reward' the animal's work or give greater meaning to its death: '*This is not normal. Killing to feed [people], yes, but killing just to throw [an animal] away, no*' (CS1-F9).

Last, even though it remains a secondary driver, the 'weight' of moral values can sometimes outweigh the necessity of killing animals and can lead to an alternative performance of the routine, especially when death dispositives are considered unsatisfactory by animal owners.

Our dispositional analysis has thus highlighted the limited agency and unhappiness experienced by primary operators regarding the management of the end of their animals' lives, but it also

shows that the levers to change the routine lie beyond the reach of these operators, being located in relationships between instruments (rules, markets) and numerous other operators.

4. Discussion: routine as a source of conflict

Our results offer a potentially interesting approach to organizational routine dynamics by combining micro and macro approaches through dispositional analysis (4.1.). This allows us to discuss the distribution of power among elements of the routine, highlighting that some organizational routines are strongly characterized by dilemmas and conflicts (4.2.). Last our results allow us to identify key actions or pathways that could help this routine to evolve in a way that changes our relationship with working animals (4.3.).

4.1. Routines as Dispositives: a way to map and distinguish performance types

In choosing to study the operational routine constituted by the management of an animal's exit from work, we were led to consider complex organizational arrangements involving a variety of actors, artefacts, discourses, values, etc. Dispositional analysis allowed us to map the different ways of performing this routine, by identifying coherent organizational arrangements (dispositives) that lead to differing fates for the animal. Each dispositive produces a kind of 'sedimentation' of heterogeneous elements and relationships that form different configurations when the routine is actualized (Raffnsøe, 2008; Collier, 2009). Within each dispositive, we identified the interdependencies between elements that bind together all the components of a performed routine. Additionally, mapping and distinguishing these configurations allowed us to identify the relationships and mechanisms of interdependence between each dispositive. It also allowed boundaries within the routine to be traced (Kremser et al., 2019).

The constituents of a routine operate at both macro and micro levels (Salvato and Rerup, 2011). Dispositional analysis allowed us to identify the ostensive aspects of the routine, which can be viewed as a managerial technology that, through multiple performances, is questioned and made to compete with more discrete courses of action. For instance, the culling and selling on (for slaughter) of less productive ewes and their replacement by young animals is standard practice in farm management systems. But farmers do not always follow technical advice on the choice of culling animals (performative dimension) and may sometimes even activate a different dispositive (gift to a neighbour, for example). The choice of dispositive depends on the relationships both within and between dispositives. And the dynamics of this choice may be determined by the relative 'weight' of each element.

4.2. Conflicts in routine dynamics

4.2.1. Conflicts in the socio-materiality of the routine

Our study revealed that, rather than driving coordination and truth between operators (Nelson and Winter, 1982; Becker, 2004), routines can be a source of major conflictualities, dissatisfaction, and even suffering. Indeed, while dispositional analysis shows the interdependence between elements, it also exposes antagonist or conflictual relationships. Performance of a routine may be coherent and efficient from one viewpoint (that of economics, for example), but may be seen as conflict-ridden and lacking effectiveness from another (considering the value of an animal's life for example), leading operators to 'create' or 'follow' other dispositives. But our dispositional analysis, inspired by Foucauldian studies in management, confirms that it is erroneous to assume that operators have extensive freedom to create new routines, or that managers are in a position to prescribe and fully determine the performance of a routine (Labatut et al., 2012). Indeed, we have seen that alternatives to 'official dispositives' are rare, and sometimes illegal, but that they do occasionally operate as a bypass or a resistance that seeks to balance conflicts with satisfaction.

We have thus seen macro and micro elements shape patterns of action in a nexus of tension between multiple sources of power (what we called the 'weight' of the elements). Indeed, as Raffnsoe et al. (2019) suggest, the multiple processes of subjectification in the performance of the routine make clear that it is a co-production. This is not the expression of a power structure over a social body, but the expression of a distributed body of power under tension (a 'topology of power' to use Collier's term (2009). Power is distributed and co-produced in the complex organizational arrangement that constitutes the routine, leading to a lack of balance between its elements, since the main way in which it is performed is largely unsatisfactory for operators (in three of our four cases: ewes, hens and experimental animals). Macro-structures (the market for hens and ewes, bureaucracy and rules for experimental animals) weigh heavily on the performance of the routine (Clarke and Knights, 2022; Christensen and Lamberton, 2022), even if operators manage to bypass them occasionally, through various forms of subjectification (Raffnsøe et al., 2019). Our dispositional analysis highlights that, although the death of animals is heavily instrumented (multiple artefacts and rules), their survival often arises from chance opportunities. And even though some survival dispositives are also well-instrumented (the PH structure for hens, and rehoming procedures for experimental animals), they are unsatisfactory in their performance due to conflicts between operators and artefacts (complex bureaucracy in the case of experimental animals, for example). As instruments are tracers of managerial

technologies (Moisdon, 1997), this means that the survival of animals at the end of their productive lives currently depends on opportunistic bypass or resistance behaviours, and this would appear to confirm that concrete forms of care can be undertaken as a form of struggle against containment, by those who have less power in society (Tronto, 2020). This managerial technology, from a Foucauldian studies perspective, thus calls for collective questioning (Anthony, 2012).

4.2.2. Ethical blindness vs ethical foresight

With the exception of horses (existence of a market for their care in retirement at macrostructural scale, predominance of survival dispositive), our study revealed that the organizational rationale underpinning this routine is still almost exclusively based on a 'human-resource' or 'human-machine' type of relationship, neglecting important aspects of human-animal relationships that involve emotions, values, and the recognition/reward of work (Mouret, 2022). It chimes with a recent paper by Grimm (2023), who depicts the compassion fatigue[6] that can affect experimenters, as described by an animal technician who developed anxiety and depression because 'his animals' were euthanized ('*I wanted to be there for them*,' he says. '*It's almost like they become your pets*.'). Despite efforts in the history of livestock farming to externalize animal death (through the use of slaughterhouses), it is still hard for those who have cared for the animals to deal with.

The numerous conflicts described above reveal that the different forms of relationships mapped in Connolly and Cullen's ethic of care framework (2018) are woven into the performances of our routine. 'No care', 'Contractual care', 'Care for', and 'Care about' relationships underpin its execution. The horse case study was an exception, in that the 'Care for' relationship appeared dominant and was shared by operators, who implemented relevant artefacts to execute the routine. For experimental animals, the survival dispositive was dominated by a 'Care about' relationship that was bureaucratic and relatively distant from the operators' 'Contractual care' and 'Care for' relationships, showing through our dispositive lens that the more diverse the forms of ethic of care relationships are within a routine, the more it is marked by unhappiness and conflict among operators.

These conflicts also reveal the use of complex and unsuitable artefacts for operators (e.g. in the replacement of lab animals), and a highly distributed responsibility amongst operators, whose

[6] We use 'compassion fatigue' as defined by Jensvold (2022) : 'Compassion fatigue is when those in helping professions experience burnout and secondary traumatic stress in excess of the compassion satisfaction derived in interactions inherent to their occupation'.

main goal was to complete their individual tasks (Kump and Scholz, 2022), confirming that this routine is a source of ethical blindness (e.g. PH farmers who did not consider the high mortality of their hens, technical advisers in the dairy ewe sector) (Kump and Scholz, 2022). It can also contribute to a process of adiaphorization (e.g. farmers who assert that they should try to suppress their feelings) (Clarke and Knights, 2022). Replacement procedures for laboratory animals and the PH case demonstrate that the weight of ethical considerations is far from sufficient to prompt the design and operation of a routine that would 'unstick' ethical blindness (Kump and Scholz, 2022). Dispositional analysis teases out many other aspects of the routine that must be considered, such as the potential bureaucratic burden (for animal labs), farm equipment requirements or market structures (PH case).

But these conflicts also revealed forms of 'ethical foresight' (as opposed to ethical blindness), in that some operators sought to re-assume their responsibilities by activating other dispositives that would provide an alternative, more satisfactory fate for their animals. This was particularly true of dairy farmers and researchers, some of whom did not hesitate to break the law, spurred on in particular by dissatisfaction over artefacts, by other operators and by affective salience (Tallberg et al., 2022). Affective salience can thus be a potential driver to change a routine and exit from ethical blindness. For example, it caused the horse sector to institutionalize the survival of the animals. The emergence of ethical foresight could be interpreted, then, as a positive tension between 'Contractual care' and 'Care for' relationships, triggered by compassion fatigue (Jenvold, 2022) and affective salience and contributing to a partial collapse of *sensemaking* in the general organisation of this routine (Weick, 1993).

4.3. Alternatives to animal slaughter: management implications

If we are to achieve real changes in the current organizational routine, there must be a collective discussion on what we want to do with these animals and on the kind of agricultural model the public and farmers are prepared to support (ranging from the use of fewer laboratory animals or thinking about giving laying hens a 'second life', to consumption of fewer animal products). Political pathways must be created to allow the different forms of ethic of care relationships (Connolly and Cullen, 2018) to converge, bringing the governing technology of the livestock sector into line with the necessity of ethical production (Anthony, 2012). This is easier said than done. But we could start with a few lines of thought and action inspired by the findings of our four case studies.

For Corsican ewes, the main problem appears to be the economic burden old animals place on the farm and a lack of knowledge of ways to provide for such animals. It would be interesting to experiment with a small flock of old ewes drawn from two or three farms, redeploying them to keep land free of scrub to reduce fire risk (given that Corsica, and most Mediterranean areas are deeply concerned over the management of wildfires). Scholars have already demonstrated their potential contribution to ecosystem services (Delanoue, 2018; Ryschawy et al., 2020). Consideration could also be given to setting up a mobile slaughterhouse system to enable on-farm slaughtering and the meat to be sold on a short distribution circuit (Astruc et al., 2005).

For experimental animals, actions are beginning to be undertaken to facilitate rehoming (reduce bureaucracy), train scientists and raise awareness in research facilities and, possibly, improve working conditions for shelter organizations (funding, space, facilities, etc.). For hens, the problem lies in the technical model commonly followed and the high dependency of farmers on stock suppliers who breed genetically-selected animals to fit this model based on a short period of high productivity. The promotion of rustic breeds that produce less, but do so over a longer period, in diversified farming systems could be tested, mainly through partnerships with public agricultural research (a retirement dispositive where private individuals adopt a hen, for example). Last, for horses, which in France are mostly retired, knowledge about the horse's health and welfare should be developed, in particular to make the appearance of old horses more socially acceptable.

Conclusion

Our study has shed light on an issue that is insufficiently discussed in rationalizations of livestock farming systems, i.e., the management of animals that are no longer economically productive. They are often killed when they could still enjoy many years of life. By approaching the management of the end of an animal's working life as an organizational routine, we used dispositional analysis to describe the variability in the routine's performance, tracing and describing the interdependent relationships between its elements, including the forms of human-animal ethic of care relationships. This allowed us to adopt a macro-micro perspective in our analysis and to discuss the relatively limited agency we found for this routine's operators. Through the multiple conflicting relationships, we showed that organizational routines are not necessarily instruments of 'peace', nor are they guarantors of better coordination between actors. Where individuals attempted to reconfigure the elements of the routine's dispositives to save their animals or avoid their suffering, they came up against these conflicting relationships.

Our use of an organizational-routine framework, analysed through the lens of dispositional analysis, would appear to offer an interesting approach to the role of human-animal relationships in organizational change, highlighting the synergies and conflicts between components of complex organizational configurations. It has allowed us to identify key levers for change in this routine for the good of both animal and humans.

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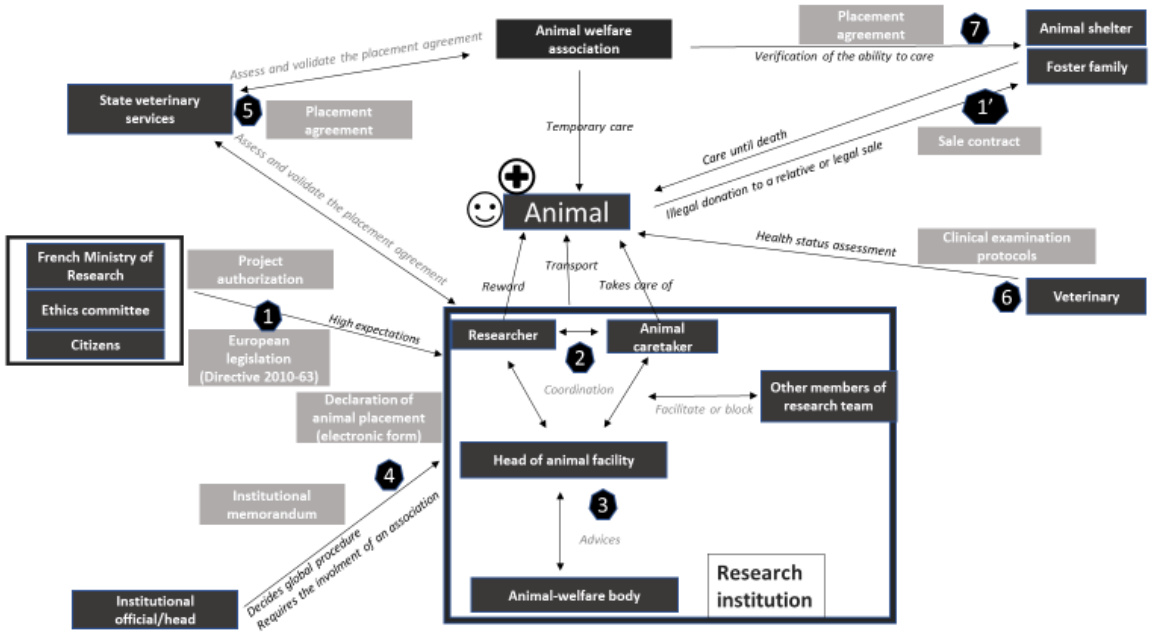
Death, retirement or redeployment for unproductive farm animals? Dispositional tensions in organizational routines

Figures

Figure 1: the rehoming dispositive for experimental animals



Replacement procedure for laboratory animals: stakeholders, tools and actions

Key:

Interactions

Actions

Stakeholders/actors

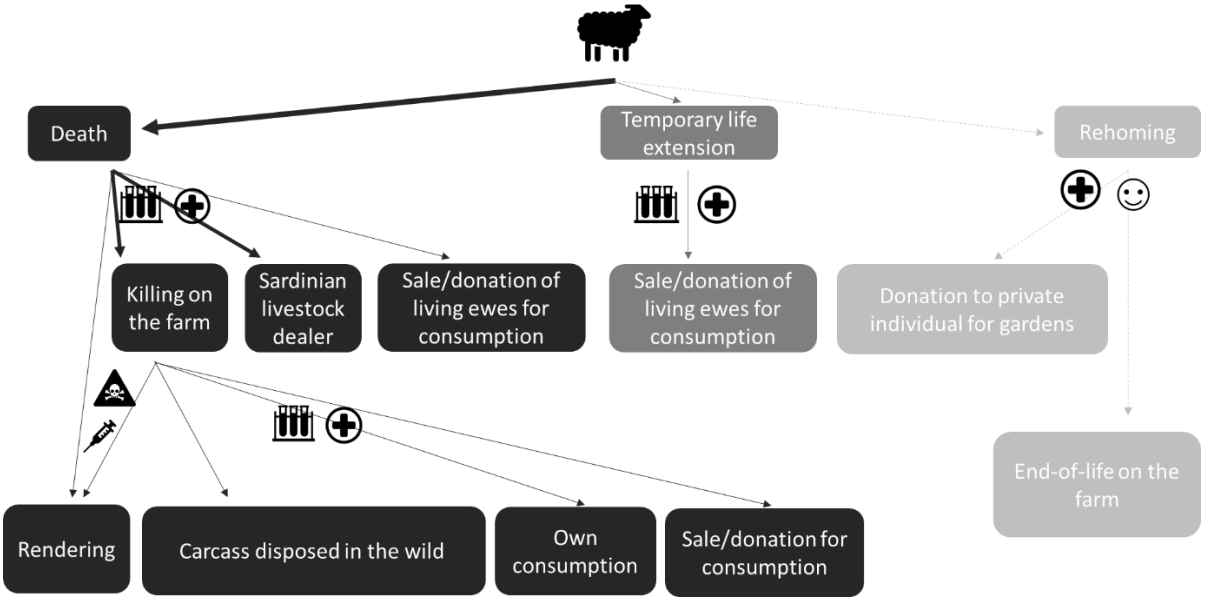
Tools/instruments

Good animal health and welfare

Sociability and behavior

1. Regulation
1'. Direct replacement through an illegal process or legal sale
2. Preparation (project application, submit the project to the ethics committee)
3. Advice - Anticipation
4. Institutional procedure
5. Authorization delivered by the state veterinary services (to ensure of adopter' competence)
6. Clinical examination of animals before rehoming
7. Transfer of animals to the shelter or private individuals

Figure 2: Exit of Corsican cull ewes from labour



Key:

Hygiene package (the animal is healthy and the meat is consumable)

Not in accordance with hygiene legislation : the meat is not consumable

Good animal health and welfare

Sick animal

Sociable animal

Meaning of grey shades

Pathway to death

Temporary life extension

Animal kept alive

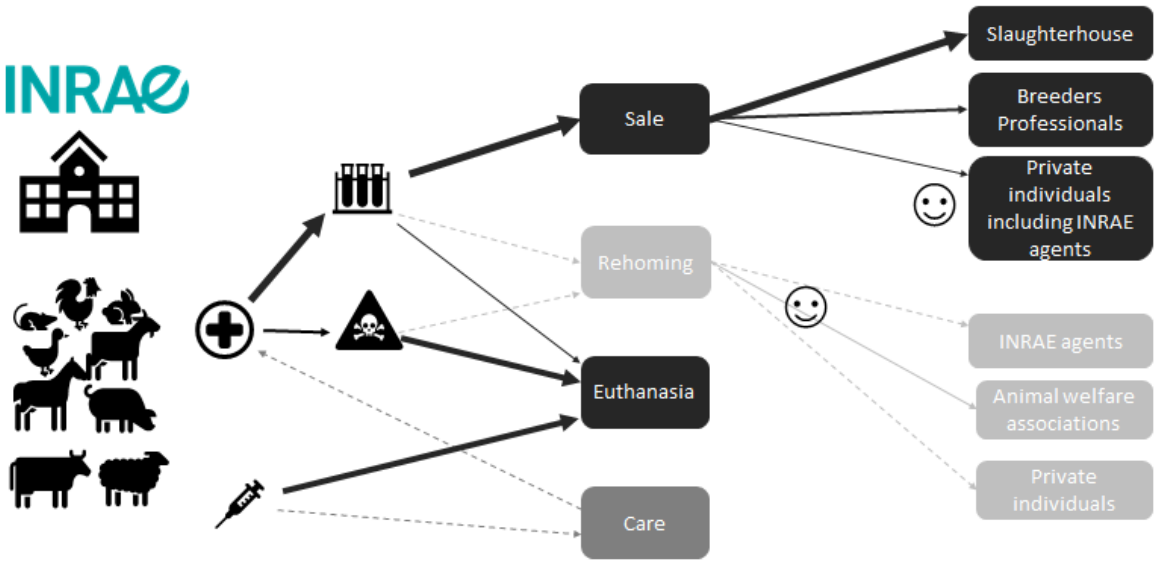
Meaning of the arrows thickness

Common destination

Low incidence

Rare

Figure 1 : Exit of INRAE experimental animals from labour/ Animals' fate on conclusion of experiments



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Death, retirement or redeployment for unproductive farm animals? Dispositional tensions in organizational routines

Tables

Table 1:The different dispositives identified in the management of the end of an animal's working life (Corsican ewes)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositives	Sardinian market	Relationship with a visiting dealer from Sardinia after lambing. Selling prices are very low and depend on an evaluation of the animal's body condition (zootechnical/marketing knowledge). Farmers and elected officials from the sector coordinate the overall process. This is the most used option because there is no market in Corsica and the slaughterhouses are overloaded.	Very common/frequent
	Donation/sale (of live animals)	Relationship with individuals or butchers. One-off event, the animal is slaughtered at the slaughterhouse by the buyer. More profitable than the Sardinian market.	Occasional but regular
	Auto-consumption (on-farm slaughter)	Slaughter and processing on the farm. Parts of the animal are given/sold to butchers and individuals or consumed by family or friends.	Occasional but regular
	Unauthorised slaughter and disposal	On-farm slaughter. The carcass may be disposed of in a pit or in the wild, sometimes the renderer collects the carcass (rendering rules). The farmer refuses to use the 'Sardinian truck' and takes responsibility for killing: the Sardinian truck is legal but unjustifiable; shooting is illegal but justifiable.	Common
Postponement dispositive	Donation/sale to other farmers	Depends on relationships between farmers. Healthy animals assessed as still being productive are donated to compensate other farmers' losses through disease. More frequent in health crises (bluetongue), technicians are sometimes intermediaries between farmers.	Occasional, linked to health events
Retirement or retention dispositives	Donation to individuals	Depends on the relationship between farmers and their communities or friendship networks; the animal is given away to become a pet or to 'keep the grass down'.	Rare
	End of life on the farm	Depends on relationships between farmers and animals: farmer's reward to the animal for good work or use of the animal's skills to graze and maintain lands.	Rare
(Dispositives desired by farmers)	Sale to a local market	Stable and well-structured market, local slaughterhouse, value-added price, and provision of meaning for the animal's life (raised to feed humans)	Not in existence

Table 2: The different dispositives identified in the management of the end of an animal's working life (experimental animals)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositives	Euthanasia for experimental sampling	Euthanasia planned in the protocol (organ sampling) following an authorized method	Very frequent
	Euthanasia for health reasons	Euthanasia decided on by the veterinarian (or the person responsible for the protocol) during the protocol in cases where health is irreparably damaged	Occasional
	Euthanasia of cull animals	Euthanasia of breeding or supernumerary animals following an authorized method often adapted to the processing of large numbers.	Rare for farm animals, frequent for laboratory animals
	Slaughterhouse killing and sale to the food sector	Transport by a licensed company and slaughter in a licensed slaughterhouse of healthy animals which can be consumed (no potential chemical residues in the meat or in products).	Very frequent
Postponement dispositives	Sale to farmers or individuals	Transport of animals to a farm or an adapted property (qualified person and suitable infrastructure) to be kept for future consumption or grass control.	Occasional
	Reuse	If animals have not previously undergone an invasive procedure as defined in the protocol and following veterinarian checks, they can undergo a moderate procedure from another protocol. These conditions are clearly defined in European directive 2010-63.	Occasional
	Return to home institution	If the procedure has no impact on the animals, they can return to the home institution. In this case, they can be reused or slaughtered after being fattened for a time.	Frequent
Retirement dispositives	Legal rehoming	Adoption by an animal welfare association, then placement in a sanctuary or foster family. Complicated process involving government veterinary services.	Rare
	Illegal rehoming	Adoption by an animal's care giver/handler because of a special relationship with the animal. The process is locally accepted but is performed without traceability, rendering it much simpler.	Occasional

Table 3: The different dispositives identified in the management of the end of an animal's working life (horses)

Dispositive	Outcome	Description of the dispositive	Activation frequency
Death dispositive	Euthanasia	Criteria for euthanasia are a horse's state of health (terminal disease), loss of enjoyment of life or autonomy, and suffering. The owner is the sole decision maker and only the veterinarian can carry it out. But owners always listen to their veterinarians, whom they trust. The veterinarian performs the euthanasia and the horse is removed by the renderer. The owner pays all costs.	Rare
	Slaughterhouse killing	Although taboo, the entire horse industry sends horses to the slaughterhouse. The decision to cull horses depends on the sector (meat horse breeding; draught horses; equestrian sports, horseracing, etc.) and professional's age. Younger generations are increasingly reluctant to cull horses.	Uncommon
Redeployment/ retirement dispositives	Staying on the farm	Mainly small owners, who can provide food and space and afford expenditure.	Frequent
	Boarding	Owner pays a boarding facility to look after the horse.	Very frequent
	Donation	Sale at meat price, usually to a private individual (friend or client).	Frequent
	Second career sale	Sale at a working value to a private individual or a professional (animals between 7 and 12 years). 'Second career' for the animal. Involves finding a reliable buyer who will take good care of the animal.	Frequent