ethics. Rollin uses the concept of the lie to illustrate this: "Act in such a way that your actions could be conceived to be universal law", Kant stated. Rollin follows with "So before you lie, you conceive of what would occur if everyone were allowed to lie whenever it was convenient to do so. In such a world the notion of telling the truth would cease to have meaning... and no one would trust anyone". As I am writing this in February 2017 in the United States, it has profound meaning to me.

It is equally profound when applied to animal ethics. Current approaches to food animal welfare in the industrial setting have redefined (a little bit like lies) animal welfare. while neglecting *telos* and common sense. The measure of welfare in industrial settings is productivity. The same is true for research animals, where animal welfare is defined mainly by the lack of pain. Common sense, in both cases, tells us this is wrong.

Reading Rollin is like having a one-on-one discussion with the master. He lectures and teaches in the same manner. Having been in an audience where he is the presenter, you feel like he is talking directly to you. The book is filled with personal anecdotes, stories, and examples that explain the philosophy and ethics of each point.

"My thesis, then", Rollin states, "is that animals have needs and desires flowing from their *teloi* that, when thwarted, frustrated, or simply unmet, result in negative feelings that are the experience of poor welfare". He continues: "Thus in the swine industry one encounters a host of welfare problems that are the direct result of industrialization of agriculture and are based on thwarting the animals' behavioral and psychological needs and their nature". He concludes the chapter: "As a matter of fact, just because we live with domesticated animals does not mean we understand their natures — witness dog owners who believe that a wagging tails is an indicator of friendliness rather than excitement".

This leads us into a chapter entitled 'The End of Husbandry'. Husbandry, Rollin suggests, ended after WWII when university departments of animal husbandry become departments of animal science, with academic goals no longer dedicated to care but to "the application of industrial methods to the production of animals so as to increase efficiency and productivity". He provides, in great detail, descriptions of several industrial production approaches for different species each with their own negative outcomes resulting in behavioural consequences, diseases of industrialisation, and harmful consequences to human health.

The first major evaluation of Industrial Farm Animal production by a national commission was the 2008 study funded by the Pew Charitable Trust. Rollin and I were among fifteen commissioners that studied this issue first hand over three years with site visits, interviews, and careful evaluation of the issues identified in the report. Rollin provides a detailed (and, I will add, very accurate) description of the process, the findings and the recommendations of this commission. The report, unfortunately, had minimal if any legislative impact, though it did influence consumer attitudes and a demand for more animal welfarefriendly products. I anticipate that this volume *A New Basis* for *Animal Welfare*, will further those trends.

Many writers have asked the question, 'Do animals have a mind?' Although Rollin presents arguments for and against that question, the concept of common sense as advanced in this book answers it best. They do. Thus, when doing things to, for, and with animals, it is important to both understand their *telos* and to use common sense.

In the concluding chapter, Rollin states, "I am convinced that one must establish a strong link between common sense, morality and animal ethics. I have attempted to do this by invoking Plato's notion of recollection and Aristotle's notion of *telos*, both of which, when properly understood, accord extremely well with the thinking of ordinary people...."

There are many thoughtful books on animal ethics and animal welfare, but only a few — very few — must-reads. *A New Basis for Animal Ethics: Telos and Common Sense* is among the must reads.

Alan M Goldberg Departmental of Environmental Health and Engineering, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA

Animal Housing and Human-Animal Relations: Politics, Practices and Infrastructures

Edited by K Bjørkdahl and T Druglitrø (2016). Published by Routledge, Milton Park, Abingdon OX14 4RN, UK. 216 pages Hardback (ISBN: 978-1-138-85411). Price £90.00.

The aim of this book is to present an historical account of very different housing systems for a wide variety of animals and hugely differing contexts (laboratories, farms, the pet industry and so on). The two editors have assembled an impressive array of expertise, from different fields of interest, to discuss the relationships between animal housing (and this is rather a restrictive definition in this case) and the variety of contexts and histories that surround (and surrounded) these types of structures. It makes for a fascinating, highly informative read; full of surprises and provocative interpretations and points of view. We go from the history of battery cages in Norway to the effort to habituate monkeys used for lab research to sociality; from an account of the aesthetic characteristics of dog display in shops to the history of Heini Hediger's approach to animals' display in Zurich zoo.

In their introductory chapter the editors stress an important point. When looking at animal housing, ie a cage in a zoo or research laboratory, it is overly simplistic to dismiss such scenarios as 'bad' or 'immoral'. Often the scenario is far more complex requiring a finer analysis. In describing some of the more uncomfortable captive conditions for animals (single cages for monkeys, intensive farming of pigs), no moral judgement is expressed. Instead, the editors seek to better understand how such a condition of captivity came into being. This is not a book on the ethics of captive conditions of animals. The basic premise of this book is fascinating, however, in my opinion, it does not always deliver what it promises. Some chapters are captivating, others are somewhat less straightforward, and a number leave you to wonder why they were included (although, I freely admit that as a biologist certain sociological and philosophical nuances escaped me).

So, having finished my first read of the book, I chose to revisit a number of my favourite parts. For example, one was the moving story of the special relationship between eider ducks and the inhabitants of the Vega archipelago in Norway (now declared a UNESCO site). The local community of one the islands bases their living on the collection of eggs and down, subsequently used as filler for winter jackets. In order to continue this activity, the inhabitants have constructed a series of nests on the ground to which eiders return each year to lay their eggs. A special kind of symbiosis has developed between humans and birds: on the one hand, the birds provide economic means to the human population, on the other the humans defend the eider ducks from predators and make themselves virtually invisible to the birds (no smoke from the houses, nobody visible through the windows). Terms such as 'reciprocal exchange' and 'necessary trust' are used to describe such a relationship, and the care shown towards the eiders is described as something 'sacred'.

Another enjoyable and engaging read is the chapter informing us of the use of piglets in translation medicine in Denmark, to study problems affecting neonatal human newborns. The author here follows the life of the piglets from premature birth to sacrifice for histological exams. But what is extremely interesting is the way the piglet changes its status during the different phases of the experimental protocol. In particular, animals shift their identity back and forth from 'zoe' to 'bios'. 'Zoe' refers to a "life as living objects and biological instruments", whereas 'bios' refers to "sentient individual life that has subjectivity and is placed in affective relations within sociality". Furthermore, when data from the piglets' study are presented during a conference, the 'bios individual' (with its own name derived from Nobel Prize winners) completely loses its own identity to become a numerical data. The interviews with the researchers involved at different stages of the study, are particularly illuminating, illustrating such passages of status for their experimental subjects.

So to whom will this book appeal? I would say that anyone professionally involved with animals (in labs, farms, conservation organisations) should be interested, and there is actually something for everybody. But I also have a sense that reactions could be quite distinct: some would like it very much, finding it a gold mine of new perspectives in their daily interactions with animals: others may find it irritating, full of instances of arguments being complicated merely for the sake of it. As you have probably gathered by now, I represent both positions. To conclude, this is a very intriguing book, original and provocative. For me, not all of it hits the target and some parts are less engaging than others, but still this is a book that will help to enrich our perspectives, when thinking about our relationships with other animals. At the end of the day I always appreciate books such as this, that have the merit of making you think about a particular topic in a different way.

Augusto Vitale,

Centre for Behavioural Sciences and Mental Health, Istituto Superiore di Sanità, Rome, Italy