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The Status of Empirical Knowledge in Interspecific Ethics

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אוניברסיטת תל-אביב
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Introduction

This dissertation is about some aspects of moral competence. It focuses on how real people – particularly in the contemporary West – function in the real world when they address moral conflicts between the interests of human beings and nonhuman beings. Given that the moral consideration of such conflicts necessarily involves specific factual assumptions, my argument is twofold. First, I claim that knowledge of the relevant facts is a crucial aspect of moral competence. And second, I claim that this knowledge tends to be inadequate, and that is a major reason for compromised moral competence concerning such conflicts.

Before presenting my argument in detail, I address its theoretical background. At the foundation of my argument lie critical insights about the social origin and function of morality. Although not my original contribution, these insights are by no means commonsensical or consensual. Therefore I will devote to them considerable space (chapters 1-2). Nevertheless, since they originate in critical studies of intra-human affairs, I will add specific adaptations to interspecific affairs.

The central insight in the background of my argument is that *moral competence is constructed by circumstances*. It is not an isolated capacity of individuals, and it does not result merely from individual character, good will, a correct understanding of moral principles, or personal circumstances. Without denying the significance of such individual factors, it is important to acknowledge that moral competence is deeply affected by socio-historical factors, as well as biological ones, such as species identity.

Although the effect of such factors is not fully predetermined, it does provide highly probable results within a definite range.¹

The effect of circumstances is not a simple matter of biased moral judgement due to apparent interests. Socio-historical and biological factors operate at every level of emotion, thought and activity. Accordingly, they put their mark on every aspect of moral competence: the ability to perceive beings and situations as worthy of moral attention (moral perception), the knowledge of morally-relevant information, the ability to tell right from wrong (moral knowledge) and to make moral judgement, the abilities to empathise with others, to care for them and to respect them, and the motivation to act according to moral sentiments and judgements.

At some general level, this insight may be widely accepted. Whether you follow utilitarianism, contractarianism, virtue ethics or other approaches to moral philosophy, you may agree that some conditions are likely to impair people's moral competence. In that sense, general claims about the socio-historical and biological influences on moral competence should be widely accepted – at least once problems are presented explicitly. Nevertheless, an intuitive understanding of social constructionist insights may thrive along with a contradicting intuition, namely that once you acknowledged the limiting factors on your moral competence, the major challenge is behind you and balanced moral views are easily reachable. I believe that the casual dismissal of the problem of socially constructed bias by most moral philosophers expresses the potency of the latter intuition.

¹ The wide range of abilities and conditions that constitute moral competence is often analysed in terms of moral philosophy, and it incorporates much of what moral philosophy is about. The term "moral competence", however, is more commonly used in psychological theory and applied psychological research, following the works of Piaget and Kohlberg (See: Walker and Pitts, "Naturalistic Conceptions of Moral Maturity;" Liszka, *Moral Competence*; Park and Peterson, "Moral Competence and Character Strengths;" Huebner, Lee and Hauser, "Moral-Conventional Distinction."). I do not challenge these perspectives, but I do add a heavy emphasis on the socio-historical conditions that tend to yield moral competence or hinder it.

Uncritical, conflicting intuitions seem to me like a problem serious enough to justify a systematic introduction to this subject (chapters 1-2) rather than a succinct introduction. While common intuition may allow overlooking widespread limitations on moral competence, I hope that a systematic analysis shows that overcoming some limitations is highly improbable due to social, historical and biological conditions.

Furthermore, I suspect that referring to the social construction of moral competence in mere interspecific contexts may be misleading due to the prevalence of speciesism. Without being used to ask critical questions about what we know of chickens in the meat industry, for example, any attempt to outline existing morally-relevant empirical knowledge about them may seem uninteresting. Surely, agricultural details and basic chicken biology are beyond common knowledge, and discovering some agricultural facts may be shocking; but once we get hold of the technical details, what else is there to know?! The poor accessibility of agricultural information and the alleged inaccessibility of chickens' minds are likely to be recognised by anyone, yet other difficulties are easily overlooked. It is only in the context of power relations that have become unacceptable that we can best recognise the social construction of morality and understand how to approach related problems. Therefore I see the discourses on morality in the socio-historico-biological context of widely rejected aspects of sexism, racism or capitalism as a necessary background to the discourse on widely accepted speciesism.

The idea that moral competence is constructed by circumstances has consensual aspects, which I emphasise. Nevertheless, some aspects of this insight may remain somewhat controversial. Controversy is likely to arise over the idea that preferring some moral conceptions over others may itself be influenced by socio-historical and biological

conditions. Correspondingly, moral conceptions (or approaches, theories, etc.) tend to be relatively more favourable for some social and biological groups. The conditions in question affect specific moral views and morally-motivated actions – through the very preference for specific moral conceptions. Therefore my analysis of influences on moral competence must address this more controversial subject as well. Evidently, attempting to determine which theory of moral philosophy is better than others in general is beyond the scope of the present work; yet it is necessary to examine whether some theories of moral philosophy are connected to compromised moral competence under some circumstances and concerning some moral problems.

Throughout this dissertation, I argue that moral competence is compromised by several major factors: the actual invisibility of one or more of the parties who are involved in the moral problem at hand; the intensity of differences between them and us; their position as dominated and exploited by another party; our own involvement in their domination and exploitation; and the level of institutionalisation of all the previous factors. These factors influence all aspects of moral competence. This does not necessarily mean that limiting factors on moral competence could not be overcome. But the effort needed to overcome them depends on their intensity, and when limiting factors are too intensive, the moral competence of concerned individuals or a small oppositional group is beyond recovery, despite any effort they may make.

My critique of morality is of Marxist and feminist origin. Perceiving morality as an ideological expression of actual, material relations draws on Marxist insight.² One

² The great majority of Marxist theory is, of course, bluntly speciesist. Nevertheless, Marxist insights are directly applicable to interspecific relations, and reviewers of mainstream Marxist attitudes towards nonhuman animals stress the inconsistency between speciesism and Marxist principles. See: Benton,

plausible implication of the Marxist attitude towards morality is acknowledging the ideological aspect of interspecific ethics as a discourse produced exclusively by humans, and therefore suspected of pro-human bias. The emphasis moral philosophy tends to put on allegedly unique human traits such as autonomy and rationality is not, in that respect, an impartial conceptual reaction to moral problems, but rather an ideological, speciesist project; similarly, the factual picture of a great gulf between humans and all other animal species is not a result of a pure quest for knowledge, but again, an ideological construction. No less important is to comprehend that acknowledging these ideological inclinations does not exempt the critic from these flaws, since she cannot observe human-nonhuman relationships from a neutral vantage point: you never stop being human. Indeed, the human mind is allegedly open to an unlimited variety of critical views; yet in reality we are rather limited; both moral concepts and empirical knowledge are the products of immense communal efforts we cannot exceed single-handedly or within a small oppositional community.

Some feminist critical ideas are applicable to interspecific issues without considerable adaptation, or with simple adaptations that have already been suggested by feminist theorists.³ The feminist critique of traditional moral philosophy provides a basis for doubts about the validity of certain moral theories (such as contractarianism) in interspecific contexts, and about the heavy emphasis given to some concepts (such as autonomy and rationality) in interspecific ethics. As to bodies of empirical knowledge

Natural Relations; Szybel, "Marxism and Animal Rights;" Perlo, "Marxism and the Underdog"; Benton, "Marxism and the Moral Status of Animals."

³ Unlike the writers on Marxism and nonhuman animals, the writers on Feminism and nonhuman animals tend to overlook much of the typical feminist speciesism. See: Adams, *Sexual Politics of Meat*; Adams, *Neither Man Nor Beast*; Birke, *Feminism, Animals and Science*; Carol and Donovan, *Animals and Women*; Donovan and Adams, *Beyond Animal Rights*.

that may be used for interspecific moral considerations, some feminist as well as similar environmentalist critique is directly applicable to interspecific issues. The critique of science as a project of dominating nature gains special meaning in light of the common classification of nonhuman animals as mere "nature". Similarly, the feminist interest in the construction of women's and men's alleged natural traits is a source of insight and methodology for exposing the construction of "animals" as naturally dominated and exploited – a status that may seem to exempt the dominators and exploiters from moral responsibility. This critical interest may be extended to the construction of "animality" and the alleged nature of specific species or specific animal populations.

Without underestimating the insights that may be drawn from feminist and Marxist criticism, I believe that interspecific moral issues call for much attention to other social-biological topics as well: the lack of speech and the resulting lack of self-representation as an ultimate weakness; moral reflection without presuming that all members of the moral community are essentially similar and equal, and without presuming that the variety of natural traits across the community is morally insignificant; being regarded and treated as a mere body and a resource; the industrialization of sentient beings; and the significance of empirical knowledge about moral subjects. These topics are somewhat familiar from intra-human contexts as well, and sometimes they are referred to in feminist and other critical literature. The interspecific context, however, provides the archetypal and potentially most enlightening case for every such topic.

As we see here, interspecific moral concerns mark a departure from a central trend in Marxist and feminist traditions. As liberationist projects Marxism and feminism put much weight on a better understanding of social relations by the exploited party

(proletariat, women, etc.) and on social changes initiated by that party. What exploiters understand and wish to change is a marginal issue in these traditions. In contrast, the present dissertation is concerned exclusively with the moral competence of dominators and exploiters. This focus, however, does not undermine the relevance of Marxist and feminist insights; it merely indicates that the prospects of "animal liberation" are low. Without a self-representing social group, which is a potential leader of social change, the change depends on other factors, such as a transformation of morality throughout human society, and other, material factors (e.g.: a mega-epidemic originated in animal farms, developing very cheap artificial "animal products", or a global policy of sustainable – that is, plant-based – agriculture). The Marxist and feminist traditions remind us that a deep transformation of dominators' and exploiters' attitude is not likely to happen without an accompanying change of actual interspecific relations. A better understanding of the problem of morally-relevant empirical knowledge may contribute to such a change, but it is not the key to it; there is probably no single key in any case. In that sense, the liberationist orientation, central to the Marxist and feminist traditions, is beyond my work. My modest aim is to apply familiar traditions to an analysis of shortcomings of interspecific ethics.

After explaining what kind of theoretical background will be discussed in the first two chapters of this dissertation, I will now provide some introductory notes to my original argument. As the title suggests, among all aspects of moral competence, the dissertation focuses on *knowing the relevant facts*. This includes, beyond knowing the necessary facts, recognizing missing, distorted, or fabricated information. When relevant facts are unknown, they are likely to be replaced by other, wrong factual beliefs, or by

ignorance and indifference to the factual domain. This impairs the validity of moral judgement and the relevance of moral feelings, and it may also thwart the development of a comprehensive attitude to morality in general. Nevertheless, in the discourse of moral philosophy, the problem of knowing the necessary facts is perhaps the most neglected aspect of moral competence.

One possible explanation to this neglect is that often it seems that we know enough about the parties and the situation in question, and any missing detail may be easily learned, if necessary. This impression is plausible, given the strong emphasis, throughout most of the history of moral philosophy, on conflicting interests among more or less familiar and equal members of our own society. Yet once moral reflection departs from what we know intimately, empirical knowledge turns to be a serious problem (indeed, intimate knowledge appears superfluous when considering some harm, such as overtly sadistic abuse, which seems obviously wrong under prevailing norms. Nevertheless, when harm to others is institutionalised, ignorance of morally-relevant facts contributes to its status as obviously *acceptable*, or at least controversial).

Another possible explanation to the scarcity of attention to the problem of empirical knowledge is that many philosophers believe that examining their own state of knowledge is beyond the boundaries of philosophy. Whether that position is valid or not, it is obvious that moral philosophers present in their work numerous factual claims about the nature of specific parties, their life circumstances, their experiences, and their relationships with other parties. Surely, if such claims are biased, inaccurate, or lacking relevant details, the philosopher cannot reach valid moral conclusions. Therefore, I believe that moral philosophers should not be exempted from the responsibility to address

their own state of knowledge, i.e., they should inquire which information is necessary for their work and examine the limitations of their own knowledge. If nothing else, they should admit that their moral opinions on less than intimately familiar issues are essentially deficient.

I claim that the problem of knowing the relevant facts cannot be dissociated from other moral issues and treated as if it was external to the process of forming a moral opinion. Some aspects of this idea have been acknowledged and developed by many theoreticians, as I will discuss in chapter 3. In real life, empirical knowledge is well integrated into the moral domain. Knowing morally-relevant facts is essential to the development of attention to specific moral problems as well as to the motivation to get involved in relevant moral considerations and the resulting actions. Yet, comprehensive morally-relevant knowledge is not likely to be acquired at random; without attention to moral matters and motivation to learn the facts in the first place, the relevant information would be overlooked.

Furthermore, information itself cannot be dissociated from moral content, since the language used to describe phenomena is laden with moral meaning (for example, describing a specific behaviour as "crying" usually implies the acknowledgment of distress, while describing it instead as "vocalising" implies an intentional disregard of the distress; apparently, both concepts carry moral meaning). This is true also for non-verbal means of representation (e.g., the choice of photographic elements such as subject and angle, or editor choices). Consequentially, factual content and moral meaning are intermingled. This means not only that the lack of relevant empirical knowledge limits moral competence, but also that it is morally insufficient to know a social reality through

mere technical details without much moral connotations, or through descriptions that grant domination and exploitation with a positive value.

Another point I wish to emphasise is the actual dynamics of learning morally-relevant facts. Morally-relevant empirical knowledge could be acquired through personal experience or direct observation, through learning testimonies by others who report on their personal experiences or their direct observations, and through generalisations and analogies based on the former sources. The level of effort such learning activities require varies. Reflection on moral problems in the lives of roughly equal and similar, free members of your own society require relatively manageable learning efforts. For example, you may ask both parties directly what the problem is, get satisfying answers, and form a well-informed moral opinion. Yet such a casual, personal mode of inquiry is likely to become ineffective when the parties in question are invisible to you, significantly different from you, or institutionally dominated and exploited. Under such conditions, establishing sufficient knowledge becomes a considerable effort that requires strong motivation, long duration, cooperation among many like-minded people, and support (e.g., financial support) by a much larger social group. These requirements are more demanding for the acquisition of empirical knowledge than for any other aspect of moral competence.

This brings us explicitly to interspecific issues. There are at least two elements that affect moral competence concerning *all* nonhuman animals (or, more precisely, concerning all moral problems that involve conflicts between humans and nonhumans). First, all nonhuman animals are noticeably different from all humans. Indeed, differences among various taxonomic categories of nonhuman animals may be even greater, but

these are irrelevant here. What matters is that if noticeable differences hinder the understanding of others and the ability to empathise with them easily, then all nonhuman animals arouse such reactions. Acquiring sufficient knowledge of them is thus a considerable challenge. Secondly, all nonhuman animals (as well as some large human groups) lack the ability to represent themselves in the moral discourse, and therefore their representation is necessarily mediated. Furthermore, the mediation is not provided by a neutral third party, but by members of the very species whose interests are considered against the animals' interests. All these factors combined make the project of interspecific ethics highly problematic.

Beyond these general considerations, I believe that referring to nonhuman animals as a single group in the context of moral competence is a misleading generalization. So is a more refined focus on taxonomic classes, orders, etc. Instead, the focus should shift to relation types, since moral theorising and moral behaviour tend to conform to specific patterns of power relations rather than to biological taxonomy. As socio-historical conditions have an inevitable effect on moral competence, different kinds of relations yield different limiting factors on moral competence. There are distinct types of human-nonhuman relations, some of which are somewhat similar to some intra-human relations. For example, the "companion animal"/"guardian" relation bears some resemblance to some types of intra-human relations, and accordingly the limiting factors on the moral competence of a "guardian" are comparable to those of a parent or another guardian of humans. Similar analogies may be applied to human relations with "working animals", or with some "wild animals". Nevertheless, *other types of animal exploitation are predominantly interspecific, and they give rise to distinct limitations on moral*

competence. The range of such predominantly interspecific relations is wide, and so is the range of distinct limitations they put on moral competence. This insight, despite its familiar Marxist and feminist origin, has hardly been recognised in interspecific contexts.

Among all interspecific relations, I give special importance to the industrial exploitation of nonhuman animals, which is the focus of chapter 4. This type of exploitation is predominantly agricultural, and it is a central phenomenon throughout most countries since around the early 20th century, with direct roots in the 18th century. Nowadays, each year tens of billions of animals are industrially exploited, and nearly the entire human population in the industrialised countries supports these industries as consumers. By "industrial exploitation" I mean a combination of several elements: all the animals are under intensive, constant confinement; very few people, who rely heavily on specialised technology, are in charge of numerous animals; and the entire activity is supported by intense scientific and economic research, which is guided by purely economic considerations. Industrial exploitation is unprecedented in methods, scale, and levels of domination and exploitation, and it is essentially different from any familiar social phenomenon. Unlike traditional farming, it has not been considered as a social reality, and most of it has hardly ever been described outside the technical discourse. Therefore, *it is most difficult to represent and understand industrial exploitation in moral terms, and consequently, the moral competence of anyone who considers that reality must be extremely deficient*. I believe that this insight has been overlooked entirely by scholars.

One key element of industrial exploitation is a unique pattern of production of morally-relevant empirical knowledge, i.e., knowledge of the exploited animals' traits, their experiences, the exploitative conditions, etc. The resulting knowledge is extremely

deficient. This knowledge and ignorance are at the core of a specific kind of morality, which is marked by extreme incidence of limiting factors on moral competence.

Despite the severe limitations on moral competence concerning interspecific issues, most moral philosophers have ignored their problematic position in that field, and they have not paid special attention to the deficiency in morally-relevant empirical knowledge.

The common attitude towards empirical knowledge in interspecific ethics is demonstrated by Jacques Derrida:

"It is all too evident that in the course of the last two centuries [...] traditional forms of treatment of the animal have been turned upside down [...]. This has occurred by means of farming and regimentalization at a demographic level unknown in the past, by means of genetic experimentation, the industrialization of what can be called the production for consumption of animal meat, artificial insemination on a massive scale, more and more audacious manipulations of the genome, the reduction of the animal not only to production and overactive reproduction (hormones, genetic crossbreeding, cloning, and so on) of meat for consumption but also of all sorts of other end products [...].

All that is well known; we have no need to dwell on it."⁴ [My emphasis]

This short list does imply some knowledge – enough knowledge to raise doubts whether the facts are really well-known to Derrida's audience. On the other hand, does Derrida's own knowledge surpass his succinct points significantly? Or does he rather believe that in any case philosophers do not need to know much, and therefore "we have no need to dwell on it"? Whatever the answers may be, Derrida represents what seems to me like naïve self-confidence in the context of the empirical knowledge necessary for interspecific moral considerations. Most other philosophers demonstrate similar casualness towards empirical knowledge, while they also make numerous factual claims. This tendency is most explicit when they attempt to apply moral principles to actual interspecific conflicts – which they very often do.

⁴ Derrida, "Animal that Therefore I Am," 394.

Thinking, talking and writing about interspecific moral issues is certainly not limited to professional philosophers: virtually every normal person takes part in such activities. It should be noted, though, that professional philosophers write more than other people about moral issues, they do so more systematically, and their writings are more accessible than other moral writings (not to mention moral thoughts and conversations). Therefore, I will demonstrate my argument about the treatment of empirical knowledge in interspecific ethics through prominent academic texts.

Tom Regan's 1983 *The Case for Animal Rights* is among the most well-known books on interspecific ethics, and it demonstrates a typical treatment of empirical knowledge in that discipline. Overall, Regan shows minimal interest in empirical information as such, yet the entire book is immersed in factual assumptions and claims. Most prominently, the first two chapters, "Animal Awareness" and "The Complexity of Animal Awareness," survey commonsensical beliefs since Descartes about nonhuman animal minds, against the background of relevant scientific developments (among the two, the first chapter is more fact-oriented). Regan is apparently satisfied with his own general knowledge and the readers' knowledge of nonhuman animal minds, including knowledge of evolution, behaviour, and anatomy and physiology. He refers to a mere few sources to illustrate some points, while other parts of the discussion apply to commonsensical knowledge, and to casual observations of dog behaviour – in response to other philosophers who used the same intuitive methodology.

The Case for Animal Rights discusses the problems of knowing about the minds (or the lack of them) of nonhuman animals as a matter of mere conceptual clarity rather than a problem in the state of knowledge, the history of knowledge, the institutions of

knowledge, etc. Indeed, in his brief discussion of anthropomorphism and human chauvinism, Regan notes that the discourse on nonhuman animal minds does not occur in an ideological vacuum,⁵ and following Donald Griffin, he states that "It is not [...] any defect in animals that bars us from recognizing that they have a mental life; the bar to this recognition is our own conceit."⁶ This insight could be developed into a deep critique of the limitations of the "animal awareness" discourse, but Regan soon loses interest in the problem of distorted knowledge, and he returns to use factual common-sense uncritically. The casual attitude towards empirical knowledge leads him to ascribe consciousness specifically to "mammalian animals,"⁷ and define "animals" as "mentally normal mammals of a year or more."⁸ This oddly narrow, arbitrary definition is applied throughout the book, and "animal rights" refer to that kind of animal. Animals other than mammals of a year or more are protected by weak "moral caution" and "benefit of the doubt"⁹ (indeed, in later writings Regan grants birds a clearer status of rights-holders).¹⁰ This "line drawing" is dramatic since it excludes the overwhelming majority of institutionally exploited nonhuman animals – birds, fish and young mammals – from the core of Regan's animal rights theory. Despite that, the last chapter of the book is dedicated to practical implications of Regan's theory to actual practices, including meat eating (although in practice people eat mainly birds, fish and young pigs) and animal experimentation (which in practice is performed mainly on young rodents). Minimal factual descriptions of these practices are provided.

⁵ Regan, *Case for Animal Rights*, 6-7, 30-31.

⁶ *Ibid.*, 31.

⁷ *Ibid.*, 29.

⁸ *Ibid.*, 78.

⁹ *Ibid.*, 366, see also 349, 367.

¹⁰ Regan, *Empty Cages*, 59-61. This view towards birds is also expressed in the preface to the 2004 edition of *The Case for Animal Rights*, xvi.

Regan's attitude towards empirical knowledge is typical of philosophers who write about interspecific ethics. Those who promote radical social changes (such as Regan) are often indistinguishable in that sense from contributors of apologies for the status quo. I believe, however, that it is not unreasonable to expect philosophers to pay serious attention to the limitations of their factual sources and to the consequent limitations on their moral competence. A sincere acknowledgment of these limitations would demand a shift of the philosophical agenda towards factual inquiry and critique of ideology. I do not believe that trying to draw away from any practical implications and practice philosophically pure interspecific ethics is a realistic option. Indeed, the project of interspecific ethicists is all about practical implications, and accordingly most texts in the field of interspecific ethics are immersed in factual assumptions.

The factual assumptions in these texts relate to three domains of knowledge: nonhuman animal minds (their consciousness, emotions, desires, experiences in specific circumstances, etc.); exploitation of nonhuman animals (what happens in farms, laboratories, etc.); and human benefits from their relations with other species (this last domain is the only one that people may be familiar with – familiar enough to use what they know for moral consideration). These assumptions, however, appear in the text in a casual, implicit manner, without specifying that there is a factual, possibly controversial issue at hand. Some books do not include any significant presentation of factual claims beyond that.¹¹ Others include further short sections that present some factual points explicitly, yet without attempting to present a systematic account of the relevant domain (and without claiming to do so). Some of these elaborations rely on random expert,

¹¹ E.g.: Frey, *Rights, Killing and Suffering*; Midgley, *Animals and Why They Matter*; Linzey, *Christianity and the Rights of Animals*; Sapontzis, *Morals, Reason and Animals*; Regan, *Defending Animal Rights*.

scientific sources concerning nonhuman animal minds,¹² and less commonly, technical sources on exploitative practices.¹³ Alternatively, some elaborations rely on common knowledge without significant references. They appeal to common knowledge of scientific or technical alleged truisms concerning nonhuman animal minds or exploitative practices;¹⁴ often these elaborations also appeal to casual observations of dogs and cats.¹⁵

The stated attitude towards empirical knowledge in most of the professional discourse on interspecific ethics may be summarised in the following passage from Frey:

"I support wholeheartedly the application of philosophy to practical issues; but it is as well to be aware at the outset of the form which the philosopher's contribution of these issues takes. [...] though he can and doubtless should concern himself with and even soak himself in the factual material pertaining to the specific arguments under his gaze, further increase in this factual material and knowledge are not part of a philosopher's task as such."¹⁶

This claim is very plausible: moral philosophers should certainly learn the facts, but they should also leave research to researchers. Although I do not recognise in Frey's own work indications that he did "soak himself in the factual material," other philosophers did take the challenge of a systematic inquiry into morally-relevant factual issues. For example, much of *Taking Animals Seriously* by the philosopher David DeGrazia is an attempt to present the scientific state-of-the-art in the study of nonhuman animal minds.¹⁷ Parallel

¹² E.g.: Singer, *Animal Liberation*, 11-18. Citations in this introduction refer to the Thorsons edition; Frey, *Interests and Rights*, 91-100; Leahy, *Against Liberation*, 34-40, 58-60, chap. 6; Pluhar, *Beyond Prejudice*, 21-22, 26, 46-51, 83-85.

¹³ E.g.: Leahy, *Against Liberation*, chap. 8; DeGrazia, *Taking Animals Seriously*, 281-297 (DeGrazia does attempt to summarize conclusive surveys of factory farms and zoos rather than local works).

¹⁴ E.g.: Carruthers, *Animals Issue*, 56-58, chap. 6; Scruton, *Animal Rights and Wrongs*, 11-26, 40-42, 66-96 (sporadically); Pluhar, *Beyond Prejudice*, 201-203, 270-281.

¹⁵ E.g.: Frey, *Interests and Rights*, 102-120, 128-130, 135; Pluhar, *Beyond Prejudice*, 40-42, 271. In Some texts anecdotes are more detailed and they are used less as illustrations and more as the central objects of reflection: Gaita, *Philosopher's Dog*; Manning, "Caring for Animals."

¹⁶ Frey, *Interests and Rights*, 2.

¹⁷ DeGrazia, *Taking Animals Seriously*, chaps. 5-7.

ambitious attempts have been made by a few other theorists.¹⁸ DeGrazia provides several "reasons to explore the mental life of animals:"

"[it] is necessary for determining which animals have basic moral status. [...] we want to know (1) whether there are morally important differences among moral beings, and, if so, (2) what factual variables underlie such differences, and, in general, (3) which morally relevant traits particular animals have."¹⁹

A philosopher who wished to stick to pure philosophy would not raise all these points. But DeGrazia raises them since almost no one else does, and he makes the effort to provide a thorough review of the scientific knowledge of nonhuman animal minds since previous reviews are not satisfactory for the purpose of moral reflection. Indeed, he did not add his own observations to the reservoir of scientific knowledge, but if thorough reviews add knowledge, his review seems to have increased the "factual material and knowledge," exceeding Frey's limitation on the philosopher's task.

The production of new knowledge is more apparent in the most influential text in interspecific ethics, Peter Singer's *Animal Liberation*. This book includes an attempt to provide an overall picture of the exploitation of nonhuman animals in agriculture and in research.²⁰ Such a thorough approach to the facts of exploitation is uncommon among moral philosophers – even less common than thoroughness in relation to empirical knowledge of nonhuman animal minds.²¹ Singer's review pioneers a critical reading of primary sources, and in that sense it presents factual innovation. Had Singer written

¹⁸ Wise, *Rattling the Cage*, chaps. 8-10. These chapters attempt to summarise the scientific knowledge of chimpanzee and bonobo minds. Some attempts to write books in interspecific ethics, or contribute to volumes in ethics, have also been made by biologists whose expertise is apparent in the texts, e.g.: Bekoff, *The Animal Manifesto*; Rogers and Kaplan, "All Animals Are Not Equal" (this is a scientific text in a volume that contains mostly philosophical and legal articles); Dol et al., *Animal Consciousness and Animal Ethics* (this volume is predominantly scientific).

¹⁹ DeGrazia, *Taking Animals Seriously*, 75.

²⁰ Singer, *Animal Liberation*, chaps. 2-3.

²¹ Bernard Rollin, who holds a rare combination of professor positions in philosophy, animal sciences and biomedical sciences, provides an expert review (yet without references) of animal experimentation in the USA: Rollin, *Animal Rights and Human Morality*, pt. 3. See also: Regan, *Empty Cages*, pt. 4.

Animal Liberation today, he would have probably been less innovative thanks to animal welfare science and the conclusive reviews written, for example, by animal welfare committees of the European Union. But when he wrote the book around 1974, the discipline was at its infancy. Singer recognised the *moral* need for a description of nonhuman animal exploitation, and therefore he created a sort of proto-animal-welfare-science text.

I elaborate on these exceptional projects in order to stress that some philosophers did acknowledge that the reality they write about is largely unknown. They realised that if they wish to relate to real animals and to real interspecific relations rather than to vague, prejudiced preconceptions – they must venture beyond the boundaries of philosophy and make a thorough factual inquiry. Indeed, *Taking Animals Seriously* is far from pure philosophy, and *Animal Liberation* is in fact a philosophically-oriented manifesto, but these deviations from the discipline were necessary for answering the moral questions.

An intriguing question is whether these books and similar ones provide the necessary information for interspecific moral reflection. Obviously, no single review includes the entire knowledge in a specific field. Furthermore, I am not familiar with any attempt to examine thoroughly both the minds of nonhuman animals and their exploitation. But beyond limitations of scope, do existing reviews present *valid* information? Is this knowledge comparable to the knowledge we use to consider the human side of interspecific relationships – in terms of depth, breadth, and sensitivity to moral issues? Or does it reflect the exploitative relationship, including typical distortions,

overemphasis on degrading elements, and omission of elements that may elevate the animals' status?

DeGrazia, for one, seems to take for granted the validity of his informational review. Like those philosophers who provide mere fragmentary factual accounts, he appeals to science – especially to cognitive ethology – without a serious account of scientific bias. He overlooks the implications of the ideological scepticism towards the mental world of nonhuman animals in the relevant scientific sub-disciplines (DeGrazia's does discuss bias, but as a mere flaw in a hypothetical process of moral judgement rather than as socio-historically evolved norms).²² For him, science is the legitimate reservoir of empirical knowledge, and its limitations (e.g., further research needed, or doubts concerning the validity of "anecdotal" information) are acknowledged through methodological reflection within science.

Singer's approach to information about the agricultural and scientific exploitation of nonhuman animals is entirely different. He characterises the kind of information he presents in terms of truth vs. persuasiveness:

"[...] in order to make my account as objective as possible I have not based the descriptions that follow on my own personal observations of farms and the conditions in them, nor have I relied on reports from others especially sympathetic to animal welfare. Had I done so I could have been charged with having written a selective biased account, based on a few visits to unusually bad farms. Instead the account is drawn largely from the source that can be expected to be the most favourable to the farming industry: the magazines and trade journals of the farm industry itself."²³

²² DeGrazia, *Taking Animals Seriously*, 19-32.

²³ Singer, *Animal Liberation*, 99. See also 34-35 for similar comments concerning the information on animals in laboratories.

It is not clear whether Singer really thinks that personal observations and observations by people who are especially sympathetic to animal welfare are unworthy sources or merely vulnerable to criticism. Nevertheless, he is very clear about the sources he used:

"Naturally, articles directly exposing the suffering of farm animals are not found in farm magazines. In fact the farm magazines are not interested in the question of animal suffering in itself. [...] the idea that we should avoid confining animals in uncomfortable conditions simply because this is in itself a bad thing is not mentioned. [...]

Still, we can learn a great deal about the conditions of farm animals from the farm magazines. We learn the attitudes of some of the farmers to the animals under their absolute and unrestricted rule, and we learn also of the new methods and techniques that are being adopted, and of the problems that arise with these techniques. Provided we know a little about the requirements of farm animals, this information is enough to give us a picture of animal farming in the United States today."²⁴

This description indicates that Singer never pretended to provide a full or balanced picture of the agricultural reality. He acknowledges that factual information is likely to be biased or be read as biased in any case. Accordingly, he chose to locate his informational account at a specific location on the map of biases: in the exploiters' territory. As a matter of persuasion rather than of sound argumentation, if he succeeds to make a case for vegetarianism on the basis of information from the agricultural industries, he would succeed with any kind of sources. Given this pattern of persuasion, the reader should never forget that she is reading a partial and distorted account rather than a truthful one. This insight is missing from most of the presentations of empirical knowledge in interspecific ethics. In fact, Singer himself loses this insight occasionally.²⁵

²⁴ *Ibid.*, 99-100.

²⁵ For example, trying to justify the consumption of eggs from free-range farms, Singer claims that the hens in such facilities "live comfortably" and "They do not appear to mind the removal of their eggs." (*Animal Liberation*, 190) The basis for these claims is not specified, and the claims are taken uncritically with no consideration of bias.

If one can make a convincing case for vegetarianism using "the source that can be expected to be the most favourable to the farming industry," is a full and balanced factual account of nonhuman animal exploitation still needed? My answer is: "certainly yes!" Although vegetarianism may be the single most important issue in interspecific ethics in the contemporary West, it is by no means the only issue. Singer's sources are doubtfully sufficient for a serious discussion of veganism (and as we have seen above, Regan's more typical treatment of empirical knowledge in *The Case for Animal Rights* is only vaguely relevant even to vegetarianism, except for the relatively marginal consumption of mature mammals). Furthermore, a full, balanced factual picture is essential for the moral consideration of interspecific conflicts that call for a refined compromise between similar options rather than a sweeping choice between two distinct options (such as "vegetarianism/omnivorism"). What price should we pay – economically, culturally, emotionally, etc. – as individuals and as a society, in order to eliminate some forms of exploitation? What kind of pressure – persuasion, imposing fines, imprisonment, etc. – should we put on those who insist on preserving the exploitative status quo, either as perpetrators or as indirect supporters, such as meat consumers? These and many other perplexities cannot be resolved by a dichotomous answer such as "vegetarianism/omnivorism." When a refined answer is needed, Singer's strategy of using information that can be expected to be the most favourable for the exploiters would inevitably facilitate a distorted moral resolution. In that sense, an *Animal Liberation* kind of factual account is misleading – at least if it is wrongly read as an attempt to present the definite truth about farms and laboratories. Still, the more typical factual accounts by

interspecific ethicists are more bluntly misleading since they explicitly attempt to provide such truths, without warning about the limitations of their sources.

Summing up the treatment of empirical knowledge in interspecific ethics as a sub-discipline of professional philosophy, four points emerge:

- a. virtually all texts relate to a specific reality, and they make many factual claims, including claims about the nature of nonhuman animals, their experiences under human domination, and the benefits humans gain from exploiting nonhumans;
- b. these texts nevertheless do not refer to the entire range of relevant facts, and most of them make rather unsystematic factual claims that rely on random sources – from occasional ethological studies to personal impressions of pets;
- c. these texts show no attention to the fact that most of the sources of their factual claims were produced under extreme power relations by the dominant party, and so the problem of bias in these source is ignored; and finally,
- d. these texts nevertheless do present specific conclusions as to the morally preferable treatment of specific taxonomic groups, and whether to continue, intensify, refine or terminate specific exploitative practices, such as eating and wearing animal products, using animals for work, entertainment and research, or killing wild and feral animals as recourses, competitors and threats.

Despite the claim of philosophy to deal with conceptual problems rather than facts, I do not see how making many factual claims (a) could be avoided in practice. Moral philosophers are anxious to say something meaningful about real life; what is the point of ethics that avoids any factual reference, or relates to utterly theoretical entities in theoretical situations (if such philosophical projects are possible at all)? For similar

reasons, presenting practical conclusions (d) is not likely to be avoided. The level of factual sources taken into consideration (b) is very diverse in different texts. Seriously addressing the need for factual details marks a dramatic shift from pure moral philosophy; it is likely to occur only if the writer acknowledges that she cannot practice moral philosophy in a casual manner since intuitive, common knowledge of nonhuman animals is essentially insufficient. Addressing the problem of bias (c) develops the previous point, again outside the realm of philosophy. It is likely to be addressed if the writer acknowledges that expert knowledge of nonhuman animals is biased and misleading. This point is largely overlooked by moral philosophers, yet it is by no means fully ignored. For example, many books on interspecific ethics mention anthropomorphism, or the excessive fear of anthropomorphism, false scepticism, human chauvinism, etc. – as a problem that characterises knowledge of nonhuman animals.²⁶ In fact, some philosophers made important contributions to the study of distorted knowledge of nonhuman animals – in their non-ethical works. The most notable of them is probably Bernard Rollin's *The Unheeded Cry*, a detailed critical review of the history of the science of nonhuman animal minds.²⁷

It should be stressed that addressing ignorance and bias, however sincerely and through whatever personal virtues and circumstances, does not guarantee that these obstacles would be overcome. In a reality where the obstacles are integrated in the entire social system rather than mark a specific social position, the efforts of interested individuals to overcome this kind of limiting factors on moral competence would be

²⁶ Regan, *Case for Animal Rights*, 6-7, 30-31; Rollin, *Animal Rights and Human Morality*, 64, 72-73, 81-82, 192; Midgley, *Animals and Why they Matter*, 115-116, 125-143; Carruthers, *Animals Issue*, 124-126; Frey, *Interests and Rights*, 84-86; Leahy, *Against Liberation*, 10-13.

²⁷ Rollin, *Unheeded Cry*. See also: Midgley, *Beast and Man*.

inevitably insufficient. Sporadic good intentions are not likely to eliminate the age-long, consensual disregard of nonhuman animal life and feelings, nor the sense of legitimacy of exploiting them. They do not make other species more understandable, and they certainly do not generate empirical knowledge that requires expertise, long-term study, finance, and access to confined animals. Despite good intentions, *ignorance and bias tend to prevail and obstruct any reasonable moral work, and prevent valid, conclusive moral judgement regarding many interspecific conflicts*. This tendency may characterize any enduring, strikingly unequal and exploitative relations. In interspecific contexts, it is intensified by the nonhuman animals' lack of self-representation, and by their being biologically different and therefore difficult to understand.

The industrial exploitation of nonhuman animals adds a further, effective obstacle on empirical knowledge, since almost all the information about that reality has been produced by the industries for internal use. This professional discourse refers to the animals as mere objects of rational management for economic purposes, in terms of living raw material, living production machines, or not yet processed products. There is hardly any information available about industrial exploitation as a relationship – however coercive – in social, morally-laden terms. Additionally, it is so unlike other types of relations that analogies to familiar relations are more deceiving than revealing. Therefore *the animals cannot be well perceived outside the context of their status as resources incorporated in a technological-economic practice*. This is my deepest criticism of the discourse of interspecific ethics.

Despite these severe problems, moral philosophers write their essays as if their knowledge is valid and sufficient for definite moral conclusions. Of course, this is not a

special shortcoming of philosophers. Other people of all occupations and social positions normally do not even bother to look at occasional scientific sources. Even so, they do presume that their knowledge of the facts is sufficient, and they do form numerous moral opinions – about the consumption of animal products, the treatment of companion animals and other close animals, and issues beyond their direct influence, such as animal experimentation or the "development" of wild habitat. Whether the moral opinions and practical decisions are reflected upon and supported by arguments or whether they are habitual and not fully conscious, they rely on false confidence as to the relevant empirical knowledge.

I cannot provide a review of the levels of such knowledge and the relevant moral attitudes across contemporary Western culture, and compare it to the professional discourse of interspecific ethics as I have reviewed it. I assume that knowledge and morality are not uniform throughout society, especially as some people are direct exploiters, others are active reformers, and the great majority of the population is neither, yet it supports nonhuman animal exploitation through the consumption of animal products. Furthermore, the distribution of ignorance and knowledge cannot simply conform to people's location on the social map of exploitative relations: direct exploiters have access to morally-relevant knowledge more than any other group, while they are in the worst social position to develop moral perception; animal welfare scientists are acknowledged as the highest authority on morally-relevant knowledge of nonhuman animals, while their moral attitude and perception are ambiguous; and animal rights activists have considerable knowledge (including original knowledge from undercover investigations) as well as high moral alertness. This is indeed a complex picture, and for

the sake of brevity I will not devote much space to the last two groups, which are very small. I will refer to them mainly in the conclusions, where I claim that morally-relevant empirical knowledge in both animal welfare science and animal rights groups is largely dominated by the animal industries.

1. Moralities and their relation to social orders and power systems

Moral methods, principles, beliefs, habits, etc., are social products, and as such, they express the worldview of their creators. Not every member of society participates equally in the creation of such social products, if she can participate at all; participation is rather a privilege of powerful social status and cultural capital. The result is a standard dynamics of social influences on moral emotions, theorising, judgment, and any other level of moral activity. This chapter examines that dynamics under unequal social power relations. The thesis is that under unequal power, moral systems cannot fulfil their own aspirations for impartiality, justice, care or other meta-ethical constituents. It should be stressed that although many of my arguments about the weaknesses of specific moral systems are taken from moral philosophers of rival schools, eventually I do not endorse one attitude to morality as an adequate solution to the problem of moral competence. On the contrary: my aim is to stress the vulnerability of morality of any kind to some socio-historical and biological circumstances.

1.1. Morality as a direct instrument of power

Moral considerations relate to values of good and evil. A common perspective in Western philosophy relates to the moral domain as a domain of ideal principles, beyond worldly existence. As such, the moral element is irreducible to anything else.²⁸ In this view, the essence of good and evil cannot be reduced to empirical facts, nor can it be deduced from factual experiences.

²⁸ Walker, *Moral Contexts*, 103-4.

This idealistic view is typical of normative ethics, i.e. ethics or moral philosophy as a system of principles and rules that aspire to direct people's good or right behaviour. Other, more mundane perspectives on the moral domain are also familiar. The distinction between normative ethics and descriptive ethics, whether always productive or not, allows the examination of the entire moral domain as a social practice, without necessarily challenging the assertion that good and evil are irreducible to empirical facts.²⁹ The two attitudes to the moral domain may plausibly be considered as complementary rather than contradictory. For the sake of brevity, henceforth I will refer to the ethics in the descriptive sense as "morality".

A presupposition from the descriptive point of view is that morality relates to actual entities in an actual world. Moreover, no real person can reflect on moral issues from an objective point of view outside any society whatsoever. The moral discourse is a social practice, deeply rooted in social relations and material conditions, and moulded by them. In that sense, since social relations and material conditions are local and versatile, there is no point in speaking of mere one, "morality" in general, considered as one, universal phenomenon; the point of morality is rather to describe and understand what specific groups regard as morality. Any such morality is a product of a specific society and it refers to specific social entities.³⁰ Different conditions give rise to different limitations of the moral discourse. In other words, norms and values retain a circular relation with behaviour, reflecting it and reinforcing it. Descriptive approaches to morality along these

²⁹ For a succinct discussion on the descriptive definitions of "morality" vs. the normative definitions, see: Gert, "The Definition of Morality."

³⁰ Walker, 107. Some examples from outside philosophy: Durkheim, *Durkheim on Morality and Society*; Smith, "Geography and Ethics;" Barker, *Anthropology of Morality in Melanesia*; Hitlin, *Handbook of the Sociology of Morality*.

lines, focusing on the social origin and function of moral ideas, have been developed by a variety of critics throughout history, including Greek sophists, Marxists and feminists.³¹

A rather simple connection between morality and power derives from a definition of morality as the entirety of socially accepted values, leaving out unpopular and subversive moral ideas. Such a concept of morality cannot but reflect and reinforce social behaviour. If it does not, we should observe profound contradictions between values and behaviour, and conclude that in practice behaviour is directed by factors other than values. How does morality reflect behaviour and reinforce it? The basic pattern of facilitating norms and values is based on connecting morality with successful behaviour. When behaviour is either desirable or already proven successful for some party, the party expresses this status in terms of values, that is, the behaviour in question is considered good. Similarly, when some behaviour is undesirable or proven damaging to some party, the behaviour is considered evil. Alternative views of good and evil will be rejected by that party since they are connected to undesirable and threatening results. In other words, the views on good and evil reflect utility for the party in question.

Admittedly, this description is too simplistic from a social point of view. Reflecting on seemingly any observable society, different parties in that society may get different benefits or may be harmed in different ways as a result of specific values, and yet many such values are prevalent throughout the entire society. For example, although it is mainly the well-to-do who benefit from a moral code against stealing, such a code is prevalent throughout (contemporary Western) society. A straightforward view on that

³¹ Marx and Engels, *German Ideology*, chap. 1, pt. 1.A.: "First Premises of Materialist Method" (and see also chap. 3, pt. B.6.C: "Morality, Intercourse, Theory of Exploitation"); Nietzsche, *Will to Power*, vol. 14, bk. 2, pt. 2; Nietzsche, *Genealogy of Morals*, vol. 13, essays 1-2; Gilligan, *In a Different Voice*; Baier, *Moral Prejudices*; Walker, *Moral Understanding*.

matter is commonly attributed to Greek sophists, who conceived a notion of morality or justice that is strongly connected to the interests of the powerful and their expression in the law.³² In Plato's *The Republic*, for example, the character of Thrasymachus provides a clear account of this approach:

"And each form of government enacts the laws with a view to its own advantage, a democracy democratic laws and tyranny autocratic and the others likewise, and by so legislating they proclaim that the just for their subjects is that which is for their – the rulers' – advantage and the man who deviates from this law they chastise as a law-breaker and a wrongdoer. This, then, my good sir, is what I understand as the identical principle of justice that obtains in all states – the advantage of the established government. This I presume you will admit holds power and is strong, so that, if one reasons rightly, it works out that the just is the same thing everywhere, the advantage of the stronger."³³

Thrasymachus' view of the morality/power connection is rather blunt: in his view, justice is nothing but one of the social manifestations of power; therefore speaking of morality as something beyond power and beyond actual social relations is unrealistic, and in that sense it is meaningless.

A similar though less sweeping view is presented by Nietzsche: "[...] in reality, a species fated to act in this or that fashion wanted to justify itself, by dictating its norm as the universal norm [...] 'How should one act?' is not a cause but an effect. Morality follows, the ideal comes at the end."³⁴ This view does not necessarily see morality as an active tool of enforcement, but rather as a supplement to preceding actions, a justification. However, like Thrasymachus, Nietzsche in this passage connects morality straight to acts of power.

³² Kerferd, *The Sophistic Movement*, chap. 10; Bett, "Sophists and Relativism," 162-163; Balot, *Greed and Injustice in Classical Athens*, 5-9, 104-105.

³³ Plato, *Republic*, bk. 1, 338e-339a (pp. 588-589). See also the view of Callicles on "natural rights", in Plato, *Gorgias*, 482e-484c (pp. 266-267).

³⁴ Nietzsche, *Will to Power*, bk. 2 ("Critique of Highest Values Hitherto"), pt. 3 ("Critique of Philosophy"), aphorism 423.

Although blunt, such views have not been uncommon in recent decades. Some critics of patriarchy and of racism regard prevalent moralities as patriarchal, racist or colonialist devices of social management, control and justification, created by white powerful men for their own benefit. The objects of these critiques are broad-range social moralities – everyday codes of do and don't do, of right and wrong (some critique is also directed at moral theory itself, especially theories of social contract, see sec. 1.3.). The critics note that such moralities are systems of self-definition and exclusion: the powerful define themselves by excluding the weak from the social sphere of equals worthy of justice. As Margaret Urban Walker wrote about adherents of social contract,

"[...] mutual recognition of these men's rights over certain women is one of the significant respects in which they define themselves as equal. Furthermore, the hierarchical sexual division of labor is a material condition for men's condition for men's being free to engage in the economic competition, social participation, and political contests the both express and measure their equality in society's public sphere."³⁵

The historian Charles Mills emphasises that the social system that enables racist social behaviour, the "Racial Contract", is both descriptive and normative. The conditions for moral standing are applicable only to whites (and in fact only to some of them), whereas non-whites "are biologically destined never to penetrate the normative rights ceiling established for them below white persons."³⁶ Therefore,

"[...] whether openly admitted or not, it is taken for granted that the grand ethical theories propounded in the development of Western moral and political thought are of restricted scope, explicitly or implicitly intended by their proponents to be restricted to persons, whites."³⁷

Historically, the distinct moral statuses of whites and non-whites has allowed and justified any act of power over non-whites, from acts of government through enslavement

³⁵ Walker, *Moral Contexts*, 111-112.

³⁶ Mills, *Racial Contract*, 17.

³⁷ *Ibid.*

to murder. In other words, the moral codes are not only made by whites for their own benefit, but they are also made predominantly for whites to use, and whether non-whites believe in white morality or not does not matter much. In fact, Mills claims that non-whites under colonialism recognised the falsehood of the white "Racial Contract".³⁸ The colonialists' power has been so great that the subordinate groups did not have to agree to the white view: enforcement prevailed anyway.

Thrasymachus' and Nietzsche's analyses could be read as deliberate, cynical and exaggerated rhetorical expressions against the distortion of justice by powerful interest groups in their own society. But feminist and race theorists provide an elaborated, serious critique of prevalent moralities as direct manifestations of power – whether the moral codes are openly discriminatory or commonly stated as unbiased and impartial.

1.2. Marxism and the endorsement of oppressive morality

The practical implications of some specific conceptions of justice could be enforced by any kind of coercion, from physical violence to economic sanctions. But if indeed a direct imposition of interests was practiced vigorously, then justice, and morality in general, would have been redundant, and the conception of morality would have become practically indistinguishable from the concept of law, or even from violent authority. However, the view that morality is a direct manifestation of power contradicts the commonsense notion of justice (and moral considerations in general) as a socially neutral faculty that contains various, often contradicting interests. Different parties may disagree about specific moral considerations, yet justice, and morality in general, is believed and perused by every normal mature human being, including the weak. Virtually everyone

³⁸ *Ibid.*, 109-110.

believes that some moral codes are not bounded to some specific interests, but they are rather disinterested, neutral, and good for their own sake.

Therefore an approach that associates morality in general with powerful interests must be more refined, and explain how morality seems neutral while in fact it serves the strong. That is exactly what Marxists seek to explain. Marx did not reduce moral conceptions into a system of coercive enforcement. He acknowledged the fact that moral conceptions seem rather independent of their social origin and they seem disinterested. In fact, without an analysis of the process of their production within a specific division of labour, it is not easy to note the interests that lie behind the moral concepts themselves. In *The German Ideology*, Marx and Engels wrote:

"The production of ideas, of conceptions, of consciousness, is at first directly interwoven with the material activity and the material intercourse of men, the language of real life. Conceiving, thinking, the mental intercourse of men, appear at this stage as the direct efflux of their material behaviour. The same applies to mental production as expressed in the language of politics, laws, morality, religion, metaphysics, etc., of a people."³⁹

The ideas of the ruling class are in every epoch the ruling ideas, i.e. the class which is the ruling material force of society, is at the same time its ruling intellectual force. The class which has the means of material production at its disposal, has control at the same time over the means of mental production, so that thereby, generally speaking, the ideas of those who lack the means of mental production are subject to it. The ruling ideas are nothing more than the ideal expression of the dominant material relationships, the dominant material relationships grasped as ideas; hence of the relationships which make the one class the ruling one, therefore, the ideas of its dominance.

So the Marxist view stresses that moral ideas are not discovered, or given, or exist out there in an ideal sphere, but they are rather produced by people within specific socio-historical conditions. Whoever controls the production of moral ideas determines their content; and since the production of such ideas is expert mental work – separated from

³⁹ Marx and Engels, *German Ideology*, chap. 1, pt. 1.A. ("First Premises of Materialist Method").

manual work – moral ideas are produced by members of the privileged classes. This privileged identity has an unavoidable effect on the content of moral ideas: "The ideas of the ruling class are in every epoch the ruling ideas, [...] The ruling ideas are nothing more than the ideal expression of the dominant material relationships."⁴⁰

It should be emphasized that for Marx, the moral bias is not merely erroneous judgement of specific moral problems. Such incidents should be rather easy to identify and challenge with counterarguments. Marx thought that bias in morality goes deeper: it is incorporated into basic moral concepts themselves. In his comments on the revolutionary French declarations of rights, he notes that the concept "rights" reflects the egoistic and individualistic tendencies of a specific social structure:

"Above all, we must record the fact that the so-called rights of man, as distinguished from the rights of the citizen, are nothing else than the rights of the member of bourgeois society, that is of the egoistic individual, of man separated from man and the community. [...]

None of the so-called rights of man, therefore, goes beyond egoistic individual, beyond the individual as a member of bourgeois society, withdrawn into his private interests and separated from the community. Far from regarding the individual as a generic being, the generic life, Society itself, rather appears as an external frame for the individual, as a limitation of his original independence. The sole bond which connects him with his fellows is natural necessity, material needs and private interest, the preservation of his property and his egoistic person."⁴¹

Another important contribution by Marx to the morality/power analysis is the emphasis on the cooperation of exploited parties with values and institutions that have been produced by their exploiters. According to Marx, the human majority – proletarians and

⁴⁰ *Ibid.*, chap. 1., pt. 1.B. ("Ruling Class and Ruling Ideas"). See also: Rosen, "Marxist Critique of Morality", 29. This view may seem too radical, and it could be argued that any human group produces some moral ideas as a basic dynamics of social life, without necessary expertise. But even so, the powerful party within any society holds a privileged position concerning the promotion of its own moral views. Its power enables the best means and the easiest access to present its case and demean the competitors' views in the public sphere; therefore it has an advantage in an open debate, without any apparent threat or violence in practice.

⁴¹ Marx, "On the Jewish Question," 45-46.

peasants – live by the ideology of their exploiters: their ideas, values, laws, habits of life and institutions, which inevitably reflect social relations. The exploited masses "imbibe it as part of their normal education, of the general outlook of the unnatural society, and so come to look upon it, and accept it, as objective, just, necessary, a part of the natural order which pseudo-sciences are then created to explain."⁴² In other words, the exploited masses have "false consciousness". Although not used by Marx, this concept has nevertheless been useful to Marxists, as well as to psychologists in recent decades. Just how passive or cooperative or even deluded are the masses in the ideological process is a matter of debate. Gramsci's concept of hegemony, for example, puts more emphasis on the consent of all the social groups who share the values and attitudes that have the effect of supporting the status quo.⁴³

False consciousness allows the promotion of the interests of a dominant group not by sheer coercion, but rather by the dominated party's misapprehension of the actual social conditions. For example, members of the dominated party believe that social norms work in their favour, or they believe that the present, degrading social conditions are natural and unchangeable, or they follow social norms that function against them.⁴⁴ So instead of reflecting the conflicting interests of the different parties, the moral views of both parties are more or less the same. There is a dominant morality, which is appealing to everyone and not only to the party that visibly benefits from it, and members of the dominated party believe that the moral code is good for its own sake.

⁴² Berlin, *Karl Marx*: 101.

⁴³ Bates, "Gramsci and the Theory of Hegemony," 351-353, 359-360; Femia, "Hegemony and Consciousness," 30-35.

⁴⁴ For useful classifications of various types of false consciousness, see: Guess, *The Idea of a Critical Theory*, 12-22; Jost, "Negative Illusions."

The emphasis on the misled cognition of dominated parties explains how come they do not initiate a social change for their own good. This kind of explanation is crucial when considering masses that are dominated by a minority: in an actual, physical sense, the masses are stronger than the minority. Nevertheless, they are dominated and exploited, or they may be said to allow themselves to be dominated and exploited. Against that background, the concept of false consciousness is interesting when assuming that false consciousness may be overcome and realist understanding will take over; otherwise consciousness should be regarded as a static social force. Theorizing on false consciousness aims for liberation through overcoming epistemic falsehood.

This line of thought is relevant only if: a) the exploited group can indeed change its beliefs and attitudes; and b) such a change is sufficient to affect the social conditions and demean the power of the exploiters. In other words, false consciousness is irrelevant to mentally limited groups, and/or to cases of an extreme power gap between the exploiters and the exploited. Obviously, the analysis of false consciousness is irrelevant to nonhuman animals,⁴⁵ as well as to some very weak human groups (but common moral views of most *humans* on nonhuman animals may be defined as speciesist ideology and false consciousness).

1.3. Feminism and the powerful moral agent

At this point I will examine the critique of power in specific moral theories. Surely, moral theories are not "moralities" in the sense that I use in this dissertation. Nevertheless, elements of such theories are included in people's everyday moral beliefs and behaviour,

⁴⁵ One might claim that a tamed animal, such as a working horse, is a victim of false consciousness. The Marxist analysis, however, refers to the social awareness of the members of entire groups. Presumably, the tameness of each nonhuman animal is largely or fully isolated from the tameness of similar animals.

i.e., in moralities in the sense of descriptive ethics. Such elements may be an important part of specific moralities. Hence, inasmuch as moralities are developed, argued and practiced with elements of normative ethics in mind, the critique of academic moral theories throws light on widespread moralities as well.

We have seen that according to Marxism, seemingly disinterested and neutral premises of major moral theories reflect the priorities of their creators' social milieu. Some later critics have expanded this critical vision. Most notably, feminist ethicists have identified bias in allegedly neutral elements of the major Western moral theories. Such elements include: rationality, universality and abstractness of moral principles; the conception of "moral agency" as a quality of isolated, anonymous and egoistic individuals; and the disregard of moral emotions and moral aspects of close relations. This list represents the acknowledgement of qualities the authors see in themselves – while ignoring morally-relevant capacities of many other people. In the words of Margaret Urban Walker, "The moral agent is none of us at all times, and many of us at no time."⁴⁶ Feminist critics present an alternative approach to ethics, focusing on common experiences and moral emotions of women in close, caring relations and particular attachments (especially motherhood). This ethics of care (and ethics of trust, of love, etc.) aims to complete traditional ethics rather than replace it, and so the moral domain contains both "justice" and "care" without a simple, single, unified perspective.⁴⁷ The feminist critics ascribe the problematic tendencies of traditional ethics to the masculine identity of the traditional ethicists and their special attention to the moral lives of men (and more specifically, white, European, mature men). The critics claim that these

⁴⁶ Walker, "Moral Epistemology," 364.

⁴⁷ Held, *Ethics of Care*, chap. 1; Gilligan, *In a Different Voice*; Ruddick, "Injustice in Families," 203-206.

premises of the major moral theories reflect the interests of men – and more specifically, strong men in their public life – while contributing to the relative weakness of all other members of society. Virginia Held explains:

"The ethics of care usually works with a conception of persons as relational, rather than as self-sufficient independent individuals of the dominant moral theories. The dominant theories can be interpreted as importing into moral theory a concept of a person developed primarily for liberal political and economic theory, seeing the person as a rational, autonomous agent, or a self-sufficient individual."⁴⁸

Feminist criticism elucidates the role of power in normative ethics by analysis of moral theories as products of some people in some societies. This analysis is sometimes applied in association with a search for inconsistencies within the moral theory on its own terms, while socio-historical and sometimes psychological explanations fill the gaps. Out of the considerable body of such feminist (and also non-feminist) criticism, I will briefly look into five major issues (and further elaborate on some aspects of them in later chapters):

- a. Rationality: the appeal of many moral theories to rational understanding of principles undermines the role of emotions and personal, contingent attachments in the moral life. Whether it is a utilitarian calculation of the common good, an appeal to moral rights or paying respect to an imaginary contract, the moral decision is supposed to be the result of an emotionally detached, impartial rationalisation, based on a rational recognition of good and evil. Such theses demand cognitive abilities that are shared only by some part of the human population while excluding other parties from the circle of the morally capable and marking emotional attachments and emotionally

⁴⁸ Held, *Ethics of Care*, 13.

motivated decisions as irrelevant to morality. These theses also oversimplify the complexity of moral reality.⁴⁹

- b. Universalism: the conception of ethics as a set of rational principles is connected with the universalization of these principles, i.e., a tendency to look for argumentations and codes of behaviour that are applicable to any case, anywhere, any time. The alleged gains of universalism in ethics are impartiality, and a clear analytical procedure in every case. In practice, however, universal principles emerge from a specific social reality. Despite their creators' aspiration for impartiality, they cannot avoid reflecting the social horizons of the ethicists' social milieu. Any sense of morally-important issues emerges from a socially-specific set of values. Margaret Urban Walker, summing up both feminist and anti-racist theories, stresses the claim that allegedly universal moral theories, and most notably contractarian ideas, do define a pattern of power relations between a party of powerful and equal, and any other, weaker party:

"In all versions of this contract equality was seen as conferred by a restricted class of men on its members, and among the things conferred was the right of those equal to each other to distinguish themselves from the rest, particularly by specific powers over those not equal to them."⁵⁰

This kind of criticism does not acknowledge a substantial difference between morality as an openly stated instrument of power (see sec. 1.1.) and the kind of universalism endorsed by contractarianism. The failure of such a theory to be truly universal is not a result of random, amendable neglect, but rather an inherent aspect of the theory. Walker emphasises that contractarian thought excludes weak parties from the party of equals, but the weak are not overlooked. On the contrary: they are

⁴⁹ Gilligan, *In a Different Voice*, 21-32. Martin, "Feminism, the Self, and Narrative Ethics," 8-9.

⁵⁰ Walker, *Moral Contexts*, 112.

taken into consideration "in subordinate or diminished statuses that serve to define entitlements of the equals and the nature of equality itself."⁵¹ In other words, the minimum requirements for moral standing in contractarian universalism – and possibly in any traditional, universalistic ethics – leave some moral patients out, and therefore the benefits of moral standing do not apply universally. Furthermore, some of the benefits involve power over others, and in that sense universalism in ethics cannot be extended endlessly until it includes all moral patients.

- c. Autonomy: many moral theories are modelled on the cognition, behaviour and social position of a typical autonomous agent – an agent capable not only of understanding principles, but also of presenting his case in the public sphere. Becoming such an agent is a matter of specific inclinations, and more importantly – of a privileged social position, which is necessary for the construction of such an agent. Modelled predominantly on Western, adult, well-to-do men, the moral theories in question express the worldview as well as the interests of that group; their concept of autonomy "represents a masculine-style preoccupation with self-sufficiency and self-realization at the expense of human connection."⁵² Other social groups are not expected to be autonomous in that sense, but rather to depend on autonomous agents or to serve them. Autonomy is revealed not as a personal virtue but as a part of a privileged social status: "Men are supposed to 'stand up like a man' for what they believe or value, including the simple assertion of their self-interest. Women are instead supposed to '*stand by your man*'."⁵³

⁵¹ *Ibid.*, p. 113.

⁵² Friedman, "Autonomy, Social Disruption, and Women," 35.

⁵³ *Ibid.*, 36.

- d. Individualism: many moral theories rely on a concept of an isolated individual in an abstract world. It is an individual who recognises good and evil, and understands moral obligations and rights, or negotiates with other isolated individuals in an attempt to reach a compromise of interests. This kind of "morality of rights", as Carol Gilligan describes it, "differs from the morality of responsibility in its emphasis on separation rather than connection, in its consideration of the individual rather than the relationship as primary."⁵⁴ Therefore it tends to put individual interests in the spotlight rather than the common existence and common good of a social or family unit.

Since abstracted, individualistic moral theories take the isolated individual in an abstract world as the premise of moral contemplation, they contribute to overlooking the construction of individuals through society and history. Actual individuals are biased to recognise some moral obligations more than other obligations, and they rely on social bonds without reference to a hypothetical society. In that sense, addressing the morality of actual individuals without examining their bias in a socio-historical context is a philosophical practice that works in favour of some groups – again, predominantly Western adult well-to-do men. Moreover, the appeal to isolated individuals facilitates an image of a world of more or less equal and powerful agents, constructing their own social norms. It conceals the fact that society is comprised of unequal members, some of them deprived of any substantial power, many unable to contribute to the construction of moral norms, and many are subjected to harmful treatment not as individuals but as members of some specific group.

⁵⁴ Gilligan, *In a Different Voice*, 19. For a concise critique of the connection between individualism in ethics and liberal political and economic theory, see: Held, *The Ethics of Care*, " 13-15.

e. Conflicts: the construction of a moral theory on negotiating rights and justice, on calculating happiness vs. suffering, etc., is based on the preconception of society as an arena of constant controversy, conflicts and struggle, whereas the role of ethics is to regulate power. Sara Ruddick explains: "From the perspective of justice, relationships require *restraint* of one's own aggression, intrusion, and appropriation and *respect* for the autonomy and bodily integrity of others."⁵⁵ This approach reflects the worldview of a competitive, aggressive group, and the fear of extra aggressiveness and fatal indifference towards the plea of others. However, it tends to neglect other major aspects of the moral life: "*attentiveness* to others and *response* to their needs",⁵⁶ or the role of empathy, care, compassion, love, trust and a sense of personal responsibility in social relations. Furthermore, it presents strict principles, agreements and obligations as the preferable social device to regulate social relations – instead of enhancing empathy, tolerance and good will. Hence this approach reinforces the role of power and alienated obligations in social relations.

In brief, such moral theories promote the deprivation of moral status of weak social groups. If such parties cannot participate in the moral discourse as required by the theoreticians, they may be deprived of some respect and interest, and eventually of moral consideration, which are reserved to full participants in the discourse. The best that they can hope for is moral patient status – enjoying the results of some moral obligations towards them – thanks to the understanding and good will of their mentally superior and socially stronger.

⁵⁵ Ruddick, "Injustice in Families," 204.

⁵⁶ *Ibid.*

All the above critique does not demand a total rejection of fundamental concepts adhered by the moral theories in question. The notions of good and evil, universal justice or moral rights are not necessarily disputed as important premises of moral thought. The problems lie elsewhere: first is the disregard of other, no less important premises of moral thought, such as communality, care or moral motivation; and second is the shortcoming of such moral theories when relating to a more down-to-earth level. An abstract discourse does ignore everyday, real moral problems and therefore it may contribute to the lack of concern with the unprivileged; nonetheless, the more elaborated discourse tends to be no better, bluntly focusing on the concerns of the privileged. For example, moral rights seem to be a most useful conception in some discursive contexts, but once the discourse has been brought to focus on the moral rights of citizens, it leaves non-citizens out. Similarly, focusing further on the moral right to property, the discourse may very well function as a mere ideological device in the service of the rich against the poor or against colonised peoples; further elaborations may enter the apparent territory of application, whereas a typical choice would be to discuss incidents of theft from a property owners' point of view. In any case, as we have seen above, the problem is not limited to practical issues – some problematic content may be found in the basic concepts and theorizing tools.

1.4. Rationality and interspecific issues

The feminist critique has been further elaborated concerning interspecific issues. Much of the animalist-feminist critique is a direct inference from the extensive theorising on two topics in earlier feminist ethics – the patriarchal disregard of emotions and personal attachment, and the patriarchal disregard of nature. "Natural" or "biological", and "social"

or "cultural", tend to be used as value-laden terms. Under specific power relations they are not applied neutrally to all social groups. Natural/biological is deemed inferior to social/cultural, and so naturalness is attributed degradingly. In that sense, the slave trade in Africans, the European colonialism and the industrialization of Europe gave rise to the "naturalization" of the dominated populations. The degrading, naturalistic discourse is still socially acceptable in the West concerning women. It includes not only the naturalization of women, but also the feminization of nature.⁵⁷

In her animalist-feminist critique, Josephine Donovan is especially interested in the alleged patriarchal conception of nature as feminine, while identifying nonhuman animals as nature: "the domination of nature, rooted in postmedieval, Western, male psychology, is the underlying cause of the mistreatment of animals as well as of the exploitation of women and the environment."⁵⁸ Donovan relies on Max Horkheimer and Theodor Adorno, who have described civilizing rationality as the denial of nature, including human nature, for the sake of domination over nonhuman nature and over other humans. Horkheimer and Adorno characterised enlightenment in terms of the scientific point of view, which imposes mathematical models on any aspect of reality, living things included.⁵⁹ This is a totalitarian system, manipulating and dominating its objects as much as possible, and when they cannot fit into the orderly pattern of the mathematical paradigm, they are either ignored or ever more aggressively subdued. Emotions are a major victim of such treatment.

⁵⁷ Guillaumin, *Racism, Sexism, Power and Ideology*, 219-220; Soper, "Naturalized Women and Feminized Nature;" Smedley, *Race in North America*, 177-185.

⁵⁸ Donovan, "Animal Rights and Feminist Theory," 41. See also the rest of the chapter, and other chapters in Donovan and Adams, *Beyond Animal Rights*, and: Adams, *The Sexual Politics of Meat*; Adams, "Feminist Traffic in Animals."

⁵⁹ Horkheimer and Adorno, *Dialectic of Enlightenment*, 24-27, 54.

Animalist feminists identified the bias towards rationality not only in traditional ethics, but also in the major animal liberationist theories of Peter Singer and Tom Regan. Singer is a utilitarian that grants moral standing according to a being's capacity to experience suffering and enjoyment,⁶⁰ and Regan endorses a rights theory that applies to any being that has a slightly more complex set of mental capacities⁶¹ (evidently, both philosophers did not aspire to depart too far from traditional ethics, and much of their work is focused on neglected implications of traditional theories, or on inconsistencies in them). Donovan claims that the anti-emotional bias that may be found in Singer, Regan and their peers is detrimental to their revolutionary goal:

"Unfortunately, contemporary animal rights theorists, in their reliance on theory that derives from the mechanistic premises of Enlightenment epistemology (natural rights in the case of Regan and utilitarian calculation in the case of Singer) and their suppression/denial of emotional knowledge, continue to employ Cartesian, or objectivist, modes even while they condemn the scientific practices enabled by them."⁶²

In Donovan's view, interspecific ethics that has been developed from traditional moral theory preserves the agenda of domination of nature, and as a result it reproduces the oppressive attitude of patriarchal society towards nonhuman animals. Notably, there are two aspects to the issue of rationality/emotion in this context. First, Donovan promotes an ethics of care. Unlike Singer's utilitarian calculations of sufferings vs. benefits, she prefers to appeal to the human emotional motivations towards nonhumans. Such motivations are also an alternative to Regan's Kantian notion of moral duty. In that sense, Donovan's moral attitude should resolve one aspect of power in interspecific ethics.

⁶⁰ Singer, *Animal Liberation*, rev. ed., 7-17.

⁶¹ Regan, *Case for Animal Rights*, 243-248.

⁶² Donovan, "Animal Rights and Feminist Theory," 45.

There is a second, perhaps more fundamental problem here, of rationality and emotion not in the process of moralizing but in the object of the moral theory. Donovan accepts the utilitarian minimum criterion for moral worth: a being is worth consideration if it is capable of suffering – presumably the most elementary of all emotional capacities. At the same time, Donovan rejects Regan's criterion for "inherent value" that institutes rights. Regan bestows such value to individuals that have:

"[...] beliefs and desires; perception, memory, and a sense of the future, including their own future; an emotional life together with feelings of pleasure and pain; preference- and welfare-interests; the ability to initiate action in pursuit of their desires and goals; a psychological identity over time; and an individual welfare in the sense that their experiential life fares well or ill for them."⁶³

In Donovan's view, "Regan's theory depends on a notion of complex consciousness that is not far removed from rational thought, thus, in effect, reinvoking the rationality criterion."⁶⁴ I believe that this criticism may be too harsh – most of Regan's list is about basic emotional capacities of a surviving creature; a creature that must act rather than wait passively to have her emotions aroused. In any case, Regan's list is far removed from rationality – at least in the eyes of anyone who promotes rationality as the threshold of moral standing. This position is especially typical of contractarian and contractualist moral theories. These theories attribute moral norms to a hypothetical or a real contract or mutual agreement, and they demand highly advanced rational capacities from anyone who takes part in a contract, despite the evident fact that some people, such as children and some disabled people, are in a weak position as contractors, if they are capable of contracting at all. As we have already seen (sections 1.1., 1.3.) contractarians have excluded large human groups throughout history, including women, blacks, caretakers of

⁶³ Regan, *Case for Animal Rights*, 243.

⁶⁴ Donovan, "Animal Rights and Feminist Theory," 38.

the dependent, and more.⁶⁵ Whether these exclusions derive from the moral theory itself or unrelated bias that contractarians added to their moralising, there is something about contractarianism that makes it predisposed to such exclusions. The contractarian demand for advanced rational capacities as a condition for having moral standing is inherently narrowing compared to the demands of other moral theories, and it also offers a convenient conceptual system for reinforcing prejudice.

Now, as long as the critique focuses on the exclusion of women, blacks and other adult, healthy humans, the verdict against contractarianism as an instrument of power may be answered with counter-power: all adult, sane humans can contract. In principal (though not necessarily in practice) they have the innate powers to do so: they can rationalise, they can represent themselves through negotiation, they can bargain to get themselves a better position in the contract. Thus "feminist contractarianism" is possible, as Jean Hampton has demonstrated.⁶⁶

Some subjects, however, lack such powers not due to socio-historical factors that prevented them from developing full agency, but because of cognitive limitations. For the contractarian, as well as for some other moral theorists like the Kantian, the cognitive weakness of such subjects is a good enough reason to exclude them from the moral realm (while they may still enjoy "indirect duties" in their favour). Or, in other words: their cognitive weakness provides the rationalization for administering unlimited power over them. In his interpretation of John Rawls, Peter Carruthers presents this position most vividly:

"Since it is rational agents who are to choose the system of rules, and choose self-interestedly, it is only rational agents who will have their position

⁶⁵ Patricia Williams, "On Being the Object", 12-15; Kittay, *Love's Labor*, pt. 2.

⁶⁶ Hampton, "Feminist Contractarianism."

protected under the rules. There seems no reason why rights should be assigned to non-rational agents. Animals will, therefore, have no moral standing under Rawlsian contractualism, in so far as they do not count as rational agents."⁶⁷

In this view, a "non-rational agent" (according to a specific definition of rationality) may be subjected to any treatment whatsoever, unless the interests of a "rational agent" are affected by that treatment. This is a kind of morality that calls for a deeper and more clear-cut critique than the feminist critique of rationality. Since normal adult women are rational, and since the critical discourse is produced by rational women – the mental world and interests of rational women is likely to take precedence over the mental world and interests of non-rational (nonhuman and human) beings. The difference is even clearer in regard to language. Since nonhuman animals lack the cognitive capacities of rationality and language they cannot take part in the moral discourse. There are indeed many versions or opinions on interspecific ethics, but all of them are a product of speech power over the lack-of-speech weakness. In that sense, any interspecific ethics, feminist interspecific ethics included, is a demonstration of power over non-lingual beings. Consequently, *the bias towards rationality is more speciesist than patriarchal*. This fact has rarely been acknowledged in interspecific ethics – which is not surprising, since unlike feminist theory, which focuses mostly on women and is created by women, in animalist theory there is a total split between the theorizing party and the object of contemplation.

⁶⁷ Carruthers, *Animals Issue*, 98-99. For a critique of Rawls's exclusion of nonhuman animals from his theory of justice, see: Regan, *Case for Animal Rights*, 163-173. Regan shows that (non-rational) moral patients should be included in the "original position", in which the contractors define the best ethical system as if they were outside the world and they do not know who they are about to "become" in the real world. According to Regan, they may become (non-rational) moral patients; in fact as "reborn" children they will unavoidably lack the capacity to contract. Furthermore, "To allow those in the original position to know what species they will belong to is to allow them knowledge no different in kind from allowing them to know what race or sex they will become." (*Ibid.*, 171)

1.5. Naturalization of oppressive relations

Confronting oppressive relations between two parties, perception is easily distorted. Oppressive relations tend to conceal or distort some information while other elements become more apparent, and yet more details may be fabricated. Any witness, whether involved directly in the relationship or not, is likely to misperceive some of the characteristics of the parties who are involved in oppressive relations; this is likely to lead to misperceiving the character of the relationship, which results in reduced moral competence. The distortion does not necessarily affect the use of moral concepts or moral theorising; it is rather situated in the perception of morally-relevant factual details. The distortion occurs through naturalizing. Weakness, stupidity, dependence, helplessness, nervousness, depression, laziness, poor ability to organize, etc. – all seem to characterize the weaker party, that is, they seem like its own traits regardless of circumstances. Correspondingly, strength, intelligence, autonomy, resourcefulness, mental fitness, vigilance, high skills of sovereignty, etc. – all seem to characterize the stronger party. Inasmuch as such characteristics seem to determine social relations, domination and exploitation appear as the natural result of the parties' nature.

Taken uncritically concerning social entities, "natural" in the modern sense means that the subject in question has a function that has been predetermined genetically, i.e. the subject is programmed from within the living matter. As such, the subject is both anatomically and physiologically organized to fulfil its function.⁶⁸ This conception of naturalism means that observable traits of the parties involved are not socially constructed; they are rather trans-cultural and trans-historical. The current relationship is

⁶⁸ Guillaumin, *Racism, Sexism, Power and Ideology*, 215-219.

a realization of these essential, fixed traits. Socio-historical analysis is irrelevant to the relationship since the foundations of the relationship are not changeable over time and across cultures.⁶⁹

This kind of naturalism carries striking moral implications. Morality assumes the possibility to choose between alternatives. Nature's determinism, however, does not allow an alternative reality; the existing relationship could not have developed otherwise, and therefore it is meaningless to consider whether the relationship is ethically acceptable. It may be unfortunate – just as a natural disaster is unfortunate – but it cannot be ethically unacceptable. Furthermore, morality assumes a directing, morally-competent mind behind the state of affairs; natural facts are nothing of this sort, they merely occur, spontaneously. No one could be held morally responsible because there is no one there. Even when a dominant party initiates aggressive actions consciously, its consciousness is not the real driving force behind its actions. Rather, both the actions and the associated thoughts and feelings of the aggressor towards the other party are mere realizations of its genetically constructed nature.

The degree of naturalization is strongly associated with the level of institutionalization of the relationship. Incidental, temporary domination of one person over another could hardly seem natural to anyone. This may be the case, for example, when one person hires another person of the same gender and a similar social background for a specific, professional mission. Domination and exploitation, however, are very often rooted in social institutions. Throughout entire societies, many occupations are much more common among some social groups than among the rest of the population, with

⁶⁹ For extensive discussions on the meaning of "natural" and "naturalness" in social thought, see: Inglis, Bone, and Wilkie, *From Nature to Natures*, vols. 1-3.

typical patterns of wages and other employment conditions. Such social association makes managerial authority, for example, seem less natural in people who are not white men compared to white men (in the contemporary West), while tolerance for taking care of physically dependent people seems more natural to women, and to non-whites of both sexes.⁷⁰

The association between occupations and social group identity is nevertheless flexible enough – in the contemporary West – to allow many exceptions that act against the process of naturalization. If everyone has encountered quite a few exceptional workers in terms of occupation/social identity, the association would not seem clear-cut and deterministic. The more a population is regulated to enter specific circumstances and express specific behaviours, and to avoid other circumstances and behaviours, the more easily the limitations may be perceived as natural. The cultural and spatial separation between a native population and a conquering population tends to be much more clear-cut than the separation between working populations in the above example, and therefore it may give rise to a more profound process of naturalization. Yet as long as social alternatives keep emerging, the trend towards naturalization is interrupted. Such alternatives may arise from knowledge of other cultures in other times or other countries, or from the effective articulation of alternatives by voices from within the dominant group. Accordingly, naturalization is at its peak when no alternative is known, that is, when the oppressive relations between two groups seem trans-cultural and trans-historical (an impression that itself relies on a constructed conception of the two groups, and possibly on a selective account of their history). Completing the optimal conditions for

⁷⁰ Amott and Matthaai, *Race, Gender, and Work*, chap. 2; Chong, *Servitude with a Smile*. On the construction of modern gendered work in Europe, see: Honeyman Goodman, "Women's Work, Gender Conflict, and Labour."

the persistence of a naturalized view of the relationship is the lack of protest by powerful subgroups of the dominant party.

The naturalization of oppressive relations depends on social status and location. Naturalized, distorted perception may occur in the weaker party. In Marxist criticism, this is identified as a major problem. The culture of the ruling elite, including its values and institutions, is assimilated by the rest of the population as its own common sense and institutions, and it is conceived as a part of the natural order of things despite the fact that it is a cultural product that serves the elite on the expense of the rest. This aspect of naturalization, which I addressed in sec. 1.2., is largely irrelevant to the conception of an interspecific society (i.e. to the human domination of other species) and therefore I will not elaborate on it any further.

The naturalization of oppressive relations tends to be more pervasive and thorough in the stronger party, who benefits from the status quo and has no motive to look for alternative social relations and alternative explanations to it. Naturalization could also occur in a third, uninvolved party, since even when one has no special interest in the relationship that she witnesses, the parties involved appear to her in their state as dominator and dominated. One needs to have in mind an alternative model of this relationship or to make the effort to look for such a model in order to recognize the aspect of social construction in the what seems like plainly observable facts. Lack of involvement, however, is hard to achieve. Even when one witnesses a private conflict between strangers, she is likely to feel closer to one of them due to her own identity and personal interests. Moreover, lack of involvement may be relevant only to relations that

have not been institutionalized on a large scale. In cases that have to do with sexism, racism or speciesism, probably no person can credibly claim to be uninvolved.

Naturalization is therefore a major aspect of sexism and racism (the social mobility of class is much more apparent in the modern West, and class has been largely de-naturalized, although "notions of class as inherited or genetic continue to haunt us").⁷¹ In fact, as much as the idea that gender and race are social constructs has become triumphant among scholars of sexism and racism, it remained alien to the ordinary common sense (at least the contemporary Western common sense throughout most social groups). In everyday life, the sexes are perceived as naturally/essentially different from each other in numerous, fundamental aspects, despite some superficial alertness to prejudice; and races are perceived as natural classifications that denote extensive differences, again, despite some superficial alertness to prejudice. Therefore critical scholars and activists since around the 1960s make a constant effort to "un-naturalize" conceptions of sex and race, as well as resolve the disagreement with anti-racists, and even more so with feminists, who do embrace some forms of essentialism.⁷²

In the case of race scholarship, the historization and deconstruction of "race" leads rather straightforwardly to challenging any essentialist conception of race. The move is relatively simple here – mainly since the biological differences between any human groups that are defined as races could be plausibly claimed as superficial, and because ethnic groups that seem to be racially "atypical" are abundant, just as "hybrids" between

⁷¹ Amott and Matthaehi, *Race, Gender, and Work*, 12.

⁷² Fuss, *Essentially Speaking*; Lorber and Farrell, *Social Construction of Gender*; Hare-Mustin and Marecek, *Making a Difference*; Delgado and Stefancic, *Critical White Studies*, especially chaps. 24, 30, 38, 55; Glenn, "Social Construction and Institutionalization"; Haney López, "Social Construction of Race;" Roberts, "Race and the New Reproduction."

allegedly typical race representatives are abundant. The following passage by the American law and race expert Ian Haney López demonstrates this approach:

"[...] I define a 'race' as a vast group of people loosely bound together by historically contingent, socially significant elements of their morphology and/or ancestry. I argue that race must be understood as a sui generis social phenomenon in which contested systems of meaning serve as the connections between physical features, faces, and personal characteristics. In other words, social meanings connect our faces to our souls. Race is neither an essence nor an illusion, but rather an ongoing, contradictory, self-reinforcing, plastic process subject to the macro forces of social and political struggle and the micro effects of daily decisions."⁷³

Challenging naturalistic/essentialist views of the human sexes has been among the foundations of feminist theory. Consider, for example, this celebrated statement by de Beauvoir:

"One is not born, but rather becomes, a woman. No biological, psychological, or economic fate determines the figure that the human female presents in society; it is civilization as a whole that produces this creature, intermediate between male and eunuch, which is described as feminine."⁷⁴

A large body of feminist work that emerged after de Beauvoir (especially since the 1970s) emphasised the social construction of gender – as opposed to sex or "biological fate".⁷⁵ Some biological differences between the sexes – the different reproductive functions, at least – never seemed superficial, neither did they fade away in light of intermediate forms, which are too rare.⁷⁶ Therefore feminist theory is persistently occupied with telling social construction from biology or nature – without denying that some substantial differences between the sexes do exist. There is a fine line, however, between acknowledging a constant biological difference, and claiming that other

⁷³ Haney López, "Social Construction of Race," 165.

⁷⁴ Beauvoir, *Second Sex*, 267.

⁷⁵ Brickell, "Sociological Construction of Gender;" Lorber, "Constructing Gender: Dancer and Dance."

⁷⁶ For the "medical" treatment of babies with exceptional genitalia, see: Fausto-Sterling, "How to Build a Man."

differences must emerge from it – natural-social differences, so to speak. This tension prompts some feminist theoreticians to question not only specific "natural facts", but also the biological/social dichotomy. Christine Delphy, for example, claimed:

"'Sex' denotes and connotes something natural. It is therefore not possible to question 'sex' head on, all at once, since to do so involves a contradiction in terms. ('Naturalness' is an integral part of the definition of the term.) We must first demonstrate that 'sex' is applied to divisions and distinctions which are social. Then we must not only *separate* the social from the original term, which remains defined by naturalness, but make the social *emerge*. This is what the notions of first 'sex roles' and then 'gender' did."⁷⁷

The result of this project is a new conception of what is regarded as natural. It should be noted that the label "natural", has another aspect that the critics are keen to expose, as we have seen in sec. 1.4.: "natural" (or "biological") is often a degrading label of inferiority that marks dominated social groups. Naturalness, in this discourse, carries a dual meaning: those who are natural are inferior, and their inferiority is natural.⁷⁸

This concise summary of naturalization as feminists and anti-racists perceive it brings us to interspecific issues. If challenging essentialism and promoting social constructionism is prevalent and profound concerning human groups, it is yet rare and immature concerning nonhuman groups, whereas it is restricted to scarce sources that engage specifically with critical animal studies.⁷⁹ The scarcity of critical consideration of the naturalization of oppressive relations between humans and nonhuman animals is itself a reflection of that naturalization. Humanist critics and social scientists fail to perceive the interspecific relationships in social terms, and they rather perceive it uncritically as natural reality, beyond the realm of social and moral interest.

⁷⁷ Delphy, "Rethinking Sex and Gender."

⁷⁸ See n57.

⁷⁹ For practical purposes, I accept Steven Best's division between "mainstream animal studies", which may be integrated into exploitative institutions and contribute to their operation, and "critical animal studies", which are committed to the animal liberationist stance.

Outside the emerging discipline of critical animal studies – that is, in the humanities and social sciences, as well as in life sciences and in popular thought – empirical claims about nonhuman animals are perceived in terms of true or false, conclusive or superficial, but not as a reflection of the power relations with the nonhuman groups in question. Furthermore, in the humanities and social sciences, the fairly developed account of the social construction of nonhuman animals has evolved on mere anthropocentric grounds. The convictions that lie behind this discourse are that nonhuman animals are "good to think [with]",⁸⁰ and that "We polish an animal mirror to look at ourselves."⁸¹ In other words, most of the theorists that wrote about the social construction of nonhuman animals believe that human conceptions of nonhuman animals reflect intra-human issues; the theorists ignore the possibility that these conceptions reflect and reinforce the actual relationship between humans and the animals in question.⁸² Somewhat like people who are engaged in direct, physical exploitation of nonhuman animals, the humanist theorists address nonhuman animals as a resource for advancing anthropocentric concerns. Stereotypical and symbolic reflection on nonhuman animals, with no effort to expose the gap between the stereotypic or symbolic and the real, without acknowledging this very gap and with no recognition of its moral significance, is typical of the humanities and social sciences.

There are seemingly good reasons to doubt the relevance of "de-naturalization" or anti-essentialist critique to interspecific relations. First, unlike many women in a patriarchal society or many non-whites in a white-dominant society, who play an active

⁸⁰ Lévi-Strauss, *Totemism*, 89.

⁸¹ Haraway, *Simians, Cyborgs, and Women*, 21.

⁸² Best, "Rise of Critical Animal Studies," 14-15; Stibbe, "Language, Power and the Social Construction of Animals," 146-147.

role in the hegemonic discourse that naturalizes beliefs about their inferiority and oppression, all nonhuman animals play no role in the discourse concerning them. In that sense, exposing the excessive essentialism in beliefs about the inferiority and oppression of nonhuman animals should be relatively one-dimensional; it is therefore not as interesting as deciphering or deconstructing a hegemonic discourse.

Second, since the active participation in the hegemonic discourse turns many women and non-whites into accomplices in their own oppression, and since direct, physical force is infrequently used under these conditions, these hegemonic patriarchal, racist, etc. discourses are a highly significant aspect of the oppression of the relevant human groups. Considering interspecific relations, however, the discourse of dominance is undoubtedly influential among the dominators, but domination itself is achieved through a combination of constant direct physical force, and hereditary manipulations that have made the animals docile (an element of "false consciousness" may be traced in loosely controlled nonhuman animals, but it is marginal).⁸³ In this respect, once again, the essentialist discourse is less significant and less interesting than the parallel discourse concerning intra-human oppression.

These two arguments may imply that the critique of essentialism in oppressive interspecific relations should never become as significant to critical animal studies – or at least as elaborated – as the critique of essentialism is significant and elaborated in feminist theory, in critical race theory, etc. But these arguments certainly do not justify

⁸³ Hereditary docility could be regarded as *natural* docility, whether it has characterized the ancestors of the contemporary animal population prior to domestication, or it is the result of artificial selection. If we argue that docility is not natural to a contemporary breed or strain since it is the result of artificial selection, then we must claim that artificially selected animals have no nature at all, or that their nature is unnatural. See more about this perplexity in section 4.6.

the scarcity and fragmentary character of the critique of essentialism in the discourse concerning nonhuman animals to date.

A third possible argument for the scarcity of such a critique has to do with biological differences. Critical theory that addresses sex or race (or class, sexual preference, disability, etc.) is based on the belief that humans are essentially quite similar to each other and equal in traits that have to do with moral status. At least they are much more similar and equal than ordinary classifications indicate, whereas the considerable visible differences are predominantly a result of social construction. Conversely, nonhuman animals are truly and fundamentally different from humans (and there are fundamental differences between many other species) – so different, in fact, that social construction must have relatively minor weight when reflecting on them.

This, however, is an *essentialist* claim that a social constructionist cannot accept uncritically. For a social constructionist, "The terms in which the world is understood are social artefacts, products of historically situated interchanges among people. From the constructionist position the process of understanding is not automatically driven by the forces of nature, but is the result of an active, cooperative enterprise of persons in relationship."⁸⁴ Accordingly, the differences among species are not naturally given or perceived as they really are; the interest would rather lie in questions such as: why do we notice some facts (or "facts") about animals of various species better or worse than other facts? Under different social circumstances, could the same data be plausibly interpreted as an indication of different facts? And what makes a fact morally important under some interspecific relations and not under others? Such questions are no less relevant to interspecific relations than to exclusively human relations.

⁸⁴ Gergen, "Knowledge as Socially Constructed," 15.

That said, studying human-nonhuman relations is also likely to promote a fundamental positivist consideration of the unique biological characteristics of each species involved, followed by considering the relevance of these characteristics to moral status. While intra-human anti-essentialist criticism may attempt to bypass questions of difference and naturalness by persisting that all people are essentially similar and they are all social (read: not natural), such a strategy seems counterproductive when the inquiry is expanded to other species, families and orders. Apparently, even deep scepticism towards the constructed nature of nonhuman animals will not result in an utter dismissal of the fundamental differences among different taxonomic groups; neither will it be resolved by redeeming nonhuman animals from their status as "natural beings" into the safety of the social realm.

Some issues regarding the social construction of nature in general have been studied quite systematically. However, the implications of these works for understanding the construction of factual claims about nonhuman animals under human domination may be limited. A prominent topic is the status of the species category. Biologists and philosophers alike have challenged the common-sense simplicity of the species category and problematized it; "species" has many definitions, in biology as well as in everyday use, which are all unsatisfactory in some way or another.⁸⁵ More specifically, some philosophers have challenged the classification of the human species, in belief that this classification is central to anthropocentric speciesism.⁸⁶ Presumably, the deconstruction of the monolithic, clear-cut conception of species could function in a similar manner to

⁸⁵ Wilkins, *Species: A History of the Idea*, especially 197-225; Coyne and Orr, "Speciation: A Catalogue and Critique."

⁸⁶ Clark, *Political Animal*, chap. 3: "Is Humanity A Natural Kind?"; Elstein, "Species as a Social Construction."

challenging the biological ontology of race; it could refocus the moral attention to morally-relevant informational details about individual nonhuman animals (life circumstances, behavioural reactions, character, etc.) instead of the popular appeal to mere taxonomy. This project seems to me successful only to some extent, because the alleged collapse of the system of classification into species may be replaced by another rigid system of grouping and labelling individual beings (e.g., classification according to ecological characteristics such as habitat or eating habits, or according to human utility) and not necessarily by attention to individuals. The speciesist separation and isolation of *Homo sapiens* may persist in most alternative, flexible systems of classification. Unlike racial classification, which loses ground when the major racial categories are blurred, the differences between humans and chickens, fish and other industrially exploited animals seem great enough to endure taxonomic perplexities and redefinitions.

Another, more promising critical strategy is exposing the construction of the conceptions of specific animal species or populations under specific conditions of domination and exploitation. Such a strategy may help to reveal biased factual claims when examining interspecific relations. Relevant studies have been published sporadically, mainly in popular books and in the few journals that specialise in animal studies.⁸⁷ At the present time, these studies are scarce, and they are scattered over many species; this often makes them only marginally helpful in pinpointing which factual claims about animals have been biased by the naturalization of oppressive relations.

⁸⁷ Books: Karen Davis, *More than a Meal*; Susan E. Davis and Demello, *Stories Rabbits Tell*. Articles: Birke, "Who—or What—are the Rats;" Birke and Michael, "Raising the Profile of Welfare;" Davey, "The 'Disgusting' Spider;" Quinn, "Corpulent Cattle and Milk Machines;" Reading, Miller and Kellert, "Values and Attitudes toward Prairie Dogs;" Russell, "The Social Construction of Orangutans;" Scarce, "Socially Constructing Pacific Salmon;" Stibbe, "As Charming as a Pig;" Wolch, Gullo and Lassiter, "Changing Attitudes toward California's Cougars."

Unlike feminist criticism that provides an analysis of alleged feminine/masculine traits – which have long been recognized as clichés, both in this discourse and throughout wide populations – the above studies are pioneering in all too many aspects. To take one example, when the sociologist Rick Scarce described the socially constructed conceptions of Pacific salmon among salmon biologists to the readers of the journal *Society and Animals*, he had to put much of his effort into presenting basic claims about the salmon industry, assuming that his audience hardly knows anything about this subject.⁸⁸ *Society and Animals* readers cannot function as a critical community in the way that readers of feminist journals – or even laywomen – do function. Consequentially, such an isolated study must be extraordinary indeed if it succeeds to expose how the prevailing conceptions of the nature of salmon reflect the human/salmon relations.

If pioneering studies about specific species or populations are a difficult medium for handling the biased construction of morally-relevant factual claims, a clear focus on specific traits may be more effective. Again, this approach has been widely used regarding morally-laden traits in exclusively human contexts. The Western contemporary conception of pain is one example. This conception, as an extremely repulsive and redundant experience, as well as a physiological problem and medical challenge, has been traced to its historical origin. Apparently, it has emerged in the Victorian era, where it replaced the Christian conception of pain as "gift from God". The shift in meaning affects the experience, and hence a variety of different conceptions and experiences of pain has been provoked in various eras and cultures with regard to the social identity of

⁸⁸ Scarce, "Socially Constructing Pacific Salmon."

the members of a specific culture, including class, gender, race, and supposed degree of criminality.⁸⁹

Focusing on specific, morally-laden traits in nonhuman animals is, of course, among the elementary tasks of animal welfare science, but socio-historical, critical reflections on such accounts have hardly been written. The article "Death by Decapitation: A Case Study of the Scientific Definition of Animal Welfare" is a rare example of this kind of study.⁹⁰ In this study, the veterinarian Lawrence Carbone presents "a historical case study of the attempt to define the pain and distress of one common practice in animal research – the use of the tabletop guillotine to decapitate laboratory rodents."⁹¹ According to Carbone, claims that decapitation does not cause considerable suffering were published by scientists in reaction to new regulatory constraints on decapitation in the USA. These claims were part of the effort made by the scientific community to maintain the status quo in vivisection practices, i.e. to keep on decapitating rodents without sedation or anaesthesia. As the animal protection community did not show interest in the controversy, and since "the handful of academic veterinarians [...] who kept open the possibility of pain in decapitation have not pursued it",⁹² the belief that decapitation causes considerable suffering has remained socially insignificant.

Carbone's historical study is a vivid example of the construction of nonhuman animals' traits under extreme coercion. It is not accidental that such a historical study focuses on an extreme act of violence, which occurs only in man-made settings. Most

⁸⁹ Turner, *Reckoning with the Beast*, especially chaps. 5-6; Bending, *Representation of Bodily Pain*.

⁹⁰ Carbone, "Death by Decapitation." In 2004, Carbone updated the 1997 historical review and expanded the scope of social context in: Carbone, *What Animals Want*, chap. 9. In my concise summary of Carbone's work I emphasise the politics of the debate over pain during decapitation; notably, Carbone himself stresses the uncertainty of the scientific claims throughout the controversy.

⁹¹ Carbone, "Death by Decapitation," 239.

⁹² Carbone, *What Animals Want*, 201.

morally-relevant questions about the nature of nonhuman animals hardly have any meaning beyond human-induced circumstances. This is true not only concerning animal reactions to extreme acts of violence, but also when considering what seem like neutral, natural traits. Space requirements or light requirements, for example, are meaningless outside the context of confinement; outdoors, space and light are simply given, with no need for an adaptive effort by the animal. Accordingly, defining space requirements and light requirements among the animals' natural traits presupposes their confinement.⁹³ In that sense, their confinement is regarded as a part of their nature, and confining them is taken as natural. As a result, moral consideration can overlook confinement as such. As an allegedly objective discipline that describes the reality as given, animal welfare science can demonstrate the most extensive knowledge available about the "natural" traits and reactions of specific animal species/breeds/strains under confinement, and grade the levels of harm under various kinds of confinement – without any reference to the anomalous or social character of confinement as such. Once animal welfare scientists add to such analyses recommendations for "acceptable" space allowance, lighting regime, etc., and once legislators and the general human population take these recommendations into consideration, the reality of confinement is reinforced as naturally given and unworthy of moral reflection.

⁹³ For example: SCAHAW, *Welfare of Chickens Kept for Meat*, 59-66. Carbone (*What Animals Want*, 189-193, 204) notes that in the case of decapitation of rodents much coercion is taken for granted also. The entire debate focused on the period of time between decapitation and loss of consciousness; the stress throughout restraining (before cutting the head off), slower loss of consciousness due to some failure in the operation of the guillotine, and of course – the killing itself – are all taken for granted, ignoring the fact that these are all social and not inevitable or natural conditions for decapitation.

1.6. Morality as a counterbalance to power

Hitherto, I discussed morality as a manifestation of dominant social powers. This approach may appear counterintuitive. It may seem more commonsensical to regard morality as a social apparatus *against* those who are in power or as a restraint on oppressive self-interests. After all, morality in effect does put constraints on the expression of power. It assumes that moral agents have the power to choose to act in different ways, and it delegitimizes some of the possible choices. When moral thought is introduced into relations of enduring inequality, where exercising unrestricted power is met with no effective resistance, morality becomes a major means of control on egoistic power.

Such a conception does not necessarily entail a separation of morality in general from social power. In this context, we could trace two different meanings of morality: "morality" as an expression of power in a set of social norms – affirmative values that most people tend to live by; while "morality" as a counterbalance to power is a set of ideals that affect behaviour but do not reflect it. Powerful people may be relatively drawn to the first kind of morality, and weak people, or advocates of any weak party – to the second kind. Accordingly, "morality" by the first definition may be typical of privileged social groups, while "morality" by the second definition may be more popular among oppressed parties and their advocates. Nevertheless, since at individual level a powerful social position is rather fragile (e.g., any king may grow old and dependent) no simple correlations between social status and value systems is likely to emerge. Both types of morality may exist side by side in the same people and social groups, involving contradictions among apparently parallel values and actions.

The elusive route of power in morality has been notably defined by Nietzsche in his conception of "master morality" vs. "slave morality". Nietzsche regarded the fostering of communal utility as an attack of the weak masses on the strong noblemen. In this view, undermining power is in itself an act of power. For Nietzsche,⁹⁴ "slave morality" (and more specifically: Christian universalistic values) is the revenge of the unfortunate against the powerful. Underrate their manifestations of power and promote opposing values may be the only means the former may have to undermine the latter. This is a power-oriented thesis, which elucidates some effects of universalist/emotionalist morality, but fails to explain the intensity of altruistic efforts and the self-sacrifice that such morality may have towards the least powerful social groups.

Evolutionary ethics is more subtle in its elucidation of efforts and sacrifice for others, claiming that altruistic values have evolved from genuine human (and possibly nonhuman) traits. These traits may be applied in various circumstances, due to their evolutionary advantage in the social context of families and communities.⁹⁵ Once again, it is a thesis that defines morality in terms of self-interest; it is not a very helpful thesis since morality in the sense of systematic challenging of powerful, dominant others is a marginal issue in evolutionary ethics. In any case, reducing morality to its evolutionary origins does not add much to the understanding of radically different social situations. It must deal with the very occurrence of benevolence towards anyone outside one's direct community as an evolutionary anomaly – and thus we are supposedly surrounded by a whole lot of anomalies throughout successful societies. Furthermore, the evolutionary concepts are too crude to explain the variety of moral reactions in seemingly similar

⁹⁴ Nietzsche, *Genealogy of Morals*, essay 1, sec. 10.

⁹⁵ Ruse, *Evolutionary Naturalism*, chaps. 8-9. For a more versatile discussion, see: Boniolo and De Anna, *Evolutionary Ethics and Contemporary Biology*.

groups (in addition to other prominent disadvantages of evolutionary ethics, such as the naturalistic fallacy).

Now, following feminist critics, it should be stressed that theorizing on the origins of morality in terms of self-interest, competition, confrontation, conflict, coercion, etc. – is inherently erroneous as an exclusive description of actual social relations (and in fact biased in favour of a specific social group).⁹⁶ In reality, mere egocentric elements cannot construct a society: they may only produce a theoretical anarchic condition of a war of all against all. In fact, thinking of society in such terms makes morality redundant and even inconceivable. Maintaining society as well as morality necessarily involves cooperation, mutual dependency, compromise, trust, self-restraint, benevolence, self-sacrifice, care, solidarity and communality. A full picture of social behaviour and values should include a look into the balance between all the elements of both types – the egocentric and the altruistic.

Further, conceptual problems are typical of the notion of universalism in ethics. Following Nietzsche, it may be noted that moral theories that aspire for universality epitomize morality as a counterbalance to power – or at least they represent a prominent option for that. Moreover, following evolutionary assumptions, universality in ethics may be viewed in terms of the social norms of groups whose members have apparent mutual interests. In the universalist conceptual framework, these social norms are adapted and extended beyond the original group, towards parties that cannot be accounted for in terms of mutual interest. What makes a party worth of investment and sacrifice, in the universalist view, is not its social position in relation to oneself, but rather its own characteristics, independently of practical implications to oneself. Whatever was the

⁹⁶ Held, "Feminism and Moral Theory."

power invested in the formation of this approach originally, now that it is based on an abstract principle it does stand in opposition to power. The opposition is grounded in the reluctance to acknowledge the identity – and the relative social power – of those who are under moral consideration.

Beyond the conceptual difficulties in the universalist approach to moral problems, there are difficulties in practical applicability. Turning the universalist theoretical principles into working principles of everyday moral conduct is futile, unless they are heavily supported by psychological and social elements that have nothing to do with the principles in question. These necessary elements are susceptible to influences of power. One element is moral motivation: learning the facts necessary for the application of moral principles requires an effort, and acting according to your moral judgement requires further effort. Evidently, making such efforts is a matter of motivation. In the next chapter I will discuss moral motivation in detail; at this point it should be noted that it is unreasonable to expect that moral motivation towards others in need would emerge from mere impartial contemplation of universalist principles. Here the psychological elements merge with social ones. Moral motivation is an expression of virtues such as generosity and kindness, feelings such as compassion and love, and communal motivations such as a sense of responsibility, conformity with norms and habits, succumbing to social pressures, etc. These many factors tend to emerge from immediate relationships (family, friends, or neighbours) and if they appear towards strangers, a sense of affinity with them is usually the most influential factor. In other words, if society was made of autonomous, isolated, rivalling individuals, then in practice universalist ethics would be futile as a counterbalance to power. Yet as feminist ethicists emphasise, society is more often made

of cooperation and emotional attachments, and this psycho-social reality gives rise to moral commitment towards the powerless. Following David Hume, Adam Ferguson and Carol Gilligan, Annette Baier explains:

"[...] we are born into families, and the first society we belong to, one that fits or misfits us for later ones, is the small society of parents (or some sort of children-attendants) and children, exhibiting as it may relationships both of near equality and of inequality in power."⁹⁷

Adds Virginia Held:

"The ethics of care recognizes that human beings are dependent for many years of their lives, that the moral claim of those dependent on us for the care they need is pressing, and that there are highly important moral aspects in developing the relations of caring that enable human beings to live in progress."⁹⁸

Following this analysis, it seems that care, compassion, love, etc. differ radically from the psycho-social categories that express power relations among antagonistic parties, and reflected in some aspects of universalist ethics. Care emerges from a most powerful position – such as the position of a mother in relation to her absolutely dependent baby – and at the same time it defies self-interest and transforms the power of strong party into a tool at the service of her vulnerable protégé. If there is a conflict of interests between the mother and the baby, it is not a conflict of powers: the mother is utterly strong, and the conflict is inside her, not between her and the baby. If care as a fundamental moral concept reflects this psycho-social reality, the language of restraints on power seems alien to it: care is not about preventing evil actions, but rather about initiating good ones.

Nevertheless, it should be noted that virtues such as kindness, benevolence, generosity, etc. could be analyzed quite convincingly as nothing new: they are part of the strategy of the powerful. Those in power distribute and promote such values and

⁹⁷ Baier, *Moral Prejudices*, 30.

⁹⁸ Held, *Ethics Of Care*, 10.

behaviour because they facilitate obedience and subservience; as "virtues" they amount to false consciousness. This critique is presented not only by Marxists, but also by feminists concerning qualities that many other feminists commend as the culmination of moral life. Mary Daly, for example, has recognized the existence of "feminine" virtues in women as male-constructed instrument of power against women. Therefore women's emancipation must confront such values.⁹⁹

In conclusion, whether applying for universal principles of justice or for emotions of care, compassion, love and trust, both types of morality retain elusive connections with power. Morality is said to function against power, yet its origins and social function are immersed with power – even when it seems to dissociate itself from power altogether. On the conceptual level, one solution to this perplexity is the separation of descriptive ethics from normative ethics. For example, some of Marx's interpreters attempt to reconcile in this manner his critique of morality and his moral motivation. On the one hand, he rejected morality as ideology, that is, as a reflection and reinforcement of an oppressive social order; and on the other hand his descriptions of oppression and suggestions for an alternative social order have been morally motivated, undoubtedly. The solution for this ostensible contradiction is to regard Marx's notion of morality as merely descriptive – as an account of human history; while understanding Marx's motivation as genuinely moral – addressing problems of good and evil.¹⁰⁰ Thus the genuinely moral sphere is beyond the socio-historical account and irreducible to it, although in practice it functions as a subversive force against social power – affirmative morality included. Having said all that, it is still humanly impossible to exit social reality and inhabit that genuinely moral

⁹⁹ Daly, *Gyn/ecology*.

¹⁰⁰ Wood, *Karl Marx*, pt. 3.

sphere – and so we are left to deal with the deep and complex connections between power and morality.

2. Implications of personal and social involvement on moral systems

This chapter is about the effects of social conditions on moral motivation. Moral motivation is one of the cornerstones of moral competence: without it, any part of the process of forming a moral opinion would not be realised if it requires some effort. The role of moral motivation is especially significant in the case of morally-relevant empirical knowledge of relatively unfamiliar parties. Since overcoming ignorance about them may require a considerable effort, it necessarily rests on considerable motivational premises.

Apparently, the entire moral project depends on anything that arouses the motivation to get involved in the efforts of learning morally-relevant facts, making moral judgements, and taking responsibility for acting upon these judgements. The present chapter examines this challenge, through the examination of different kinds of relations, from close attachment to distant estrangement. The analysis of this wide range of possible social conditions reveals how morality functions in case of actual moral problems that involve unequal relations. Once again, my criticism at some points is based on moral philosophers of rival schools, yet eventually I do not endorse one school over all others, but rather conclude that moral motivation of any source tends to be all too weak under some socio-historical and biological circumstances.

2.1. Pure and impure moral motivations

Although the focus of this chapter is on socio-historical conditions, I will start the discussion with a brief review of philosophical perspectives on moral motivation rather than a plain socio-historical analysis. Philosophy offers several conceptions of moral motivation; if the view that moral motivation is distinct and unlike any other kind of

motivation is valid, then a socio-historical analysis of moral motivation should be narrow and unrelated to the analysis of other motivations. Yet if, on the other hand, there is much overlap between moral motivation and other motivations, a wider range of socio-historical elements should be taken into consideration.

A long tradition in moral theory reflects on moral motivation. Much of this tradition is concerned with defining a distinct category of moral motivation – a motivation to act morally, which may be identified as distinct from any other kind of motivation or as autonomous.¹⁰¹ A prominent example of this tradition has been elaborated by Kant. In his *Groundwork of the Metaphysics of Morals*, Kant expresses the idea that moral motivation is a distinct kind of motivation, which emerges specifically from reason. Regarding, for example, the obligation not to lie, Kant writes:

"[...] the ground of obligation here must not be sought in the nature of the human being or in the circumstances of the world in which he is placed, but a priori simply in concepts of pure reason; and that any other precept which, is based on principles of mere experience – even if it is universal in a certain respect – insofar as it rests in the least part on empirical grounds, perhaps only in terms of a motive, can indeed be called a practical rule but never a moral law.

Thus, among practical cognitions, not only do moral laws, along with their principles, differ essentially from all the rest, in which there is something empirical, but all moral philosophy is based entirely on its pure part.¹⁰²

Kant's idea of moral motivation is based on a conceptual analysis: when we "purify" a decision or a point of view on some matter from all other distinct motivations, what is left

¹⁰¹ This is a loose definition of "motivational internalism", which is clear enough in the present context. Nick Zangwill's ("Externalist Moral Motivation," 143) definition for internalism/externalism is clearer: "'Motivational externalism' is the view that moral judgements have no motivational efficacy in themselves, and that when they motivate us, the source of motivation lies outside the moral judgement in a separate desire. Motivational externalism contrasts with 'motivational internalism,' which is either the view that our moral judgements are partly constituted by motivation, or else that they would be if we were rational." However, I do not wish to take a stand in the internalism/externalism debate, but rather to demonstrate that claims of "external" influences are valid in both philosophical views when it comes to *actual moral decisions and behaviour in the real world*.

¹⁰² Kant, *Groundwork*, preface, 45 (4:389).

may be regarded as moral. If this conception of moral motivation is valid, then a socio-historical analysis of moral motivation should focus on nothing but the conditions for the emergence of "pure reason".

Many other philosophers had great interest in a conceptual distinction between moral motivation and any other motivation, assuming that such a distinct, pure motivational faculty does exist. Even when considering the thesis that all motivations whatsoever could be traced to, say, self-interest, defining an autonomous faculty of moral motivations seems conceptually helpful. Henry Sidgwick, for example, offers it as a pragmatic manner of thinking:

"[...] since though it is widely held that the ultimate obligation of all rules of duty must be rested on the self-interest of the individual to whom they are addressed – so that all valid moral rules have ultimately a prudential basis – it seems clear that in ordinary thought cognitions or judgements of duty present themselves as *prima facie* distinct from cognitions or judgements as to what conduces to self-interest."¹⁰³

Compared to Kant's conception of moral motivation, Sidgwick's view implies that analysing the conditions for the emergence of moral motivation is more complicated. It seems that we should look for conditions that involve self-interest, but not any incidence of self-interest is necessarily relevant, and the distinction between relevant and irrelevant incidents is rather vague.

Some philosophers denied the uniqueness of the moral sphere more decisively – and their view implies that analysing the conditions for the emergence of moral motivation could rely on mere psychological conceptions. In David Hume's view, "Morals excite passions, and produce or prevent actions. Reason of itself is utterly impotent in this particular. The rules of morality, therefore, are not conclusions of our

¹⁰³ Sidgwick, *Methods of Ethics*, 27.

reason."¹⁰⁴ Therefore moral actions necessarily arise from passions (or emotions, sentiments, desires, etc.) and in that sense moral motivations are very much like other motivations. Hume explains:

"[...] since no action can be laudable or blameable, without some motives or impelling passions, distinct from the sense of morals, these distinct passions must have a great influence on that sense. It is according to their general force in human nature, that we blame or praise. [...] A man naturally loves his children better than his nephews, his nephews better than his cousins, his cousins better than strangers, where every thing else is equal. Hence arise our common measures of duty, in preferring the one to the other. *Our sense of duty always follows the common and natural course of our passions.*"¹⁰⁵
[Emphasis added]

Hume's analysis challenges the autonomy of the moral sphere and brings the notion of moral motivation into real life as a part of daily life's complex array of non-moral motivations. Motivation is a psychological faculty, influenced by urges, utility calculations, norms, values, habits, etc. In light of this view, the very pursue of right over wrong may be understood as fulfilment of emotional needs, such as: satisfying the demands of an internalized authority (the psychoanalytic superego); looking for immediate reinforcements from society or fearing immediate social sanctions; expecting a direct reward or sanction by God; acting within a reassuring framework of habits that happen to be compatible with some moral judgements; or driven by a societal instinct that is encoded in human nature.

Kant's conceptual analysis of moral motivation, like the conceptual analyses by most moral philosophers, is of course interesting in itself, and its reflections and conclusions cannot be reduced to the conceptions of another discipline. But whether moral motivation is distinct and unique or not, it is motivation nevertheless – that is, it is

¹⁰⁴ Hume, *Treatise of Human Nature*, bk. 3 (*Of Morals*), pt. 1, sec. 1, 294.

¹⁰⁵ *Ibid.*, bk. 3, pt. 2, sec. 1, 311.

an empirical phenomenon, a psychological faculty of moral agents. The psychological account does not make the conceptual analysis redundant: the two approaches can reveal different aspects of moral motivation, and in any case what counts as moral motivation depends on a conceptual analysis.

Nevertheless, even if we could actually recognize a distinct moral motivation, it would be but one type of driving force among many others. Speaking from a psychological perspective in a socio-historical context, allegedly pure moral motivations have no special status – the question is what makes moral agents act as they do. Evidently, non-moral factors are commonly stronger and frequently competing against good intentions. Thus, one may recognize evil and choose to follow it nevertheless, or recognize good and yet abstain from it. Such conflicts happen constantly, and as I have claimed in the previous chapter, the ideal of impartial, objective, moral judgement – if it is indeed a desirable ideal – is abstracted and very much removed from the reality of moral considerations. The analysis of real social power relations and their effect on moral activities indicates that moral agents inevitably occupy specific positions in webs of social powers. Their position affects the way they consider moral matters, and therefore the relevance of allegedly pure moral consideration or ethical judgement is especially reduced regarding socially weak groups. In other words, from a non-philosophical point of view the common philosophical enthusiasm for revealing the distinct, true nature of moral thoughts, sentiments and behaviours is somewhat exoteric. Pure moral motivation – if it does exist at all – could prove important if it was strong enough to override other motivations in ordinary life and become a considerable socio-historical factor. But if pure

moral decisions are marginal in everyday life, it does not matter much (socio-historically speaking) whether moral motivations are pure or not.

Having said that, it should also be admitted that behaviour which we may label as "moral" (whether our use of the term indicates purism or pragmatism) is abundant in everyday life, in all societies or at least most of them. Bearing in mind the weight of amoral influences on the consideration of moral issues, moral behaviour must be strongly motivated if it is to override contradicting motivations. In order to be expressed effectively and become a force strong enough to initiate action, *it needs the support of amoral causes* – psychological reinforcements that have to do with a sense of identity and social awareness. Virginia Held explains:

"It is sometimes claimed that liberal political principles are needed exactly when relations of affection or of special ties are absent. But unless we have sufficiently strong motives to care about our fellow human beings and value this caring, we will not care whether their rights are respected or not, especially in the case of people who are too weak to make serious trouble for us, as the history of domination, exploitation and indifference makes evident."¹⁰⁶

In conclusion, even if in fact there is some distinct kind of moral motivation that operates directly from reason – a motivation that derives directly from the understanding of the normative meaning of the situation at hand – the weight of this distinct mode of moral consideration is determined contingently in relation to the entire activity of morally-relevant feelings, inclinations and decision-making.

Admittedly, this review implies a rather grave image of the limitations on moral activities. The moral element, so it seems, is under siege by foreign elements. These elements are not necessarily traceable in the moral argumentation itself, but they are noticeable when examining the forming of a moral opinion as a mental process endured

¹⁰⁶ Held, *Ethics of Care*, 89.

by a social being. For example, if I know that my judgement in some case will have consequences for myself, many motivations will inevitably emerge throughout the process and effect my judgement. Moreover, if I predict that I may suffer significant losses in the case at stake, my judgement will likely to be affected; in fact, even my very will to get involved with moral judgement is likely to be affected. This observation is commonsensical. But what if I predict no practical implications for myself? Should we worry at all about complex and powerful motivations in such a case? Is relating to some moral case so demanding when considering matters that affect only distant strangers? As I will elaborate in the next sections, I believe that the difficulty lies in the work of getting the relevant facts. Moral consideration of any kind requires relevant empirical knowledge, and attaining it may require much effort over time and social networks; apparently, such a task is especially demanding when one is not involved with the matter at hand. Therefore carrying out such a task requires a considerable motivation.

Acknowledging that morally-related activity tends to be heavily tainted with non-moral influences may imply that thinking of morality as an autonomous domain is futile. Yet most critical ethicists would refuse to accept such fatalism. In fact, critics tend to be rather optimistic. Following the critique, they would claim, we now acknowledge problems that eluded us before, and hence we can cope with them effectively. Several philosophers (e.g.: James Sterba)¹⁰⁷ even believe that some local revisions of a classical moral theory can bring about a revised theory that meets the challenges made by proponents of the largest oppressed groups.

The proponents themselves would plausibly argue that the problems run deeper. Acknowledging that you are inevitably involved in moral matters, calls for more than

¹⁰⁷ Sterba, *Three Challenges to Ethics*.

amending your previous conceptual framework. It also means that you have to *search for your own place in the web of interests* around any moral issue in question: which of my motivations are relevant and what costs and benefits are at stake for me? What are the relevant social attachments around me? What kind of relevant information is at hand – or beyond reach? What are the relevant concepts used and how has the relevant conceptualization evolved? Margaret Urban Walker stresses that the relevant questions come from moral epistemology, and she provides her own summarized list of strategies for overcoming the flaws of traditional (that is, in her view, masculine and Western) moral epistemology:

"It [feminist ethics] finds resources and invents techniques to expose the rhetoric and politics of public, professional and folk discourse of ethics. Moral practices of communities of feminist activism and practical dialogue, and moral understandings among women and men of nondominant cultural identifications, display actual alternatives and provide revealing comparative modes. Collectivist moral theory teaches how moral knowledge is enacted and hidden in social interactions structured by differentials of cognitive authority and political access. Interpretive moral ethnography illuminates cultural presuppositions of moral understandings, creating conditions for intercultural understanding, and political compromise within and between societies. It also helps us to denaturalize those largely invisible views that reveal what it means to be 'us'. Critical analysis of our actual flawed and differentiated social-moral orders allows us to see how being 'us' is no one thing in actual communities. Cracking codes that propagate culturally normative prejudice in communities and multiplying practices of refiguration are both exercises in transparency and political actions."¹⁰⁸ [References omitted]

Note that Walker is not satisfied with what may be called "armchair moral philosophy".

The emphasis in the above list is on listening to other people – rather distant and different ones – and learning our own (or *my* own) moral limitations through understanding their different moral views and practices. In other words, introspection is not enough – I cannot overcome my own bias without the help of an outsider's observation. Once the

¹⁰⁸ Walker, "Moral Epistemology," 370-371.

effect of personal and social involvement on moral issues is recognized, the search for moral improvement requires a practical shift of involvement. New horizons of moral feelings, considerations and behaviour arise from new morally-relevant experiences.

A last comment should be made about the range of motivation in ethics. Motivation is not to be understood as a plain expression of the calculable work which must be invested in the process of moral activity. The moral aspect in specific circumstances is not necessarily evident, and in such cases one cannot predict how much work would be required. This is a matter of *moral perception*. This problem is well explained by Lawrence Blum:

"[...] although an agent may reason well in moral situations, uphold the strictest standards of impartiality for testing her maxims and moral principles, and be adept at deliberation, unless she perceives moral situations as moral situations, and unless she perceives their moral character accurately, her moral principles and skill at deliberation may be for naught. In fact, one of the most important moral differences between people is between those who miss and those who see various moral features of situations confronting them. [...]

Thus moral perception, I argue, cannot be identified with moral judgement. In a given situation, moral perception comes on the scene before moral judgement; moral perception can lead to moral action outside the operation of judgement entirely; and, more generally, perception, can involve moral capacities not encompassed by moral judgement."¹⁰⁹

Consumer behaviour reveals important aspects for this general observation. The moral aspect of purchasing habits commonly goes unnoticed. In fact, it is effectively concealed from the uninterested consumer: cheap merchandise as the product of children's labour, or food and garment items as products of animal exploitation, suffering and deprivation, etc. One must have a special interest in children's exploitation if she is to be able to perceive the consumption of some product as a moral issue in the first place. The moral involvement starts not at the point of buying a specific item, but rather as some general

¹⁰⁹ Blum, *Moral Perception and Particularity*, 30-31.

moral alertness to this sort of problems – relating to the consumption of a wide range of items as a moral issue. One cannot scan every aspect of reality in order to assess if it carries moral meaning – it is practically impossible and hardly any motivation could be strong enough to lead to such an attempt. Instead, there must be some preconceptions of morally-laden issues that will enable moral alertness to arise spontaneously in specific occasions. The significance of preconceptions is evident in the case of consumer products, but preconceptions are just as significant for the moral perception of any case. There is nothing in events or objects themselves that carries moral meaning *a priori* – assuming that facts are independent of values, one has to learn that some sort of events and objects are to be considered morally. This educational background implies for the significance of personal and social involvement in ethical systems.

2.2. Personal relations as motivating moral views and actions

Moral theorists tend to agree that early experiences of various kinds or education are determinable for later moral competence. This view is also supported by psychologists.¹¹⁰ Melvin Lerner, for example, does not see "justice motive" as a mere expression of rational reasoning or following a social contract, but rather as a matter of maintaining a stable sense of identity. Such a sense of identity develops in early life, and later its patterns could change only with great difficulty and agitation. Lerner explains:

"So I am suggesting that, for example, children's repeated experiences of equal treatment and outcomes for similar others become a fundamental part of their cognitive structure, their way of organizing their experiences in creating a stable world. As a consequence, a child assumes that it is only natural and right for similar people to be treated in the same way. Any instance where that does not occur automatically elicits the judgement of unfairness. If the violation, and hence the threat to the integrity of the

¹¹⁰ Kagan and Lamb, *Emergence of Morality in Young Children*.

person's cognitive system, is sufficiently flagrant, the awareness of the injustice will elicit emotions of anger and sadness."¹¹¹

Among moral philosophers, feminist theorists in particular have put the early experience in the family in the spotlight of their descriptive (as well as normative) reflection on morality. Many feminist moral theorists agree that the experience of being cared for as an infant and a child in the family (and also in other social circumstances, such as school) provides the model for later capacity and inclination to care for others. The sensibility to the needs and vulnerabilities of others, and the willingness to take these needs and vulnerabilities into consideration, are psycho-social traits whose very existence depend on an intricate personal development in the individual. The emergence of such sensibility and willingness in early childhood is the rise of any moral thought, sensibility and behaviour in the individual; it is the necessary precedence to the mature motivation to act according to moral principles, universalistic principles included. Nel Noddings explains:

"We cannot expect that children will build their ethical ideals without help. Neither can we expect that, at some magic age, they will become fully rational and capable of summoning the moral law that is supposedly within each of us. Nor can we suppose that rationality will bring a sense that every person should count as much as every other. Indeed, the utilitarian expectation flies in the face of universal legitimate exceptions. If I cannot expect more from my mother than from any other woman, my life is diminished. Neither Kantianism nor utilitarianism is empty of insights, but they are both weak on moral motivation. We act morally because we are moved to do so and, in large part, this occurs because we have an ideal of caring that may be consulted. Further, this ideal is reality; it exists as part of the self and requires only activation."¹¹²

I have already mentioned in previous sections some of the complex relations between universalist, abstract approaches to ethics and feminist ethics (and more specifically, ethics of care). In the present context, another complexity is revealed – concerning the

¹¹¹ Lerner, "Pursuing the Justice Motive," 18.

¹¹² Noddings, *Starting at Home*, 216.

development of moral competence in the individual. This point calls for some further elaboration of feminist insights. In her early work, Carol Gilligan presented girls' and women's moral experience, development and considerations as a socially widespread alternative to the typical principle-oriented approach of boys and men. The empirical observation is also adapted into normative terms. Notably, the normative alternative was not meant to replace traditional ethics, but rather to complete it.¹¹³ Other feminist theoreticians, however, insisted on the precedence of the ethics of care – as a normative theory as well as a descriptive account of morality – not only within the limits of close relations, but also in any other morally-relevant situation, including the political sphere. Virginia Held concludes that such theorists,

"[...] think the value of caring that can be seen most clearly in such activities as mothering is just what must be extended, in less intense but not entirely different forms, to fellow members of societies and the world. To many feminists, thinking about the social world in terms of caring is entirely appropriate, though it is an entirely different way of thinking about it than the way of liberal individualism."¹¹⁴

Held further explains:

"The ethics of care recognizes the *moral* value and importance of relations of family and friendship and the need for *moral* guidance in these domains to understand how existing relations should often be changed and new ones developed. Having grasped the value of caring relations in such contexts as these more personal ones, the ethics of care then often examines social and political arrangements in the light of these values."¹¹⁵

Held, Noddings and others believe that care is preferable, as a combination of theory and practice, for dealing with most morally-laden situations, whether "private" or "public".

The two categories are much more interconnected, in this view, compared to the

¹¹³ Gilligan, *In a Different Voice*; see also: Held, *Ethics of Care*, chap. 1; Ruddick, "Injustice in Families," 203-206.

¹¹⁴ Held, *Ethics of Care*, 89.

¹¹⁵ *Ibid.*, 12.

traditional, patriarchal separation; in terms of state policies, the focus is turned from balancing military and economic powers or managing the market forces – to issues such as poverty, social security, education, homelessness, public health, etc. Lessons learned in the domestic arena are evidently relevant to this variety of issues.

The ethics of care, like other emotion-oriented approaches to ethics (that focus on love, trust, sympathy, etc.) tends to explicate moral behaviour as a matter of motivation and personal development in the context of social relations. It also locates the core of morality at maximum social closeness and personal involvement. This view of morality is very unlike universalist moral theories in terms of personal and social involvement. Emotion-oriented approaches to ethics provide a clear and self-declared system of bias instead of self-declared indifference to the identity of the subjects in question (i.e., impartiality). On the face of it, emotion-oriented moral theories are anti-moral in terms of universalist moral theories, at least when suggesting to integrate partiality in a normative code of behaviour (normative ethics) rather than providing a mere psycho-sociological empirical account of the development of morality in the individual (descriptive ethics). In that sense, it is doubtful whether moral motivation of the kind promoted by emotion-oriented moral theories does contribute to moral competence. Indeed, emotion-oriented approaches to ethics do have a normative aspect. They promote two major types of normative claims: the one justifies the moral precedence of personal involvement; and the other suggests typical care (or love, sympathy, etc.) for a close, familiar subject as a model for the desirable approaches towards less familiar others. Emotion-oriented approaches to ethics tend to reject the universalization of specific attitudes, but they do

aspire to expand their applicability. So when others are encountered, even impersonally, one can apply a caring attitude.

2.3. Moral motivation and distant strangers

We have seen that emotion-oriented approaches to ethics provide a convincing case against the validity of universalist ethics, exposing bias in both its basic conceptions and its plausible use. Nevertheless, the alternative the critics offer is itself overtly biased. This fault casts a shadow over the entire moral project, since emotion-oriented approaches offer the most convincing account of the emergence and development of moral motivation. The problems arise in both the descriptive and the normative aspects of emotion-oriented approaches to ethics. The moral issues concerning distant strangers are very different from issues of close relations. Nel Noddings elaborates sincerely on the limits of the ethics of care:

"In an important sense, the stranger has an enormous claim on me, because I do not know where he fits, what requests he has a formal right to make, or what personal needs he will pass on to me. I can meet him only in a state of wary anticipation and rusty grace, for my original innocent grace is gone and, aware of my finiteness, I fear a request I cannot meet without hardship. Indeed, the caring person, one who in this way is prepared to care, dreads the proximate stranger, for she cannot easily reject the claim he has on her. She would prefer that the stray cat not appear at the back door – or the stray teenager at the front. But if either presents himself, he must be received not by formula but as individual."¹¹⁶

For Noddings, a stranger is an individual that makes a plea at her doorstep; and even such a close, single stranger poses great difficulties on the caring approach: "I may come to rely almost completely on external rules and, if I do, I become detached from the very

¹¹⁶ Noddings, *Caring: A Feminine Approach*, 47.

heart of morality: the sensibility that calls forth caring."¹¹⁷ So "morality" in that sense is liable to collapse when meeting a stranger – even though the encounter is unmediated, personal and prolonged.

And what about mediated, impersonal, brief encounters? Morally-laden situations that arise from relations of great spatial, social and institutional distance – consumerism, colonialism, global capitalism, etc. – provoke emotions very unlike emotions of personal relations. The basic emotional reaction to such situations is alienation, that is, probably no much emotion at all.¹¹⁸ Therefore such situations are beyond "the very heart of morality". David M. Smith, in his book *Moral Geographies*, provides an elaborated review on the possibilities to overcome partiality towards close subjects and include distant ones in our moral world (chapter 5). Smith's key concept is "community", as the framework of moral sentiments and behaviour: if we regard some subjects as members of our own community, we tend to maintain a moral attitude towards them despite their unfamiliarity and distance. The persistence of morality in such circumstances relies on a deep sense of identity – an emotional and cognitive quality that may compensate for some degree of unfamiliarity and distance. Communities vary in scope, degree of proximity and flexibility of boundaries; in some circumstances, strangers may be included in your community. However, moral concern for *outsiders* to the community remains psycho-socially problematic. Smith claims that if

"extending the spatial scope of beneficence depends on the capacity to empathise with distant others whom we understand to be similar to ourselves, this requires something more than the kind of relational (or social) self found in feminism and communitarianism, imbued with a special sentiment capable of motivating care for nearest and dearest but which may remain parochially confined. Extending empathetic capacities developed in

¹¹⁷ *Ibid.*

¹¹⁸ See, for example: *Tronto, Moral Boundaries*, 35-37.

relationships with closely known persons to those more distant does not come solely from motives rooted in self-identity: it also requires reasoning and analogical insight."¹¹⁹

The problem is that reasoning and analogy are poor as motivational triggers. In Marilyn Friedman's words, "global moral concern is a rational achievement [...] a result of moral thinking that has no necessary motivational source in the self" and therefore global moral concern is unable "to ground the widest sort of concern for others in unmediated constituents of the self."¹²⁰ In light of this psycho-social difficulty, Smith concludes that "To achieve the grounding required, and the moral progress implied, may be no less a task than the completion of transformation of human identity initiated when people were first inclined to look beyond their own highly localised experience, to see others in self-recognition and sympathy."¹²¹

What are the characteristics of such a new identity? And can the new identity preserve a considerable level of self-recognition and sympathy towards very distant and unfamiliar others – or should we expect a change in these moral features? It seems that perceiving an alienated situation in a manner even loosely similar to the plea of a stranger at my doorstep will remain a substantial challenge.

Without yet assuming a new type of psychological traits, it is nevertheless plausible to claim that images and stories of distant strangers may provoke emotional responses somewhat like the response to a stranger at one's doorstep. Stories and photos of an individual cow in a slaughterhouse, an enslaved worker in a sweatshop, or a child in a bombarded city, may reach the remote consumer or citizen and arouse emotions of sympathy, guilt and care. These emotions are somewhat like responses to a direct contact

¹¹⁹ Smith, *Moral Geographies*, 106.

¹²⁰ Friedman, *What Are Friends For?* 88. Cited in: Smith, *Moral Geographies*, 106.

¹²¹ *Ibid.*.

with a stranger, and they may give rise to self-demanding decisions and laborious actions for the sake of the distant stranger.

The particularity of the image, however, is illusory. The actual child in the bombarded city, for example, remains beyond any further familiarity and direct (and probably also indirect) influence. The emotions provoked by the image have in practice no authentic particular object – it is an image, not a real child. Of course, the image is perceived as a testimony for a real victim, but having no particular, real child to see or talk to, the information remains dull and vague, and imagination must take over to complete missing information. In that sense, the image functions more as a symbol of victims of that war than as a particular testimony. A generalization has therefore evolved spontaneously from the combination of moral emotions and the lack of clearly determined object for these emotions. Stating that the image has provoked a generalization does not mean that the reaction is morally worthless – on the contrary, images, stories, etc. do have a substantial moral effect on some recipients. But it is also important to note how different a picture, or even a continuous TV report, is from a real stranger at one's doorstep. There is no personal appeal here, no opportunity to initiate further familiarity, no exchange. If we accept the assertion that one of the fundamentals of caring is mutual influences and responses,¹²² then there is no real caring here. No wonder that moral motivation that has been provoked through the mediation of testimonies on remote strangers is relatively weak.

Moreover, testimonies on distant strangers are essentially exceptional. When distant strangers are numerous, the great majority of them remain inevitably distant and alien, and most of their misfortunes remain unknown. Thus emotions towards them are

¹²² Noddings, *Caring: A Feminine Approach*.

inevitably different from personal emotions; basically, distant strangers are a bulk of unknown entities that cannot raise much emotion. Personal feelings such as care, love, sympathy and trust are not applicable to unknown entities; here personal relations, or at least some emotional impression of personal relations, are *a necessary condition*. A distant bulk of unknown entities cannot be cared for in the sense that you care for your friend. In short, moral interest in distant strangers requires some other motivation.

Reasoning according to universal moral principles seems to be a promising starting point for developing moral interest in distant strangers, since impartiality is at the core of universal moral theories. Such reasoning is allegedly indifferent to the identity of the parties in question, as well as to special social relations with them. Distant strangers should be thought of and treated just like family members. Indeed, empirical knowledge remains a substantial problem: practical moral judgement – by any moral theory – does require empirical knowledge that may be virtually beyond reach in the case of distant strangers. However, some empirical facts about the vulnerabilities and needs of others could easily be speculated, through analogy with familiar parties. Such factual assumptions fit naturally into the framework of universal moral theories, allowing ethical consideration and judgement. So unlike moral emotions, reasoning according to universal moral principles is largely indifferent to questions of proximity vs. distance.

This is all very well, but assuming that rational reasoning does not provide substantial motivation (if it does provide any motivation at all) we are back where we started. So what kind of motivation may activate benevolent acts towards the distant strangers? The answer must apply to a set of emotions completely different from care, sympathy, etc. Such emotions include: feeling a sense of duty; fearing God; desiring to

keep consistency in one's thoughts; wishing to maintain a moral self-image, etc. If the first group of emotions is focused on others, the present group fluctuates between *self-centred emotions and eagerness to please authority*. Concerning moral attitudes to distant strangers, the lack of focus on specific entities is the very moral advantage of these emotions. They may provide a motivation to act, which could be satisfied by any object, close or distant, familiar or alien – as long as one believes that her actions fulfil her duties, reinforce her identity as a moral person, etc. That is why such motivations are suitable for connecting universalistic moral theories with action.

2.4. Stronger motivations towards the close and familiar

As we have seen, motivations to act morally may target any subject at any level of proximity and familiarity. Personal emotions of care, love, etc. may be extended beyond their ordinary object of close individuals, and a sense of moral duty, etc. is allegedly impartial and indifferent to proximity and familiarity. However, as Hume noted,

"Contiguous objects must have an influence much superior to the distant and remote. Accordingly we find in common life, that men are principally concerned about those objects, which are not much removed either in space or time, enjoying the present, and leaving what is afar off to the care of chance and fortune."¹²³

Hume stressed that moral interest fades away in relation to the social distance from the moral agent, and "Being thus acquainted with the nature of man, we expect not any impossibilities from him; but confine our view to that narrow circle, in which any person moves, in order to form a judgement of his moral character."¹²⁴ Expecting "not any

¹²³ Hume, *Treatise of Human Nature*, bk. 2, pt. 3, sec. 7, p. 294.

¹²⁴ *Ibid.*, bk. 3, pt. 3, sec. 3, p. 384.

impossibilities" does not mean that people are judged to be morally weak, but rather that we adjust our moral conceptions to this common observation on human nature:

"This partiality, then, and unequal affection, must not only have an influence on our behaviour and conduct in society, but even on our ideas of vice and virtue; so as to make us regard any remarkable transgression of such a degree of partiality, either by too great an enlargement, or contraction of the affections, as vicious and immoral. This we may observe in our common judgements concerning actions, where we blame a person, who either centers all his affections in his family, or is so regardless of them, as, in any opposition of interest, to give the preference to a stranger, or mere chance acquaintance."¹²⁵

Overall, the motivational precedence towards close and familiar subjects is apparent. Yet appealing to "human nature" as an explanation is too vague. I will therefore attempt to sum up five general reasons for that precedence:

- a. If very close relations are the psychological origins of benevolent emotions in the individual, expanding the social range of such emotions requires special circumstances, pressures, or cognitive and emotional triggers. Such activity is likely to leave the core intact: caring for strangers does not tend to rob any care from family and close friends. Similarly, family-oriented and friends-oriented sentiments of moral duty and responsibility are not likely to be compromised as a result of expanding the social range of these sentiments. Furthermore, while family and close friends compose a steady core that attracts steady moral perception, motivation, and relevant knowledge, the range of expansion and the kind of motivation towards a wider group are indeterminate and changeable. Therefore it is reasonable to expect that the emotional intensity would decline in accordance with the spatial and social distance of the subject of moral interest. Benevolent emotions towards a party that is not very

¹²⁵ *Ibid.*, bk. 3, pt. 2, sec. 2, p. 314.

well-known remain a weakened offshoot of the emotional reaction to close individuals.

- b. Making an effort in favour of close individuals normally serves self-interests, while efforts in favour of distant strangers do not. Helping my family or my close community may help me directly; and members of my family or my close community may return the favour, or settle a score if not treated kindly. In that sense, acting in favour of close individuals and sometimes of my community at large is an extension of egoistic efforts. This fact is an aspect of "moral utility", defined as the overall exchange of investments, gains and losses of work, time, suffering, pleasure, freedom, property, etc. – that affect all parties that are involved in a social act. Acknowledging the utility of investing in close individuals is common sense understanding that does not require special calculations of the cost/benefit to myself for every specific case. Therefore the self-benefit of investing in close individuals facilitates a constant motivation to do so. Local utilitarian calculations may provide further rationalization for action or for abstention from action in specific cases – both decisions are based on self-interest.
- c. Another aspect of the "moral utility" has to do with the degree of success of acting in favour of others – success in realizing the others' interests, independently of any self-interest. Investment in others is usually more effective the closest they are. The closer a subject is to you, the more you are liable to know about her vulnerabilities, needs and special circumstances – and therefore you would know how to act effectively on her behalf. Such an action will most likely affect her circumstances more immediately

and directly than an action on behalf of a distant stranger.¹²⁶ As a rationalization that reinforces emotional motivations to act, these arguments may prove very effective. Again, these are intuitive, virtually self-evident arguments, with no need to rationalize about their details ad-hoc, and therefore they are easily ready for emotional utilization.

- d. Beyond the comfort of rationalization, "moral utility" is connected to an intuitive sense of responsibility for those who are liable to be most affected from one's actions. The closer a person is, the stronger is the sense of responsibility for her wellbeing and the sense of duty to make efforts on her behalf, as Robert Goodin explains: "Whatever claim the world at large may have upon us, it inevitably takes second place behind the claims of particular others: our families, friends, colleagues, clients, compatriots, and so on. These are people who are connected to us in special ways; and rights, duties, and obligations arising out of those special relationships always seem to take priority. Duty, even more than charity, begins at home."¹²⁷ This kind of motivation functions as a permanent bias in favour of close individuals. By "bias" I mean that the priority given to close individuals is predetermined: normally, I do not bother to balance the benefits of some effort for them in comparison to the results of a similar effort for a farther party. The sense of duty for the closest others is enduring; it is a conventional element of personal identity, reinforced as a social value, and it requires no testing in specific circumstances. This sense of duty is distinct from personal care and affection, although it is influenced by such emotions.

¹²⁶ See: Jackson, "Decision-Theoretic Consequentialism."

¹²⁷ Goodin, *Protecting the Vulnerable*, 2. It should be noted that Goodin's intention is to make us recognize a much more extensive network of obligations and moral claims.

It is important to note that the origin of the sense of responsibility and the sense of duty may be disputed. It may be ascribed to either learning or innate nature. One explanation from learning and education may trace the origin of the responsibility-duty motivation in the process of rationally understanding the relative success of investing in close subjects. This means ascribing much emotional weight to rationalization. Alternatively, the origin may be traced in the process of socialization, i.e. in the learning and assimilation of social values through social experience. Such values are not necessarily similar in different societies, where they may focus on diverse types and degrees of closeness: family, friends, household members (who may include nonhumans), community members, or a larger collective. Contrarily, explanations from nature claim that a sense of responsibility for close individuals is an intuitive, gut reaction that requires neither rationalizing nor social conditioning.¹²⁸ Evolutionary ethics connects "moral utility" with gut preference for close individuals, especially genetic relatives. A sense of responsibility for them is advantageous in terms of adaptation and survival, and therefore this emotional inclination has evolved as a part of human nature (and possibly many other species' nature).¹²⁹

The two types of explanation – from education and from nature – denote somewhat different realities. If the preference for close individuals is a product of learning, then we could learn to avoid any bias in their favour, or even develop preference for total strangers over relatives – which is an anomaly from an evolutionary point of view. Alternatively, if we prefer relatives or other close individuals by nature, it is an inevitable motivation that must override any social

¹²⁸ Bellow, *In Praise of Nepotism*.

¹²⁹ Alexander, *Biology of Moral Systems*; Alexander, "Biological Considerations in the Analysis of Morality."

attempt to educate against the priority of family relations or in favour of some other relations. These "nature vs. nurture" insights seem contradictory. Yet in practice the contradiction is virtually invisible, since favouring alien parties over close individuals is too rare and socially arbitrary. It is unnecessary to speculate here why the contradictions are minor in practice. Any one-sided explanation for the origin of the sense of responsibility and moral duty is unsatisfying, since educational causes are most difficult to separate from natural causes. The bottom line is that all the factors that create a comprehensible account tend to point at a strong, enduring motivation to invest in close individuals much more than in distant ones.

- e. If reasoning according to universal moral principles does motivate moral agents' behaviour, it nevertheless does not change the balance of the agents' moral motivations: the balance remains in favour of the close and familiar. To work against this inclination, universal moral theories should have given some precedence to distant strangers over relatives and friends, in order to balance the strong motivations in favour of the latter. However, the whole point of universal moral theories is their alleged indifference to the identity of their objects. Therefore they do not allow partiality in favour of distant strangers. In that sense, there is no rationalization for preferring remote strangers, and hence even this relatively weak source of motivation in their favour is rather insignificant.

The results of these assertions are very clear with regard to distant strangers: in any case of a choice between investing in close and familiar individuals vs. distant strangers, the predisposition against the second group is deep and decisive. (In fact, this predisposition is so thorough that acting according to it may seem as a reasonable and therefore

impartial choice – and if so, no conflict of motivations between moral principles and the preference for close parties would emerge). It should be noted, though, that theoretically, none of the above assertions works decisively against developing moral motivations in favour of distant strangers. Benevolent emotions may be directed at them; the self-benefits of efforts for close individuals do not exclude efforts that carry no self-benefits; benefiting distant others is indeed possible and the knowledge of this possibility may encourage efforts; moral agents may experience a sense of responsibility or duty towards distant strangers due to an innate inclination or (more notably) a learning process; and reasoning according to universal moral principles may certainly motivate efforts to benefit distant strangers. All these possibilities are likely to emerge if the moral interest in distant strangers does not compete with some closer interests. Distant strangers cannot win the competition over moral motivations: if my family needs my help and a foreign family needs it just as well, I would certainly invest my efforts close rather than far. The strength of moral motivation for distant strangers is unlikely to overcome self-interests, relatives' interests, community interests, etc. But if no such close interests compete with universal considerations over moral attention, the latter may be freely expressed. That, however, is not likely to happen unless universal moral principles or sensitivities have been endorsed and motivated emotionally in the first place. Moreover, a situation without competition at all is hard to find: the effort that I might make for distant strangers always seem to come on the expense of an effort that could have been invested in closer targets.

It seems that the motivation to make an effort in favour of remote strangers must be based on a slightly different moral-emotional dynamics in comparison with the dynamics implied by widespread methods of ethics. There needs to be a deliberate force of

compensation for the forces that facilitate bias against distant strangers; that is, ensuring extra moral attention and willingness to act for distant strangers. By "extra moral attention" I mean that the investment goes beyond any existing assessment of their actual needs and beyond apparent utility calculations that allege to balance one's own investment with the needs of the distant strangers. This scepticism concerning both common sense and calculated reason is the result of acknowledging the prevalence and power of partial bias: the intuition towards distant strangers is unavoidably deficient. That is why better reasoning is not enough: deep bias requires compensation. So compensation is not simply a balance of interests. It is rather the conclusion of the psycho-socio-historical analysis of the dynamics of moral attention.

The motivation to compensate for bias is a reasonable result of universalist moral theories, and of virtue ethics that promotes self-sacrifice for others. It may be a trivial issue in simple societies that hardly influence distant strangers, but in modern society, where everyone have immense influence on distant strangers through purchasing habits, tax payments and any other act of supporting global capitalism and state policies, the problem is crucial. Universalist moralities should construct novel, potent social devices in order to allow compensation. I believe that no such social devices have been constructed. I will address this issue more thoroughly in chapter 4.

3. Empirical knowledge and moral consideration: essential connections / disconnections

On the face of it, a close connection between learning facts and moralising may seem awkward. The conception that learning facts is clearly distinct from thinking about moral problems prevails in Western moral thought. This may lead to the assumption that empirical knowledge is external to the process which leads to forming moral opinions. Yet if we do agree that empirical knowledge is essential to the process at some stage, at least, is it still important to tell whether the two spheres are separate or not? In the present chapter, I will present major philosophical and socio-historical arguments that indicate that the practice of learning facts and the practice of moralising are intermingled and inseparable – despite the plausibility of some conceptual distinction between the two spheres. This view is a crucial aspect of my scepticism concerning the validity of interspecific ethics; it is specifically important to my argument against the common use of allegedly neutral facts as an object of allegedly impartial moral judgement.

3.1. Disconnections

As I mentioned in section 2.1., much of the history of moral philosophy has been concerned with outlining the moral domain as distinct. Among other things, it has been conceptually separated from empirical knowledge. Indeed, "empirical knowledge" is not a common concept in this discourse, but moral philosophers commonly claim that ethics is not based on "experience". As experience is the key for attaining empirical knowledge, the separation from experience means that the moral domain is separated from empirical knowledge. The distinction between values and facts is also prevalent. Once again,

although values are not fully synonymous with the moral domain, and facts are not synonymous with empirical knowledge, the concepts are nevertheless close enough to provide an idea of the philosophical strong inclination to remove empirical knowledge away from the moral domain. Relevant are also the distinctions between is and ought, positive and normative, or descriptive and prescriptive, and discussions on the naturalistic fallacy.

It is important to note that the philosophical efforts in favor of the distinction between fact/value, is/ought, etc., like the efforts against the distinction – are hardly concerned with the questions that I raise about the status of empirical knowledge in ethics (taking ethics as an activity within a socio-historical context). The philosophical effort is concerned predominantly with the question of the validity of moral convictions, assertions, judgements, etc. Blurring the distinction supposedly brings moral claims and factual claims to the same level of truth value. Inevitably, appealing to the rich discourse on the fact/value distinction, the naturalistic fallacy or moral realism and anti-realism – is somewhat awkward in the present context, but these are the most relevant issues to the present dissertation.

Empirical knowledge is treated differently in relation to different aspects of the moral domain. Regarding moral views and attitudes to practical ethical issues, even purist moral philosophers are likely to agree that empirical knowledge of the practical issue at hand is essential. In this context, empirical knowledge is commonly regarded as a matter of application, i.e. the application of a moral theory, which itself may regard moral claims as unrelated to empirical knowledge. Typical moral aspects such as the conception of good and evil, principles of moral judgement, good and bad sentiments – are regarded as

autonomous products of the mind of the moral agent, applicable to actual experiences but nevertheless independent of any actual experience. Correspondingly, empirical knowledge is what we learn directly or indirectly from sensing the world – while moral judgement and sentiments remain distinct from it by definition.

Kant is one of the prominent proponents of this view, and he referred explicitly to empirical knowledge. In section 2.1. I presented his attempts to define a pure domain of reason. For Kant, the pure moral domain is also the source of moral observations that precede any observation of the real world: "moral principles are not based on what is peculiar to human nature but must be fixed a priori by themselves, while from such principles it must be possible to derive practical rules for every rational nature, and accordingly for human nature as well."¹³⁰ Kant is careful to dissociate any empirical considerations from his conception of morality – even his notion of reason is allegedly abstract and independent of the ordinary conception of human reason. He writes:

"[...] it is clear that all moral concepts have their seat and origin completely a priori in reason, and indeed in the most common reason just as in reason that is speculative in the highest degree; that they cannot be abstracted from any empirical and therefore merely contingent cognitions; that just in this purity of their origin lies their dignity, so that they can serve us as supreme practical principles; that in adding anything empirical to them one subtracts just that much from their genuine influence and from the unlimited worth of actions; [...] it is of the greatest practical importance [...] just because moral laws are to hold for every rational being as such, to derive them from the universal concept of a rational being as such."¹³¹

Kant's explicit interest in empirical knowledge is rather exceptional, as mentioned above. But the is/ought question is among the most notable topics in meta-ethics. The prominent precedent is Hume's complaint about philosophers' tendency to move casually from descriptive language (is and is not) to normative language (ought and ought not) as if by

¹³⁰ Kant, *Groundwork*, sec. 1, p. 64 (4:410, n).

¹³¹ *Ibid.*, sec. 2, p. 65 (4:411-412).

deduction, although the two kinds of concepts are "entirely different".¹³² The common interpretation of Hume's passage is that no ethical conclusion may be validly inferred from mere factual claims. As "is" language expresses empirical knowledge, this view denies the relevance of empirical knowledge to moral considerations.

A more elaborated, influential claim for disconnection has been presented by G. E. Moore.¹³³ Following Henry Sidgwick,¹³⁴ Moore argues that "good" is indefinable, unanalysable: a simple concept that cannot be defined by other concepts. Factual concepts such as pleasure or happiness indicate things that are commonly regarded as good and their enhancement is regarded as right, but whether or not pleasure is identical to good, or good is reducible to pleasure, is an open question. Possibly, good is something else than pleasure, and pleasure is not good in every circumstances. Moore compares this confusion in the process of definition to a claim that "yellow", that is, our perception of the colour, is equivalent to the physical traits of colour:

"Yet a mistake of this simple kind has commonly been made about good. It may be true that all things which are good are also something else, just as it is true that all things which are yellow produce a certain kind of vibration in the light. And it is a fact, that Ethics aims at discovering what are those other properties belonging to all things which are good. But far too many philosophers have thought that when they named those other properties they were actually defining good; that these properties, in fact, were simply not other, but absolutely and entirely the same with goodness. This view I propose to call the naturalistic fallacy and of it I shall now endeavour to dispose."¹³⁵

¹³² Hume, *Treatise of Human Nature*, bk. 3, pt. 1, sec. 1, p. 302.

¹³³ Moore, *Principia Ethica*, chap. 1, sec. 5-14.

¹³⁴ Sidgwick, *Methods of Ethics*, bk. 1, chap. 3, § 1.

¹³⁵ Moore, *Principia Ethica*, chap. 1, sec. 10.

The is/ought thesis, i.e. claiming that "ought" statements cannot be derived from exclusively "is" statements, has appealed to many philosophers ever since Moore.¹³⁶ Like their predecessors, they were interested primarily in the foundations of ethics, and their exclusion of factual claims or empirical knowledge from moral considerations is typical of many meta-ethical discussions.¹³⁷ Many other philosophers challenge the is/ought thesis, again from a meta-ethical point of view. The present dissertation claims for rich is/ought connections, but since my perspective is psycho-socio-historical rather than meta-ethical, much of the extensive meta-ethical discourse is excessive here. Nevertheless, I believe that most philosophers would accept some weak is/ought distinctions (although the psycho-socio-historical dynamics goes round such distinctions just as well). For example, they would agree that knowing specific morally-relevant facts does not determine moral judgement but may rather yield a variety of moral opinions. A wide agreement on is/ought issues is not likely to be found in hardcore meta-ethics, but I believe that some observations on what is commonly regarded as application are commonsensical, regardless of what one thinks about the ontological status of moral claims. Even Kant, whom I have quoted above for his firm and clear belief in the separation of empirical knowledge from moral considerations – admits right after the quote that "anthropology", i.e. empirical knowledge, is necessary to the application of moral laws to human affairs.¹³⁸

A loose principle of distinction is also expressed when trying to resolve a debate on morally-relevant issues between two parties. It is often very helpful to sort out whether

¹³⁶ Prichard, "Does Moral Philosophy Rest on a Mistake?"; Prior, *Logic and the Basis of Ethics*, 26-29; Mackie, *Ethics: Inventing Right and Wrong*, 64-73.

¹³⁷ For helpful short reviews of the debate, see: Shafer-Landau, *Moral Realism: A Defence*, especially 13-18; Sayre-McCord, "The Many Moral Realisms;" Dancy, "Moral Realism."

¹³⁸ Kant, *Groundwork*, sec. 2, pp. 64-65 (4:410-412).

the locus of disagreement is factual or value-related. This clarification may help in the case that what seems like a simple dispute over facts conceals a disagreement over values, or vice versa. Of course, exposing concealed details may help to resolve a dispute whether all the details are of the same kind or not. Nevertheless, fact/value confusions are notably common as well as misleading. The distinction between facts and values serves as a practical technique for resolving conflicts by mediators or by the parties that seek for a resolution; they typically attempt to unravel fact/value confusions, and assume that achieving an agreement over the facts is less difficult than resolving a dispute over values.¹³⁹ It may be disputed whether some claim is purely factual, or whether another claim is purely normative, yet a pragmatic distinction is possible concerning a great variety of debates.

The same arguments may be applied to more complex matters as well. A wide range of opinions on human slavery has been widespread in societies that practiced legal slavery. Slavery could be considered as mildly wrong or terribly wrong, or right or even ethically obligatory, or just ethically irrelevant (e.g.: a mere economic issue) – by different agents in presumably identical circumstances, with more or less the same empirical knowledge on the matter. Beyond differences of self-interest, group identity, etc., the disagreement may be tracked down to distinct factual or moral considerations. For example, a dispute over the validity of factual claims such as claims on the economic significance of slavery, or rather a dispute over the moral legitimacy of practices such as owning other people or torturing them.

Attempting to stick to relatively uncontroversial claims, I have deliberately described disconnections between empirical knowledge and moral consideration rather

¹³⁹ Schultz, "Distinguishing Facts from Values."

loosely. I do not claim that *any* fact can yield many moral evaluations, since this claim may be disputed by naturalists who claim, for example, that bad experience facilitates the moral conception of bad;¹⁴⁰ I only suggest that *some* facts may serve as a basis for a variety of moral judgements. In a similar manner, I do not claim that a distinction between facts and values is the decisive foundation of any moral debate on practical issues, since critics may claim that such a distinction is irrelevant in the case of "thick" ethical concepts, for example.¹⁴¹ But I do suggest that such a distinction is a pragmatic, clear analytical tool.

3.2. Factual grounds in ethics

In the previous section I have made an attempt to make a fair presentation of claims for a clear distinction between the moral sphere and empirical knowledge. This distinction does not interfere with my thesis of a close connection between the two spheres, as I will soon explain. Nevertheless, it is worth noting that these claims for a distinction have been seriously challenged. Some of the critics are philosophers who tend to focus on faults in the most celebrated arguments for distinction theses. David Brink, for example, examines Moore's claim against any synonymy between moral terms and nonmoral terms, and concludes that this argument is inadequate since "very few terms are synonymous in that sense. Certainly, few if any terms from one discipline will be synonymous with terms from other disciplines."¹⁴² Other philosophers put the emphasis on finding a counter-

¹⁴⁰ Bentham, *Principles of Morals and Legislation*, chap 1, sec. 1, pp. 1-2.

¹⁴¹ Gibbard, Allan. "Thick Concepts and Warrant for Feelings." Bernard Williams, *Ethics and the Limits of Philosophy*, 129-130, 140-142. See also: McDowell, "Non-Cognitivism and Rule-Following;" Dancy, "In Defence of Thick Concepts;" Putnam, *Collapse of the Fact/Value Dichotomy*, chap. 2; Taylor, "Ethics and Ontology."

¹⁴² Brink, *Moral Realism and the Foundations of Ethics*, p. 154.

example for distinction theses, in hope that this example may reveal a principle that makes further examples possible, and therefore it would restrict the distinction thesis.¹⁴³

These strategies, if successful, may of course have far-reaching implications on what could be said on the ethics/empirical knowledge connection, but as it is the discussion remains abstract and does not reveal much about the nature of the connection in practice.

Some theoreticians, however, present a more far-reaching thesis. In his book *The Collapse of the Fact/Value Dichotomy*, Hilary Putnam claims – as the title suggests – that the entire fact/value (including moral value) dichotomy or distinction has become an anachronism in the history of philosophy.¹⁴⁴ Putnam recognizes the emergence of "the dichotomy" (Dewey's term) in Hume through Kant, peaking with the Logical Positivists. The fact/value dichotomy, so he claims, is related to the synthetic/analytic dichotomy, because for the Logical Positivists both distinctions "contrast 'facts' with something else: the first contrasts 'facts' with 'values' and the second contrasts 'facts' with 'tautologies' (or 'analytic truths')." ¹⁴⁵ Under Logical Positivism, values became one category of what that school deemed as "nonsense". The change, however, came less from a new analysis or evaluation of values, but from the criticism of the positivist's conception of facts. Following Quine's criticism,¹⁴⁶ most philosophers became convinced that trying to classify every statement into pure "factual" or "conventional" – "was a hopeless muddle".¹⁴⁷ Here Putnam goes back to the classical pragmatist assertion that value and normativity permeate all experience. Empirical knowledge is entangled with values –

¹⁴³ Searle, "How to Derive 'Ought' from 'Is'."

¹⁴⁴ Putnam, *Collapse of the Fact/Value Dichotomy*, chaps. 1-2.

¹⁴⁵ *Ibid.*, 8.

¹⁴⁶ Quine, "Two Dogmas of Empiricism."

¹⁴⁷ Putnam, *Collapse of the Fact/Value Dichotomy*, 30.

"epistemic values" – such as "coherence", "plausibility", "reasonableness", "simplicity", etc. Now,

"If we look at the vocabulary of our language as a *whole*, and not the tiny part that was supposed by logical positivism to be sufficient for the description of 'facts', we will find a much deeper entanglement of fact and value (including ethical and aesthetic and every other sort of value) even at the level of individual predicates."¹⁴⁸

Here, through the notion of "thick ethical concepts", Putnam claims directly for the entanglement of facts and moral or ethical values. These are concepts and expressions – very common ones – that contain both a description of some phenomenon and a normative or a prescriptive statement about it (unlike "thin ethical concepts", such as "good", that allegedly contain no descriptive element). Putnam demonstrates this entanglement in the word "cruel", and sums-up his argument: "'cruel' simply ignores the supposed fact/value dichotomy and cheerfully allows itself to be used sometimes for a normative purpose and sometimes as a descriptive term."¹⁴⁹ Indeed, such words may be analysed into a descriptive aspect and a normative aspect. Proponents of the fact/value dichotomy, such as R. M. Hare and John Mackie, have denied the normative aspect of such concepts, or claimed that thick ethical concepts are "factorable" into a purely descriptive component and an "attitudinal" component. Putnam rejects both views and concludes:

"What is characteristic of 'negative' descriptions like 'cruel' as well as 'positive' descriptions like 'brave', 'temperate', and 'just' [...] is that to use them with any discrimination one has to be able to identify imaginatively with *an evaluative point of view*. That is why someone who thought that 'brave' simply meant 'not afraid to risk life and limb' would not be able to understand the all-important distinction that Socrates keeps drawing between mere *rashness* or *foolhardiness* and genuine *bravery*. It is also the reason

¹⁴⁸ *Ibid.*, 34.

¹⁴⁹ *Ibid.*, 35.

that [...] it is always possible to *improve one's understanding* of a concept like 'impertinence' or 'cruelty'.¹⁵⁰

The "thickness" of ethical concepts is not rigid, but rather a matter of socio-historical changes. Concentrating on questions of logical analysis of such concepts helps to conceal this point, as Bernard Williams wrote: "It is an obvious enough idea that if we are going to understand how ethical concepts work, and how they change, we have to have some insight into the forms of social organization within which they work."¹⁵¹ An ambitious thesis on the historical change of ethical or moral concepts has been presented by Alasdair MacIntyre. In his *After Virtue*, MacIntyre claims that modern morality is essentially incoherent and irrational, after departing from the classical virtue ethics, and especially after abandoning the Aristotelian concept of teleology. Ancient and medieval ethics, he argues, relied on the teleological idea that human life had a proper end or character. In classical ethics, "Man" was "a functional concept". MacIntyre explains this notion by comparison to contemporary concepts such as "watch" and "farmer". In his view, when we speak of a watch, we know that it should show the time accurately and be easy to carry around, and in that sense knowing what "watch" means includes knowing what a "good watch" is. Similarly, when we know what a farmer is, we know what a farmer should do to be regarded as a good farmer. That was how the concept "man" used to be before the Renaissance:

"[...] 'man' stands to 'good man' as 'watch' stands to 'good watch' or 'farmer' to 'good farmer' within the classical tradition. Aristotle takes it as a starting-point for ethical enquiry that the relationship of 'man' to 'living well' in analogous to that of 'harpist' to 'playing the harp well' (*Nicomachean Ethics*, 1095a 16). But the use of 'man' as a functional concept is far older than Aristotle [...] It is rooted in the forms of social life to which the theorists of the classical tradition give expression. For according to that tradition to be a

¹⁵⁰ *Ibid.*, 39-41.

¹⁵¹ Bernard Williams, *Ethics and the Limits of Philosophy*, 131.

man is to fill a set of roles each of which has its own point and purpose: member of a family, citizen, soldier, philosopher, servant of God. It is only when man is thought of as an individual prior to and apart from all roles that 'man' ceases to be a functional concept."¹⁵²

For MacIntyre, this is the crucial point in the history of the is/ought relation. If functional concepts are a counter-example to the "No 'ought' conclusions from 'is' premises" thesis, as he does claim, then this thesis should exclude functional concepts;

"Yet moral arguments within the classical, Aristotelian tradition – whether in its Greek or its medieval versions – involve at least one central functional concept, the concept of *man* understood as having an essential nature and an essential purpose or function; and it is when and only when the classical tradition in its integrity has been substantially rejected that moral arguments change their character so that they fall within the scope of some version of the 'No "ought" conclusions from "is" premises' principle."¹⁵³

MacIntyre continues to explain how facts and values are entangled within the Aristotelian tradition: "The presupposition of this use of 'good' is that every type of item which it is appropriate to call good or bad – including persons and actions – has, as a matter of fact, some given specific purpose or function. To call something good is therefore to make a factual statement."¹⁵⁴ Calling something good, according to this thesis, calls for much empirical knowledge. It is senseless to speak of a good man or good human actions without having an idea of what human *telos* is. The notion of *telos* is a case of entanglement of empirical knowledge and moral understanding.

MacIntyre and Putnam provide two examples of an explicit challenge to the fact/value distinction. Of course, the arguments of most philosophers that challenge the distinction go straight to the metaphysical question: "is 'fact' categorically different from 'value'?", and their major concern is the validity of moral claims. However, the fact/value

¹⁵² Alasdair MacIntyre, *After Virtue*, 58-59.

¹⁵³ *Ibid.*, 58.

¹⁵⁴ *Ibid.*, 59.

(or is/ought, naturalistic fallacy, etc.) controversy casts a light on the status of empirical knowledge in ethics from another point of view. If we make a distinction between moral theory and its application, probably any ethicist will agree on the necessity of empirical knowledge to application. Insisting on the role of empirical knowledge in the theory itself may prove more controversial, but the relevant questions are not easy to dismiss: could moral theories really be abstracted from the actual world? And more specifically: are moral theories not about actual entities? Were they not formed in accordance with empirical knowledge of these entities' characteristics? And were they not formed in light of actual problems?

Applying for human properties, as virtue ethicists do, is a matter of knowing what humans are like as a matter of fact. So is reason or rationality for deontologists, or pleasure and pain for consequentialists. Take, for example, Bentham's opening sentences in *An Introduction to the Principles of Morals and Legislation*:

"Nature has placed mankind under the governance of two sovereign masters, *pain* and *pleasure*. It is for them alone to point out what we ought to do, as well as to determine what we shall do. On the one hand the standard of right and wrong, on the other the chain of causes and effects, are fastened to their throne."¹⁵⁵

Logically speaking, the facts of pain and pleasure do not necessarily entail Bentham's conceptions of right and wrong. The pain/wrong connection and the pleasure/right connection are moral claims that go beyond the mere facts, as the logical possibility of pleasure/wrong may demonstrate (this possibility is also evidently actual, e.g. sexual pleasure among some conservative Catholics). But the point is that Bentham's utilitarianism is fundamentally meaningless without empirical knowledge on pain and pleasure. This is what the moral theory is all about. Imagine an intelligent entity that

¹⁵⁵ Bentham, *Introduction to the Principles of Morals*, chap. 1, sec. 1., p. 1.

knows nothing about pain (or more broadly, suffering) and pleasure, but does have a sense of justice – what sense would utilitarianism make for such an entity? It would be a pointless system, with an emphasis on arbitrary concepts. It seems that establishing a moral theory that relies on the concepts of suffering and pleasure requires: (a) knowing which traits (behavioural, psychological, physiological) are connected with such experiences; (b) knowing what kind of external circumstances tend to cause such experiences; (c) possibly, knowing what is it like to have such experiences. Utilitarianism makes sense only when one has the knowledge about actual aversion from suffering and attraction to pleasure. Furthermore, this theory is susceptible to criticism because actual cases of attraction to some sufferings and aversions from some enjoyments are well-known. Yet this contradiction does not interfere with the status of suffering and pleasure in this theory: these feelings are *morally-laden facts*, and in that sense they are mediating terms between facts and values. This assertion does not necessarily imply a unity between facts and values; the occurrence of suffering is a fact, whereas its moral value may still be regarded as conceptually distinct.

Beyond the analytic accounts of basic utilitarian concepts, there is a question of the cultural circumstances in which this theory has emerged and developed. A crucial point in the appeal to suffering and pleasure is its indifference to the identity of the suffering/pleasuring party. In a culture where moral interest is distributed selectively, this non-selective criterion is inevitably radical by its logical calling for moral attention to the socially weak and even speechless sufferers. The radicalism in such a level of impartiality is an empirical, social fact; it is well-known to the theorizer, and this knowledge is embedded in the theory. Of course, human beings are just one small group among other

beings who experience suffering and pleasure – a fact that was briefly acknowledged by Bentham himself in a footnote that became the most wildly cited passage in animalist theory.¹⁵⁶ (Admittedly, neither Bentham nor Mill were much interested in the threshold conditions for moral standing, but rather in familiar experiences of people around them. In other words, they had their range of moral interest and empirical knowledge. It has been Peter Singer's broader moral interest and the facts that he learned about factory farming and vivisection that brought the problem of threshold into the forefront of utilitarianism.)¹⁵⁷

Utilitarianism's appeal to known empirical facts is certainly not unique. The same is true for any moral theory, since moral theorizing is meaningless without applying to actual objects. There is no sense in speaking of a moral theory in a world that contains nothing but a solipsist theorizing mind; moral theories constitute their meaning only when considering the relations between some entities. Proponents of consequentialist and deontological moral theories must rely heavily on what they know about the world of the affected parties, while proponents of virtue ethics and ethics of care explicitly emphasize their empirical assumptions on the character of moral agents. All moral theories relate to a wide range of empirical problem. Yet it is also a limited range: limited by the autonomy of the individuals who deserve moral standing, by their rationality, by their sentience or even by their naturalness in general; or rather by the moral interest of the virtuous or compassionate person. Even the most broad-ranged theories put their limits on the empirical world. In that sense, any moral theory is a system of inclusion and exclusion, determined by agents who know the world they live in.

¹⁵⁶ *Ibid.*, chap. 17, sec. 1, n122.

¹⁵⁷ Singer, *Animal Liberation*, rev. ed., chap 1; DeGrazia: *Taking Animals Seriously*, 36-44.

3.3. Factual grounds in ethics – issues of application

I believe that some substantial connections between morality and empirical knowledge could be acknowledged by almost any moral philosopher. The major uncontroversial claims are commonly classified as matters of application. The use of the term "application" is somewhat awkward here because it may be interpreted as "application of principles", as if ethics is necessarily a fixed set of general principles that may be applied to particular cases. My claims, however, are more far-reaching, and they are valid just as well to other approaches in moral philosophy, such as moral particularism and virtue ethics. So by "application" I do refer to moral or ethical reaction to actual, particular cases in the real world, but this reaction is not necessarily derived from the rational use of principles. Similarly, speaking about "moral judgement" in the present context may be read too narrowly, as referring only to rational acts of following principles of justice. Again, my intention is broader, covering also particularist and emotion-oriented approaches to moral philosophy.¹⁵⁸

The claims that I believe to be acceptable to a wide range of moral philosophers are in fact psycho-social rather than philosophical, regarding moral consideration as an actual activity. The subject may be summed-up in five consecutive claims:

- a. Moral judgements relate to empirical situations and beings, since any situation under moral consideration has been recognized through experience – either through direct experience or through imagining a real situation. Speaking about the moral judgement of situations that cannot be known through direct or imaginary experience is

¹⁵⁸ Speaking of "empirical knowledge" in this context may also be understood too narrowly, as if empirical knowledge in this context is fully explicit, well-defined and objective, while in fact making a moral judgement in a broad sense may be understood as a practice that requires loosely defined details that emerge from particular experience. Compare: Tanner et al., "Phenomenology of Knowing the Patient." See also: Richard MacIntyre, "Nursing Loved Ones with Aids."

meaningless (e.g. situations concerning abstract concepts, or relations between transcendental beings). Relating to empirical situations and beings requires some knowledge of them, and in that respect empirical knowledge is inseparable from moral judgement. Even if one insists that moral reflection and moral understanding are conceptually distinct from empirical inquiry and empirical knowledge, the act of moral judgement necessarily combines both the moral and the empirical. This simple observation is the core of my claim for an moral judgement / empirical knowledge connection.

- b. If moral judgements are about something, the moral agent must know what it is; this knowledge is essential for the application of any ethical principle, for developing specific moral sentiments, or for the specific expression of virtues (whether or not there is a moral aspect distinct from empirical knowledge). If some relevant knowledge is missing or false, the judgement is undependable. Any judgement that does not take all the relevant facts into consideration is arbitrary or speculative. Therefore such judgement cannot be trusted as valid.
- c. If empirical knowledge is necessary for dependable moral judgement, then the essential process leading to moral judgement must include a pursuit of the relevant knowledge. Sometimes the pursuit may require no intentional active effort since enough relevant information has allegedly been acquired throughout the normal course of life, e.g.: when considering my own familiar interests. Some circumstances, however, require an active pursuit of information, since the mere information one may have when initiating judgement is likely to be insufficient. That is the case, for example, when considering the interests of some distant, barely familiar subjects, or

when much of the information on the subjects has been distributed by a hostile party. The moral agent must therefore be alert to such circumstances and meet them with an active examination of the available relevant information, attempting to identify unreliable or missing information, and search further for the missing information. Hence, moral judgement cannot be accomplished without the identification and pursuit of relevant information. This is true even when the moral and the empirical are considered as conceptually distinct.

- d. If the process of moral judgement includes a pursuit of relevant information, than it should also include reflection on the limitations of that pursuit. An effort to acquire the relevant knowledge does not necessarily ensure satisfying results. A great variety of technicalities and circumstances may impede any reasonable acquirement of information, leading to an apparent failure in attaining valid moral judgement. Such failure may be inevitable regardless of how virtuous, rational, impartial or compassionate the moral agent is. Thus moral judgement is incomplete without alertness regarding problems in the process (once again, whether such reflection is distinct from moral judgement or not, the latter cannot be accomplished without the former). The results of the reflection may vary: sometimes the moral agent may conclude that the problems are manageable with some effort; sometimes the reflection may lead to admit that the necessary information is beyond reach and therefore *valid moral judgement is impossible*. More subtly, reflection may bring about attempts to *change the circumstances that interfere with attaining the necessary information*. Admitting that the change must be deep, continuous, communal, etc. – a reassessment in the future is a part of this process.

e. This entire process involves a reciprocal connection between facts and values. Deciding whether enough information is available for moral judgement, the moral agent relies on preconceptions about what kind of information should be regarded as morally-relevant, and about what specific information qualifies as "enough". Similarly, reflecting on one's limitations in the pursuit of information, the agent has to judge which conditions qualify as "limitations", and how important these limitations are. In conclusion, when ethicists ignore the essential role of information and the crucial role of the capability to get the information, they promote a naïve and unreliable conception of moral consideration. Reflecting on these issues actively helps to confront some substantial obstacles and possibly overcome them. But it cannot guarantee valid moral judgement.

Behind this succession of claims lies the assumption that any activity, which is somehow relevant to moral or ethical views and judgements, is necessarily conducted within a biological, psychological, social and historical reality. Whether or not we can claim for a morally pure zone within the entire activity is insignificant, in this perspective, since such an allegedly pure zone is but a mere part of the whole activity. The application of moral theories and moral sentiments or virtues – possibly as well as the choice of a moral approach and the emphases and arguments within that approach – necessarily involves empirical questions and therefore it requires empirical knowledge.

What kind of information should be sought when considering a moral issue? Or more specifically, when making an interspecific moral judgement? This is a difficult question to answer regarding morality in general, since the answers vary according to different moral theories or approaches. The most general claim one can make about the required

information is that ethics examines and guides the relations among actual entities. In other words, some seemingly related issues remain beyond ethics: the relation between undefined objects, the relations between immaterial objects, or the fate of a single entity with no relation to another entity, etc. Therefore the application of any moral approach requires information about:

- (a) morally-relevant characteristics of the relevant entities;
- (b) the relation between the relevant entities in terms of their mutual morally-relevant influences;
- (c) influential morally-relevant factors that lie beyond the influence of the parties involved (environmental factors); and
- (d) the specific morally-relevant results of all these conditions and circumstances for the entities in question.

I will explain this scheme in more details; but first, it should be stressed that it is a mere general scheme that cannot be elaborated into a finite list of morally-relevant factual details that should be considered in moral reflection, since the list of possible details is infinite. Furthermore, the scheme is too vague because different approaches to morality call for different factual details. For example, if being alive is considered morally significant in itself (e.g.: in Jainism)¹⁵⁹ then the search for morally-relevant empirical information should include a check list of all the living organisms that are involved in the situation in question, an account of life threats to any of them by another, and finally an account of whether the organisms end up alive or dead as a result of the relationship in question. These informational details are roughly consistent with Jainist ethics. However, from a point of view of a moral theory that regards sentience as morally crucial, asking if

¹⁵⁹ Glasenapp, *Jainism*, 227-232.

some organism ends up dead or alive is not enough: the moral principles require information about what the organism feels. Furthermore, in some sentience-oriented theories (e.g.: utilitarianism)¹⁶⁰ life is not a sufficient condition for moral standing, and therefore information regarding non-sentient organisms is excessive. We can draw the examples further to theories that regard self-consciousness, autonomy or rational agency as the necessary condition for moral standing (e.g.: Hobbesian contractarianism);¹⁶¹ here information about most sentient entities is considered excessive, while specific details about the remaining entities gain extra importance (e.g., influencing another person in ways that defy agency).

The demand for empirical knowledge prevails in any attempt to put any of these or other moral approaches into practice, but working on such a generalized level becomes a burden when focusing on interspecific issues, since it is not clear which information is relevant. For the sake of convenience, let us assume that sentience is a necessary and sufficient condition for moral standing, although not necessarily exclusive. Establishing this assumption is perhaps the major challenge in the discourse of interspecific ethics, and due to lack of space I do not intend to summarize the entire discourse.¹⁶² Generally speaking, philosophers who promote this approach believe that ascribing moral significance to sentience (or to simple mental states that are related to sentience, such as suffering) is one of the commonest and deepest moral intuitions across various moralities, and therefore excluding some sentient beings from morality is incoherent with a wide range of moral attitudes. The argument from critical tradition, which I promote in the

¹⁶⁰ Singer, *Animal Liberation*, rev. ed., 7-22.

¹⁶¹ Narveson, *The Libertarian Idea*, 135-139.

¹⁶² For useful reviews of the discourse, see: DeGrazia, *Taking Animals Seriously*: especially chaps. 1 and 3; DeGrazia, "Animal Ethics Around the Turn of the Century;" Robert Garner, *Animal Ethics*, (Cambridge: Polity Press, 2005).

present dissertation, exposes the practical and ideological forces behind excluding some sentient organisms from the circle of moral interest. The appeal to sentience expands the range of information that should be classified as morally-relevant – compared to anthropocentric moral approaches. Contrarily, it also limits the range of information by excluding non-sentient beings (e.g.: plants) from the group of morally significant entities.¹⁶³

Going back to the first item in the list of informational requirements for moral consideration, the question is: what are "*morally-relevant characteristics of the relevant entities*" – if all sentient beings deserve at least some moral attention? Apparently, these characteristics include enduring traits, innate inclinations, or the nature of the entity – traits that do not depend on a specific situation, but instead set the predicted limits of the entity's reactions to various situations. For example, if we learn that a swallow has an urge to migrate, we can predict resistance if her movement is blocked.¹⁶⁴ The acknowledgment of the migration urge must precede any analysis of a specific movement restriction on the swallow; without acknowledging the innate inclination, we are liable to misunderstand the swallow's behaviour and emotions when she encounters an obstacle.

Of course, not any characteristic is relevant to moral issues. Morally-relevant traits vary among various moral approaches. From a point of view that regards sentience as the threshold for moral standing, mental traits, and especially emotional ones, are apparently relevant to moral considerations. However, physical traits may be just as relevant: for

¹⁶³ Admittedly, the arguments for excluding non-sentient beings are somewhat circular: these beings know no aversive states, they have no welfare, they don't know and don't care, etc. – all these claims depend on concepts that may be defined by concepts synonymous to sentience. The basic argument remains that the significance of sentience as a threshold trait for moral standing is deeply intuitive. See: DeGrazia, *Taking Animals Seriously*, 226-231.

¹⁶⁴ This reaction has long been a subject to research on migratory birds in captivity, but without welfare or ethical interest, e.g.: Giunchi and Baldaccini, "Orientation Experiments with Barn Swallows."

example, if someone is allergic to dust, then he is likely to feel ill if exposed to dust and therefore this trait should be taken into moral consideration when considering sending people to work in a warehouse. In a word, the issue is *vulnerabilities*. If sentience is the core of morality, then the important vulnerabilities are traits that may allow suffering – i.e. the ability to feel fear, pain, anxiety, frustration, boredom, etc. (Similarly, if the core of morality is autonomous agency, then the important vulnerabilities are traits that threat autonomy – an inclination for addiction, for emotional dependence, for false consciousness, etc.).

Assuming that at least one of the parties involved in the moral issue under consideration should be a moral agent (as I will soon explain) the traits that characterize *moral agency* are also among the factual details that should be regarded in moral judgement. Considering whether an issue is moral or not, we should make sure that at least one of the parties could be regarded as a moral agent, or morally responsible,¹⁶⁵ or accountable, or appraisable. The relevant terminologies, definitions and associated traits vary across different approaches to moral philosophy. Indeed, the core of the philosophical debate on the matter is about the very possibility of choice – free will vs. determinism. But once it is agreed that free will is possible, moral agency (or moral responsibility, etc.) becomes possible as well. Here most philosophers would agree that moral agency (etc.) has to do with the capability to choose whether to act one way or

¹⁶⁵ Using the term "responsibility" may be associated with doubts about moral responsibility to moral patients, since much of the discourse on moral responsibility has been influenced by Strawson's "Freedom and Resentment. Strawson has focused on "participant reactive attitudes," that is, on close relations between moral agents. I find Strawson's focus on reciprocal relations much too narrow. Non-reciprocal relations – between normal human adults and children, weak and dependent adults, nonhuman animals, or distant subjects who are affected by our actions – are no less common and no less important in our lives than fully reciprocal relations, and responsibility is no less central to them. The focus on reciprocity between moral agents has the faults of contractarianism; see: Kittay, *Love's Labor*, chaps 1-3; DeGrazia, *Taking Animals Seriously*, 45-46, 52-56; Nussbaum, *Frontiers of Justice*.

another when confronted with a morally-laden situation, assuming that the process of choosing involves moral considerations and/or sentiments.¹⁶⁶

This is still quite vague. Some theorists focus this broad view into a narrow concept of moral agency, which applies only to a rather limited part of humanity. Kant is a remarkable example: he portrayed the moral agent as an autonomous rational agent, a free-willed author and at the same time a subject of the moral law, that is, a universal moral law.¹⁶⁷ According to this approach, the relation between young children, for example, is irrelevant to moral scrutiny, and consequentially empirical knowledge of such relations bears no moral meaning. What factual details we should look for when considering whether a moral agent is involved in a relationship is relatively clear, following the definition of the moral agent: a possessor of autonomous agency, with full capacity to consider, choose and justify morally-relevant actions in relation to universal moral principles.

In some views, however, such a strict conception of moral agency is too narrow and detached from reality, as well as biased towards specific moral experiences (see section 1.3.). In brief, various authors base moral agency or moral responsibility, etc., on various traits and inclinations other than reason, and they acknowledge the effect of various circumstances on moral agency. They also do not regard moral agency as a simple “either/or” attribute. An entity may be held morally responsible in some cases

¹⁶⁶ Some examples: Aristotle, *Nicomachean Ethics*, bk. 3, chaps. 1-5, pp. 1752-1760; Wallace, *Responsibility and the Moral Sentiments*, especially chap. 3; Wallace, "Responsibility and the Practical Point of View;" Fischer, "Responsiveness and Moral Responsibility;" Nagel, *View From Nowhere*, chap. 7; Haji, *Moral Appraisability*, "; Meyers, "Agency." Notably, opinions on moral agency and responsibility are prevalent beyond the West: Framarin, *Desire and Motivation in Indian Philosophy*; Perrett, *Hindu Ethics*, chap. 2; Kline and Ivanhoe, *Virtue, Nature, and Moral Agency*, especially chaps. 4, 5, 7, 11; Shun and Wong, *Confucian Ethics*, especially chaps. 5, 6, 8, 9.

¹⁶⁷ Kant, *Groundwork*, sec. 2, pp. 81-84, (4:431-434). See also: Reath, *Agency and Autonomy in Kant's Moral Theory*, chap. 5.

without extending the responsibility to any structurally similar case, since the capacity to know good and evil has much to do with localised education, habits and attachments, as well as emotions such as care, sympathy, love, trust and loyalty, or revulsion, contempt and revengefulness – rather than with universalised principles. For example, a young child may be held morally responsible for hitting his brother because he knows he did wrong, even if he is not likely to preserve this sense of right and wrong in an unfamiliar social environment, and assuming that he cannot provide a universalised account of his offence.

Furthermore, it has been noted that moral agency works in many levels of the personality, some conscious but some unconscious, and the ethical decision could emerge against one's conscious, rational deliberation. Acknowledging this fact raises doubts whether the important traits of "moral agency" are autonomous deliberate moral sense, or rather an overall virtuousness that has no single and simple route of expression.¹⁶⁸

Another problematization arises from the common attribution of moral responsibility to non-individuals: corporations and managements, states and governments, communities, etc. The use of individualistic, psychologistic terminology is noticeably awkward here, and the issue calls for an analysis in other terms, such as the division of labour and communication within the group in question, the social role of the group within the entire society, and the conceptions of communal boundaries.¹⁶⁹

A further prominent problematization evolves from the idea of moral agency as a developing capability. Thinking about moral agency (and moral responsibility, moral

¹⁶⁸ Arpaly, *Unprincipled Virtue*. See also: Adams, "Involuntary Sins."

¹⁶⁹ Smiley, *Moral Responsibility and the Boundaries of Community*; Geoff Moore, "Corporate Moral Agency;" Kovach, "Genocide and the Moral Agency of Ethnic Groups;" DeWinter, "The Anti-Sweatshop Movement. Concepts of moral agency as communal are very useful also in descriptive ethics, e.g., Jakobsen, *Working Alliances and the Politics of Difference*, chap. 1.

sensitivity, moral responsiveness, etc.) in developmental terms blurs the boundaries of moral agency, while various, rather early stages of the development are defined as possible candidates for "moral agency". Notably, the conceptualization of morality as a matter of development is much elaborated in some scientific disciplines, and especially in psychology. From an ethical of moral point of view, the definition of "moral agency" and the definition and relevance of other moral capabilities is evidently a matter of moral philosophy rather than empirical account. However, the fast-evolving scientific conceptualization may inspire moral philosophers to redefine aspects of moral agency: look for more context-related definitions, and lower the threshold for moral agency or responsibility, etc. Additionally, the scientific account on moral agency seems promising in the present context, since based on some moral preconceptions it offers a description of the real boundaries of moral agency.

Ever since Piaget's early work,¹⁷⁰ the psychological research on moral development has produced a muddle of psychological and ethical conceptualization on moral capacities. Notably, younger children have demonstrated impressive moral understanding, judgement and potential responsibility.¹⁷¹ Psychoanalysis has also made some contribution to the subject.¹⁷² Furthermore, observations on nonhuman (mostly primate) societies have broadened the discourse with further attempts to pinpoint the foundations of morality, focusing on capabilities such as reciprocal altruism, attachment,

¹⁷⁰ Piaget, *The Moral Judgement of the Child*.

¹⁷¹ Turiel, *Development of Social Knowledge*; Kagan and Lamb, *Emergence of Morality in Young Children*; Killen and Smetana, *Handbook of Moral Development*, especially chaps. 2, 9, 10, 12, 19.

¹⁷² Noam and Wren, *The Moral Self*; Deigh, *The Sources of Moral Agency*.

authority ranking, or postconflict consolation.¹⁷³ This is a contemporary attempt to summarize the complex inventory of factual details that facilitate moral capacities:

"To a large extent, most current theories acknowledge that morality encompasses cognition and judgement, emotion and biology. Furthermore, most theories examine the contribution of diverse social relationships on the acquisition of morality, including the family (parents and siblings), peer relationships (including a wide range of friends, nonfriends, acquaintances), and nonfamiliar adults. And, most theories view morality as developing from early childhood through adolescence or young adulthood, rather than as occurring either in early childhood or in late adolescence."¹⁷⁴

Even the Kantian model of moral agency is not clear-cut and possibly less demanding when considering it in developmental terms. Psychologist Lawrence Kohlberg is famous for his theory of moral development, which sets the Kantian moral agent at the sixth, highest stage of development.¹⁷⁵ Nevertheless, we may recognise essential moral capabilities in stages earlier than the sixth, in which moral decisions are based on abstract reasoning using universal moral principles. A person may be plausibly held morally responsible also when she is capable of conceiving right and wrong in terms of a social contract that respects individual rights ("stage 5"). Even "conventional morality", that is, the capability to maintain good interpersonal relationships or maintaining the social order ("stages 3-4") could be accounted for as a demonstration of moral agency.

Criticising Kohlberg's theory, Carol Gilligan presents a different account of moral development, which is allegedly feminine.¹⁷⁶ Her conceptualization is entwined in her empirical research, yet the result is a novel ethical attitude to moral agency. In Gilligan's

¹⁷³ Verbeek, "Primate Moral Roots;" De Waal, *Good Natured*; Rottschaefer, *The Biology and Psychology of Moral Agency*.

¹⁷³ Killen and Smetana, *Handbook of Moral Development*, 3.

¹⁷⁴ *Ibid.*

¹⁷⁵ Kohlberg, *Essays on Moral Development*, vol. 1.

¹⁷⁶ Gilligan, *In a Different Voice*. The female/male dichotomy of the different moralities has been criticized by authors such as: Tavis, *The Mismeasure of Woman*. For a philosophical analysis of the Gilligan/Kohlberg debate, see: Blum, "Gilligan and Kohlberg: Implications for Moral Theory."

view, the moral development is marked by the emergence of an ability to care for others and having a sense of responsibility to give them what they need or want – especially defenseless or dependent others. The highest level of moral development occurs when a person learns to take responsibility for her choices, see the true consequences of them and extend non-violence and care to herself as well as to others. Apparently, the factual details we should look for when considering whether a moral agent is involved in a relationship are very different if we follow Gilligan's higher stages rather than Kohlberg's (or in addition to it).

The above discussion does not offer a list of the morally-relevant characteristics of the relevant entities when considering a moral problem. Such a list is in any case beyond reach in the actual world and the infinite variety of particular cases. If, however, we expected to draw loose outlines of the boundaries of the community of moral patients and the community of moral agents, it seems that the outlines remain too loose because they are theory-dependent to a great degree. Outlining the first group is one of the major missions in animal rights philosophical literature, and therefore the problems and alleged solutions are relatively well-defined. Nevertheless, the second group did not raise much interest in this context, and the picture seems more confusing. Indeed, some philosophers have addressed the issue generally through the concepts of care and virtue,¹⁷⁷ and others have explored other boundaries of moral agency, such as autism, insanity and artificial intelligence;¹⁷⁸ in other words, normal adult humans are by no means moral agents, but the boundaries of normality, adulthood and humanity are debatable. In the context of interspecific ethics, however, maybe the most important issues to be considered when

¹⁷⁷ Donovan and Adams, *Beyond Animal Rights*; Sapontzis, *Morals, Reason, and Animals*, 90-96.

¹⁷⁸ Elliott, *The Rules of Insanity*, chap. 2.; Kennett, "Autism, Empathy and Moral Agency;" Allen, Varner and Zinser, "Prolegomena to Any Future Artificial Moral Agent."

looking whether a situation is moral have to do with the moral responsibility of consumers. These issues call for an account of communal responsibility, commodification, and geographical and social distance between the alleged agent and the affected party.¹⁷⁹

Wondering what kind of information should be sought when considering a moral issue, the second group of morally-relevant factual details relates to *the relation between the relevant entities in terms of their mutual influences*. As I have suggested above, some of this information relates to the moral nature of the relation: at least one of the parties involved should be a moral agent (or could be held morally responsible, etc.) while the other a moral patient. Otherwise, the issue at hand is amoral. Since a bottle, for example, does not matter morally according to probably any approach to morality, any action performed on it by a moral agent has no moral meaning – unless the action on the bottle affects some entity that does matter morally. Misfortunate natural events, as harmful as they are to any vulnerable entity, carry no moral meaning in themselves. They just occur, presumably without anyone being responsible for them (yet if you believe that God is responsible, they do bear moral meaning). Without a moral agent that can be held responsible, and a potentially affected moral patient – there is no moral meaning. Certainly, this is only an analytic, abstract account. In reality, natural conditions, and especially natural disasters, tend to be harmful very much due to human behaviour and

¹⁷⁹ Sayer, "(De)commodification, Consumer Culture, and Moral Economy;" Barnett et al. "Consuming Ethics;"; Barnett, Cafaro and Newholm, "Philosophy and Ethical Consumption."

social order – a fact that is commonly acknowledged by those who deal with disaster relief.¹⁸⁰

Beyond that, in case none of the entities involved in the relationship could be held morally responsible, empirical knowledge about these entities is irrelevant to moral consideration. Yet it should be stressed that even when only one of the parties could be held morally responsible, moral considerations require empirical knowledge of the *mutual* influences between *both* parties, since the threatening, damaging or pleasing behaviour of any of the parties influences the well-being of the other party, whether the party is merely vulnerable (moral patient) or capable of moral considerations (moral agent).

Not anything that a party is or does is likely to matter in this context. The information that should be sought when considering a moral issue has to do only with morally-relevant influence on the other party – causing the other party to be better off or worse off. In most approaches to morality, it means influencing the well-being of the other party: enhancing or decreasing happiness, pleasure, satisfaction or as sense of security; enhancing or decreasing fear, depression, pain, anxiety, boredom, despair or frustration; causing advancement or regression of self-fulfillment in terms of desires, dreams, telos or potential. Thus the fact that a man spends long working days away from home is likely to be a morally-relevant fact concerning his companion dog, unlike the fact that he writes poems about the dog; similarly, the fact that the dog tends to chew shoes is likely to be morally-relevant, while his love for the smell of the man's cloths is not. It is not only intentional actions that could be counted as morally-relevant, but also

¹⁸⁰ Etkin and Stefanovic, "Mitigating Natural Disasters." There are also attempts to define categories that do not follow the moral agent / nature dichotomy, e.g.: Floridi and Sanders, "Artificial Evil and the Foundation of Computer Ethics."

unintentional actions, latent tendencies with no recorded action, and natural bodily qualities – as long as they are likely to affect the well-being of the other party. A human being, for example, is dangerous to most birds due to its sheer size, even if the human in question has never demonstrated any aggression towards birds. Actual as well as potential harms and benefits are the facts that should be accounted for.¹⁸¹

A third group of morally-relevant factual details relates to influential factors that lie *beyond the influence of the parties involved* – external factors that limit and shape the mutual influence of the parties involved. Again, not any factor matters in this context, and the information that should be sought when considering a moral issue has to do only with factors that influence at least one of the parties involved in terms of prospects for being better off or worse off. These factors include non-animate environmental conditions as well as social environmental conditions, including the intentional behaviour of agents who are not involved in the moral issue under consideration. Thus assessing a surgeon's moral responsibility for patients must include an account of the available technology and the conditions in the hospital, as well as the policy and decisions made by authorities at the hospital and possibly at the national health system.

All these circumstantial conditions lead to a fourth group of morally-relevant factual details: *the condition of the parties involved in the specific situation under consideration and their reactions to it*. Knowledge of the vulnerabilities of the parties involved, the relation between them and any other morally-relevant influential factor – is

¹⁸¹ The issue is admittedly more complex since unintentional actions, latent tendencies and bodily qualities of a moral agent are allegedly beyond her agency and in that sense they are no different than other natural elements. I believe that these elements should be regarded as amoral only if the agent cannot control their effect on others. In the human/bird illustration, for example, the human can control her behaviour around birds in order to avoid frightening and physically harming them, but sometimes her efforts would fail. The failure marks the boundary between the domain of moral responsibility and the amoral domain, yet the boundary is unclear since it depends on a debatable definition of the morally-necessary effort that the agent must make.

not enough for a comprehensive ethical account on the situation. All these factors are normally far too general to allow predictions of the parties' reactions to a specific situation. Nevertheless, some relevant, specific details are relatively accessible through observation. Observing any of the individuals who are involved in the situation at hand, we can learn whether she has fulfilled or failed to fulfil some of her constant inclinations and potentials, which could be described in terms of telos, instinct, vocation, social role, etc. Observation can reveal whether or not she is flourishing in terms of health and physical shape, as well as career, family life, social status, etc. All these details may be important, morally-relevant details, especially in moral systems that emphasise the significance of a good life, as well as basic rights and duties.

However, some important, morally-relevant information about the condition of the parties involved is essentially less accessible. The difficulty is in factual details about the parties' experiences: their fear, pain, joy, etc. This kind of information is the particular content of other minds, so the required information is not publicly observed. It should rather be deduced, following clues such as verbal expression, non-verbal communication and other gestures and physical reactions, as well as circumstantial evidences. Despite the difficulties, this kind of information matters probably in any approach to morality. Furthermore, it is central, or even exclusive, to moral approaches that ascribes central significance to sentience.

3.4. Moral grounds in empirical inquiry

So far I have focused on the expansion of the moral discourse into the domain of factual issues rather than the other way around. The connection between morality and empirical

knowledge, however, could be viewed with a focus on the latter. From this point of view, I believe that the most important question is whether empirical knowledge is morally-neutral data awaiting its objective perception, recording and understanding, or is it rather formulated subjectively in light of various contexts that may carry moral significance. This question surely has numerous versions that have played a central role in the philosophy of science. The issue here is examining two aspects of empirical knowledge, or more narrowly, two aspects of science, and concluding how these aspects interact with each other, if they do so at all. And more specifically, in the context of the present dissertation: if the realm of empirical knowledge is indeed morally-laden, it is important to look at various fields of knowledge and see whether moral issues play a different role in different areas of interest.

The idea that the sciences are value-free in general has a long history. The philosopher Hugh Lacey traces the origins of the idea as early as the 1620s.¹⁸² The metaphysical distinction between the two spheres originated in Galileo. In this view, the entire physical world "is fully characterizable and explicable in terms of 'its underlying order' – its underlying structures, processes and laws. All objects belonging to the underlying order can be fully characterized in quantitative terms; all interactions are lawful; and the laws (not necessarily deterministic) are expressible in mathematical equations. Such objects are not construed as objects of value."¹⁸³ An old epistemological and methodical distinction between science and values prevails as well, this one originated in Bacon. The contemporary version to the Baconian distinction, Lacey explains, holds that we gain access to the world through experience and interventions –

¹⁸² Lacey, *Is Science Value Free?*, chap. 1.

¹⁸³ *Ibid.*, 2.

interventions that do affect the world (and experiments are the recommended form of intervention) but our influence is limited according to the world's possibilities. Sound scientific knowledge relies on replicability and agreement, and "Only what is observed, especially in experimental settings, and certified by replication and agreement – independently of our desires, value perspectives, cultural and institutional norms and presuppositions, expedient alliances and their interests – can properly serve as evidence for scientific posits and for choosing among scientific theories."¹⁸⁴

The dissociation of moral considerations from science has taken various forms throughout the centuries and has flourished in the first half of the 20th century. For example, Henri Poincaré, asserting that both scientific truth and moral truth have a similar psychological function, added:

"If we ought not to fear moral truth, still less should we dread scientific truth. In the first place it cannot conflict with ethics. Ethics and science have their own domains, which touch but do not interpenetrate. The one shows us to what goal we should aspire, the other, given the goal, teaches us how to attain it. So they never conflict since they never meet. There can be no more immoral science than there can be scientific morals."¹⁸⁵

The dissociation has reached its peak under the influence of logical empiricism / logical positivism. One significant form of the dissociation could be found in the distinction between the context of discovery and the context of justification. Schickore and Steinle describe its historical heyday:

"The distinction is usually tracked back to Hans Reichenbach's *Experience and Prediction*.¹⁸⁶ In this work, Reichenbach claimed that the context of justification is the only part of scientific practice that is epistemologically relevant and open to philosophical – which, in the perspective of Logical Empiricism, means of course: logical – reconstructions. Thus understood, the distinction delineates the scope of philosophy of science – the justification of

¹⁸⁴ *Ibid.*

¹⁸⁵ Poincaré, "The Value of Science," 90.

¹⁸⁶ Reichenbach, *Experience and Prediction*.

fully developed theories – and at the same time shapes its method, logical analysis. Since then, the distinction has served two important, related purposes. First, it has been used to demarcate philosophy of science proper from historical, political, sociological and other empirical approaches to science."¹⁸⁷

One aspect of this trend is the demarcation of moral considerations from scientific content. Schickore and Steinle stress that the discovery/justification distinction "dominated philosophical debates from the early decades of the twentieth century to the 1980s. In recent years, the distinction has vanished from philosophers' official agenda. However, even though it is rarely addressed explicitly, it still informs our conception of the content, domain, and goals of philosophy of science."¹⁸⁸ The distinction remained influential despite extensive criticism. Moreover, some aspects of the distinction remained virtually unchallenged, that is, as Hoyningen-Huene puts it,

"an abstract distinction between the factual on the one hand, and the normative or evaluative on the other hand. [...] From the descriptive perspective, I am interested in facts that have happened, and their description. [...] From the normative or evaluative perspective, I am interested in an evaluation of particular claims. In our case, epistemic claims, for instance for truth, or reproducibility, or intersubjective acceptability, or plausibility, and the like are pertinent. Epistemic norms (in contrast to, say, moral or aesthetic norms) govern this evaluation."¹⁸⁹

Some critique of the distinction allowed more space to moral considerations. Some critics have claimed that there is rationality in scientific discoveries and therefore it is a proper subject to philosophic scrutiny. Others challenged the distinction, claiming that discovery and justification are sometimes impossible to tell apart.¹⁹⁰ But the major discontent came from a socio-historical point of view, following Thomas Kuhn's *The Structure of*

¹⁸⁷ Schickore and Steinle, *Revisiting Discovery and Justification*, p. vii.

¹⁸⁸ *Ibid.*

¹⁸⁹ Hoyningen-Huene, "Context of Discovery versus Context of Justification," 128.

¹⁹⁰ Schickore and Steinle, *Revisiting Discovery and Justification*, pp. vii-ix.

Scientific Revolutions.¹⁹¹ Kuhn's analysis of normal science, of crisis in science and of scientific revolution enabled him to problematise the boundary between discovery and justification: he identified systematic rationality in "discovery", and opened "justification" to a non-rational process of examining similarity between new scientific ideas and consensual examples of good scientific research. The shared "disciplinary matrix" or "paradigm" within any specific scientific community goes beyond direct technical considerations of the scientific puzzle at hand; this allows some room for various influences, moral considerations included. Kuhn himself rarely addressed such "external" influences, but he did mention that facts about an individual scientist's life history, personality or even nationality and reputation may play a role in the choice of scientific ideas.¹⁹²

Kuhn marks a link between philosophy of science and socio-historical approaches to the study of science. Social historians, however, preceded Kuhn in examining external influences on science. Robert Merton's celebrated doctoral dissertation of 1938 demonstrates a Weberian thesis about a correlation between the Protestant ethos in 17th century England and the values of the emerging science of the time.¹⁹³ Merton presented "the Protestant ethics" as a strong new source of motivation, and added that "Its ascetic imperatives established a broad base for scientific inquiry. If the scientist had hitherto found the search for truth its own reward, he now had further grounds for disinterested zeal in this pursuit. And those once dubious of the merits of men who devoted themselves

¹⁹¹ Kuhn, *Structure of Scientific Revolutions*.

¹⁹² *Ibid.*, 152-3; Kuhn, *Studies in Scientific Tradition and Change*, 325.

¹⁹³ Merton, "Science, Technology and Society."

to investigation of the 'petty, insignificant details of a boundless nature' now confronted a developing rationale for such inquiry."¹⁹⁴

Sociologists and sociologically inclined historians of science, especially since the 1970s, have studied the production of scientific knowledge as social construction, taking into consideration all the factors that seem historically, socially and psychologically relevant to the acceptance or rejection of scientific ideas. The approaches of these scholars vary, as Helen Longino explains:

"Macro-analytic approaches, such as those associated with the so-called Strong Programme in the Sociology of Scientific Knowledge, treat social relations as an external, independent variable and scientific judgement and content as a dependent variable. Micro-analyses or laboratory studies, on the other hand, abjure the implied separation of social context and scientific practice and focus on the social relations within scientific research programs and communities and on those that bind research-productive and research-receptive communities together."¹⁹⁵

Sociologically inclined scholars of science may have not rejected the possibility and validity of a distinction between normative and descriptive elements in science, but they have rather deemed this distinction culturally uninteresting. Sandra Harding demonstrates such a tone of disillusioned weariness concerning the isolation of science from other cultural domains:

"Political and social interests are not 'add-ons' to the otherwise transcendental science that is inherently indifferent to human society; scientific beliefs, practices, institutions, histories, and problematics are constituted in and through contemporary political and social projects, and always have been. It would be far more startling to discover a kind of human knowledge-seeking whose products could – alone among all human products – defy historical 'gravity' and fly off the earth, escaping entirely their historical location. Such a cultural phenomenon would be cause for scientific

¹⁹⁴ Merton, "The Puritan Spur to Science," 228.

¹⁹⁵ Longino, "Social Dimensions of Scientific Knowledge," sec. 3.

alarm; it would appear to defy principles of 'material' causality upon which the possibility of scientific activity itself is based."¹⁹⁶

Once scholars accept the relevance of various "external" considerations in the development of science (in the "context of discovery", at least) much attention is directed at the patterns of influence between empirical knowledge and other cultural domains. Longino stresses that the Mertonian school of history and sociology of science focuses on social needs and cultural values as having an impact on the kinds of research undertaken, even before the establishment of a direct connection between general social goals and scientific research. Another type of influence involves the explicit policy decisions about the application of technological developments of scientific knowledge. And a third major type of interaction involves the potential conflict between moral values and specific ways of carrying out research. Such patterns of influence may be traced in scientific practices, in questions that are asked or ignored, in the selection of data and phenomena to be investigated, in the terms used for descriptions, and in the assumptions, both specific and general, which motivate the inferences in both specific and global areas of inquiry.¹⁹⁷ Without necessarily claiming that these elements interfere with the rationality of scientific claims or with the "context of justification", all these aspects of science (and empirical knowledge in general) are affected by contextual values, moral values included. This effect crystallizes, prevails and enhances along the course of scientific development, through the reproduction, communication and distribution of ideas and practices, or rather through their disregard, elimination and negligence.

The involvement of moral values in empirical knowledge – like the involvement of all other contextual values – depends largely on the complexity of the process of

¹⁹⁶ Harding, *Whose Science? Whose Knowledge?* 145.

¹⁹⁷ Longino, *Science as Social Knowledge*, 84-86.

establishing empirical knowledge. The process of establishing it is complicated due to numerous factors: a large amount of data or scarce data, inaccessibility of information or its dispersion through time or space, the dependence on material and intellectual tools to access information and process it, the time needed for collecting and processing specific types of information, the reliance on cooperation among people and institutions throughout the scientific process, and the division of labour according to various necessary skills. Now, the more difficult, prolonged or scattered a task is – the stronger are the motivations required to maintain it; and the larger the community involved is – the stronger is the benefit of widespread, uncontroversial motivations to uphold the task. Congruity with common habits, norms and values effectively arouses, preserves and reinforces motivation to take action. That is the moral background that contributes to the persistence of any complex process of establishing empirical knowledge.

Do some domains of inquiry call for a stronger involvement of contextual (and especially moral) values? Some values, in fact, seem to be fused in science as a whole. Merton's thesis concerns the involvement of the Protestant ethos in science in general. Feminist scholars have also referred to science in general when they claimed for a masculine bias in widespread scientific practices and values. The focus of such analyses is claims about knowledge as a medium of domination, the role of any specific social standpoint in the construction of knowledge, and the prevalence of specific cognitive values such as rationality and impartiality.¹⁹⁸ The claims are general, epistemological ones, applicable to any domain of empirical knowledge. Moreover, it seems that any

¹⁹⁸ Keller, *Reflections on Gender and Science*; Harding, *Science Question in Feminism*; Haraway, "Situated Knowledges;" Keller, *Secrets of Life, Secrets of Death*; Garry and Pearsall, *Women, Knowledge, and Reality*, chaps. 6, 10, 13-16. See also earlier analysis of science by the Frankfurt School: Horkheimer and Adorno, *Dialectic of Enlightenment*, especially chap. 1.

domain of empirical knowledge could sometimes have far-reaching implications on important social norms, and therefore it may carry moral meaning. Such implications could be expressed through the scientific potential to manipulate objects and hence to affect life, but also through symbolic meaning. Even cosmology, despite the remoteness of its objects, far away from the range of human manipulation, has had crucial religious meaning throughout history. Therefore, even if many scientific questions and procedures may seem purely technical and immune to external influences, such influences are likely to infiltrate other aspects of the process.

This analysis, however, may be refined by acknowledging differences among various empirical questions and scientific disciplines. Feminist scholars themselves imply that contextual values are not uniformly prevalent throughout science. Elizabeth Anderson presents concisely the kinds of knowledge that are often gendered and could therefore influence the propositional claims that people are disposed to form and accept, in science and beyond it: "phenomenological knowledge, de se knowledge, knowledge of persons, know-how, moral knowledge, knowledge informed by emotions, attitudes, and interests."¹⁹⁹ This list may be roughly applicable to any discipline, yet it is by far more relevant to social, historical, anthropological, cultural and zoological issues, as well as to other socially-relevant biological issues. Accordingly, such issues have attracted most of the critical attention. There is a large corpus of criticism on specific social-biological developments in science – most notably on the masculine study of women's nature and biology, and the white European/American study of non-European people's nature and biology. Critics target also the research on the nature and biology of men, the poor, homosexuals vs. straights, human psychology, human medical science, simian societies,

¹⁹⁹ Anderson, "Feminist Epistemology and Philosophy of Science," sec. 1.

nonhuman animal consciousness, and many more fields; much of this work is also feminist or anti-racist.²⁰⁰

All the critics share the view that in specific circumstances some information is considered worth pursuing more than some other information by a specific scientific community. This view does not deny that pure intellectual curiosity is a major force in science, directed by cognitive values that appeal to proponents of science as autonomous, e.g.: truthfulness, predictive accuracy, simplicity, unification, explanatory power, neutrality, impartiality and autonomy itself. However, non-cognitive, contextual values – moral values included – may also enter the scientific process. Sometimes the contradiction with scientific cognitive values is apparent, and so the critic exposes "bad science". In fact, most of the criticism, especially concerning specific scientific histories, implies "bad science". Yet despite the fact that exposing "external" influences could help to improve scientific practices, some degree of susceptibility to the influence of contextual values is unavoidable. Such values are among the motivations that institute and maintain the very scientific activity. Some topics of empirical study are met with relatively high alertness, sharp perception and fast and deep understanding, while other topics are ignored or misperceived. Research, and large scale research projects in particular, cannot be successfully carried out without finance, legal approval, relevant experts, tools and concepts of research, etc. In other words, motivations do not only

²⁰⁰ Some examples of such feminist analyses: Keller, *Reflections on Gender and Science*; Fausto-Sterling, *Myths of Gender*; Gowaty, *Feminism and Evolutionary Biology*; Lederman and Bartsch, *The Gender and Science Reader*. Examples of analyses of racism: Gould, *The Mismeasure of Man*; Richards, *Race, Racism, and Psychology*; Banton, *Racial Theories*; Jackson and Weidman, *Race, Racism, and Science*. Examples of other issues: Terry, *Science, Medicine, and Homosexuality in Modern Society*; O'Connor, *Poverty Knowledge*; Haraway, *Primate Visions*; Haraway, *Simians, Cyborgs, and Women*; Rollin, *Unheeded Cry*.

determine what sort of empirical knowledge is pursued in practice, but also what sort of research is socio-historically possible.

It is worth giving here an example from the discipline of animal welfare science, which has hardly gone under this kind of criticism. Earlier in the 20th century, when behaviourism dominated psychology and zoology, a science of chickens' subjective world was inconceivable. Yet even after the cultural climate has changed and animal welfare science did emerge with much interest in laying hens,²⁰¹ the question "do hens suffer because their eggs are taken?" has remained alien to the scientific discourse. The reason for ignoring such a basic question is probably the commonsensical understanding that if the question would be answered in the affirmative, it should negate egg consumption altogether – a conclusion that interests too few consumers and no economic or legal establishment. In a technical sense, the hen welfare question and the consumerist question are certainly not impossible to study by existing methods; yet they are beyond the ideology and the material incentives of our time.

In this example, what is regarded as a fair or unfair treatment of hens relates to a specific body of knowledge about the reality of hens' lives. Yet the moral interest in hens did not lead to an impartial research and free expansion of knowledge. Instead, the range of actual scientific interest has been determined by the norm that egg farming is morally acceptable (and in fact unquestionable). In this respect, the relation between animal welfare science and moral views on nonhuman animals is circular.

²⁰¹ The 2004 European Union review of the welfare of hens in the egg industry mentions over 470 sources. 3 of them are from the 1950s and 7 from the 1960s. Typical welfare research (e.g.: clear reference to stress) started in the 1970s – 12 studies during that decade. See: *Welfare Aspects of Various Systems for Keeping Laying Hens*.

This kind of circularity is by no means exclusive to animal welfare science. A similar pattern may probably be traced in any scientific field that has moral implications (and virtually any scientific field – as well as non-scientific fields of knowledge – may carry some moral implications). This pattern may be summarised as follows: contextual values – moral views included – relate to some phenomena and require empirical knowledge of these phenomena, yet the knowledge available already reflects norms and values. In other words, an empirical inquiry may seem like the process that allows introducing external data into the moral consideration; yet the range or character of external data is likely to be limited by existing norms and values, and therefore the empirical inquiry may end up as a biased reinforcement of existing moral views. The problem may be inherent to the process of establishing empirical knowledge.

Yet there are social patterns that call for a stronger distortion of science as a source of morally-relevant knowledge, and understanding these patterns may help to moderate the problem. First, if the representation of empirical data reflects interests, norms, habits, etc. of the party that produced that information, in any case of a conflict between parties it is morally preferable to consider information that all the conflicting parties have produced rather than relying on one of them exclusively. Second, the power of a party tends to be reflected in the process of establishing empirical knowledge; handling information requires resources, and the dominant party has usually a better access to means of collecting, processing, preserving and distributing information, as well as distorting and eliminating it. Thus the richness of information that a party produces tends to depend on its power. Accordingly, there is no symmetry in the degree of attention one

needs to pay to information from sources of unequal power. It is the perspective of the weak that needs extra attention when considering morally-relevant information.

This scheme of attention is very difficult to follow in two types of practical circumstances. When one of the parties does not produce information such as texts or pictures (e.g.: nonhuman animals), information concerning it unavoidably depends on representation by another party and its own agenda. If self-representation establishes power, such a party is absolutely weak. Furthermore, when one of the parties invests some interests in a relationship and considers it morally in the same time (as in the "animal ethics" discourse) it is liable to pay excessive attention to its own information. That is but one of many biased aspects we may expect when a party considers morally its own part in a relationship. In both cases, discerning your own limitation can help to attain more morally valid knowledge, although the limitations may not be overcome.

3.5. The moral obligation to know

Having concluded that moral consideration necessarily involves empirical knowledge, there is still a need to examine the nature of connection between empirical knowledge and moral responsibility. A primary intuition concerning moral judgement and empirical knowledge implies that when some relevant facts are known, they should be taken into moral or moral consideration. Intentionally ignoring such knowledge is morally wrong. Considering moral judgement as a motivating precondition for action, the issue is not merely theoretical: the question of empirical knowledge is widely celebrated in references to the role of bystanders in events which are considered evil almost universally, such as genocide and massacres, as well as domestic violence. In popular

culture, knowing of genocide lays a moral obligation to act against it; knowledgeable bystanders are morally guilty for not acting. In parallel, bystanders and passive participants plead "not guilty" due to the lack of knowledge, meaning that they judged and acted right within their epistemic limitations.

Considering the knowledge of bystanders, it is more than moral responsibility that is at stake, but also legal responsibility that may bear severe punishment. Therefore the question "what did they know?" has been critical for both ordinary Germans and their accusers after World War II. Many Germans, even at the top of the regime, pleaded "we didn't know" about the systematic massacres, implying "not guilty" thanks to their alleged ignorance;²⁰² on the other hand, Jewish historians – among others – stressed that the entire German population knew about the killing. When such a state of knowledge is well proven, the historians are satisfied with a simple binding connection between empirical knowledge and moral responsibility.²⁰³ However, when the information about ordinary Germans' familiarity with the genocidal facts has been less clear, even a Holocaust historian such as David Bankier could not rely on simple concepts of knowledge and responsibility. When he asked in an early work "what did they know?" the answer turned into an elaborated methodological discussion about both historical research and the psycho-sociology of knowing.²⁰⁴

Conceptually, the simple empirical knowledge / moral responsibility connection seems plausible. One cannot make a moral consideration of information without having this information; with no information, there is nothing to be considered and therefore

²⁰² E.g., Albert Speer, Minister of Armaments and War Production. See: Fest, *Speer: The Final Verdict*; Sereny, *Albert Speer: His Battle with Truth*; Schmidt, *Albert Speer: The End of a Myth*.

²⁰³ Bankier, "Signaling the Final Solution;" Friedländer, "Wehrmacht, German Society, and the Knowledge of the Mass Extermination."

²⁰⁴ Bankier, "The Germans and the Holocaust."

there is no moral issue. But such a stance draws a conceptual oddity: if the lack of empirical knowledge exempts from making some judgements, then not knowing may become a comfortable way out of uncomfortable judgements and burdensome consequent actions. The oddity seems to be resolved if we agree that avoiding morally-relevant information *intentionally* is evil: there is a moral obligation not to avoid knowing information relevant to your own moral behaviour. This claim may seem self-evident, since the intentional avoidance of some information implies that the avoider already has some idea about the moral significance of the avoided information, and therefore bluntly avoiding such information is in fact no different, ethically speaking, from ignoring some information that one clearly has at hand. This detour around the conceptual oddity relies on simple concepts: one either knows or doesn't know; the knowledge is either conscious or nonexistent; knowledge is either sufficient for practical (moral) implication or insufficient; and "know" implies "understand".

From the psychological and sociological points of view, however, there is no simple matter of either knowing or not knowing. There is rather a grey area between knowing and not knowing; in the words of the theologian, W. A. Visser't Hooft: "people cannot find a place in their consciousness... their imagination... or finally have the courage to face (or allow themselves to remember) unimaginable horror. It is possible to live in a twilight between knowing and not knowing."²⁰⁵ Following critical analyses of bystanders' behaviour in times of violence, I trace four groups of obstacles to plain, full, conscious, responsible and morally applicable empirical knowledge:

- a. Misunderstandings: we can trace two levels of misunderstanding available information. The first has to do with understanding the symbolic encoding of some

²⁰⁵ Quoted in Sereny, *Albert Speer: His Battle with Truth*, 335.

available information and understanding the connection between the encoded data and the phenomena that it represents. This seems to happen spontaneously and effortlessly when, say, English speakers are examining information, which has been created by members of their own community regarding their own lives. Yet when information is passed between members of different communities, some of the meaning may be lost. Social codes that the original information contains may be misunderstood: things left unsaid and taboos, exaggerations and overemphasizing, intertext and especially allusions to local culture. Language may be misunderstood, whether professional terms, slang expressions or an altogether foreign language. The translation scholar, Lawrence Venuti, stresses that complications are inherent to translation: "A translated text should be the site at which a different culture emerges, where a reader gets a glimpse of a cultural other and resistancy." The translation should "preserve that difference, that otherness, by reminding the reader of the gains and losses in the translation process and the unbridgeable gaps between cultures."²⁰⁶ Furthermore, when information is not available as a text, other source of information (pictures, films, objects or behaviour itself) should be observed directly, and misunderstandings are probable. These various obstacles are managed by translation and interpretation. Translations and interpretations, however, require considerable efforts, and their success is rather limited.

A second level of misunderstanding has to do with putting pieces of information together into a meaningful picture. Understanding a socio-historical reality is more than understanding the literal meaning of some pieces of information about it. As

²⁰⁶ Venuti, *Translator's Invisibility*, 306. See also: Quine, *Word and Object*, chap. 2; Feleppa, *Convention, Translation, and Understanding*; Rubel and Rosman, *Translating Cultures*.

local, isolated descriptions, pieces of information are not likely to compose a comprehensive picture. Understanding means connecting the pieces together and filling the informative gaps between them according to some hypothesis. It is an interpretative, conjectural activity. There could be other hypotheses, or other ways to put the pieces together and filling in the gaps. Deciding which interpretation is the most plausible one requires a pragmatic framework, which itself could be altered. Therefore there is much to be misunderstood or indeterminate about the socio-historical reality (and reality in general).

These obstacles to determinacy of meaning may lead some thinkers to overall scepticism about the possibility to synthesise local facts into a coherent, valid story.²⁰⁷ The moral context, however, provides bystanders to an immoral event a rather clear pragmatic framework for hypotheses about the event. The bystander does not need to understand all the aspects of the event, but rather to understand enough for practical decisions. This seems like a trivial demand when witnessing closely a familiar crime that everyone around denounce; but understanding may not be so easy for indirect bystanders to unfamiliar crimes. If filling the informative gaps between pieces of information relies on a hypothesis or a general idea about the event, then prosperous and tranquil people are likely to run into difficulties understanding great misfortunes of others. The hypothesis may reflect one's conception of good and evil in the world. Accordingly, indirect bystanders to horrors seem to project their relatively positive image of their own world on negative information. That is not necessarily an expression of denial: their positive view may rather be the most reasonable deduction from their knowledge of the world. Thus information on organized murders, for

²⁰⁷ See: Jenkins, *Postmodern History Reader*.

example, is easily misunderstood as local incidents of exceptionally cruel minds and traumatic circumstances. Filling in the gaps among haphazard reports and understanding them as signs of pre-planned, systematic genocide requires establishing a whole net of connotations that to most people are unfamiliar from first-hand experience. Concerning Germans in World War II, Bankier concluded in his early paper:

"Those who acquired such knowledge, either through their work in the plutocracy or because they purposely sought it, as members of the underground did, had to view it in their mind's eye. Therefore, because they were obliged to capture with their imagination something unprecedented, they were not always able to conceive the monstrous dimensions of the crime. Despite their mentioning of hundreds of thousands of victims, and despite the fact that some of them even referred to these horrendous acts as the worst crime in the history, an unparalleled phenomenon, it seems that even then, they could not and did not grasp its incredible magnitude. Thus, what became known as The Holocaust was an inconceivable and therefore unbelievable reality even for those anti-Nazis who deliberately sought information."²⁰⁸

Surely, one does not have to conceive the exact details of the entire *Holocaust* in order to make a moral judgement and act accordingly; a limited understanding of deficient information should have been enough for the bystanders to make judgement and initiate action. Nevertheless, the problem of understanding could be crucial if the crime is even more remote and unfamiliar. Considering pieces of information about farmed animals, most modern Western people cannot fill in the gaps due to a fundamental lack of empirical knowledge in a moral context – as I will explain in chapter 4. Again, there is enough comprehensible information for moral judgement and ensuing action, but a further investigation into the agricultural reality will unavoidably be blurred by the technical terminology of the industry, that carries no

²⁰⁸ Bankier, "The Germans and the Holocaust," 98.

moral connotations and therefore the moral meaning of the facts cannot be reasonably understood.

- b. Distrust and disbelief: when considering morally-relevant information that has been delivered through mediators, it may be reasonable to suspect its validity. Indeed, the distrust may be an expression of denial; yet distrust may just as well be the results of an independent, rational assessment of the information and the circumstances of its disclosure. The arguments for scepticism are convincing: in cases of conflict, the weak party may have much to gain from criminalizing its opponent in the eyes of a third, powerful party. Accordingly, misinformation is likely to be distributed by the interested party or by its supporters. It may therefore be rational to suspect that such information is fabricated, or at least exaggerated. Additionally, when information of atrocities seems reliable to some degree, it is nevertheless reasonable to suspect that traumatized people inflate the scale of the crime, perhaps unintentionally.

This kind of rational distrust is uncommonly addressed by historians, sociologists or psychologists of atrocities. It is rather overshadowed by the major role of denial, especially when examining bystanders who have been relatively close to the events, such as the World War II Germans.²⁰⁹ Yet when the atrocities are further away, distrust in the information tends to increase. The historian Victoria Barnett emphasises the major role of denial during the Holocaust, yet she adds: "Throughout the world, the predominant reaction to reports from Europe was disbelief, indifference, passivity, and a sense of powerlessness. Michael Marrus notes that these

²⁰⁹ Bankier ("The Germans and the Holocaust") addresses distrust, which was possibly more than mere denial, only in p. 92.

reactions occurred even among Palestinian Jews, 80 percent of whom had emigrated from eastern Europe."²¹⁰

Writing about the American reaction to genocides throughout the 20th century, the journalist Samantha Power describes the habitual distrusting reactions by American officials and press. Power quotes the revealing comment by a Muslim woman who helped foreign journalists and human rights workers to get testimonies from Muslim and Croat victims of systematic rapes by the Serbs in Bosnia: "At the end, I get a bit tired of constantly having to *prove*. We had to prove genocide, we had to prove that our women are being raped, that our children have been killed."²¹¹ The quote reveals the ongoing skepticism by people of remarkable good will; unsurprisingly, the routine response of the US administration to information on genocides (and even more so – to warnings on probable future genocides) has been extra-carefulness, disbelief and a constant demand for further proof.²¹² Here disbelief is associated with placing the burden of proof on the shoulders of the victims' representative – a tactics for time-killing without taking responsibility and act.

Even sincere and rational distrust interrupts morally-relevant empirical knowledge. It is rather awkward to speak of "empirical knowledge" that is disbelieved. Writing about the Holocaust, the historian Paul Levine observes:

"The issue of *belief*, the process by which we somehow absorb, internalise and process information so that it becomes part of our thinking, is in some ways key to understanding what officials of the bystander nations did, or did not do. Making a 'leap of imagination' between knowledge and/or information and belief is central to many aspects of understanding of both the general and specific aspects of Germany's genocidal assault on Europe's

²¹⁰ Barnett, *Bystanders*, 51. See also: Bankier, "The Germans and the Holocaust," 92; Power, *America and the Age of Genocide*, 33-36.

²¹¹ *Ibid.*, 271.

²¹² *Ibid.*, 505-506.

Jews – in fact in understanding the scope of its murderous policies throughout much of Europe."²¹³

- c. Denial and repression: as a psychological defence mechanism, denial is based on the repression of inconvenient or threatening information. The denied information is supposedly known still, yet only *unconsciously*. The sociologist Stanley Cohen defines denial as a mechanism for "coping with guilt, anxiety, and other disturbing emotions aroused by reality. The psyche blocks off information that is literally unthinkable or unbearable. The unconscious sets up a barrier which prevents the thought from reaching conscious knowledge. Information and memories slip into an inaccessible region of the mind."²¹⁴ The denial hypothesis is based on the psychoanalytic paradigm of the psyche as a structure of more than one apparent level. Accordingly, this hypothesis allows knowing at one (unconscious) level and not knowing at another (conscious) level, *simultaneously*. In other words, denial is distinguished from lying by the lack of consciousness or deliberation; the very act of repressing information or denying should be an emotional unconscious reaction rather than a conscious decision. However, such a clear conceptual demand for full unconsciousness may be too strict, and denial in reality calls for "twilight" definitions. Cohen explains that "We are vaguely aware of choosing not to look at the facts, but not quite conscious of just what it is we are evading. We know, but at the same time we don't know."²¹⁵

As far as the process of denial is unconscious, moral judgement is beyond accessibility since it is a conscious faculty. In that sense, denial is an amoral process

²¹³ Levine, "Responses of Mid-level Bureaucrats," 223-224.

²¹⁴ Cohen, *States of Denial*, 5. See also chap. 2.

²¹⁵ *Ibid.*, 5.

at an amoral mental level, which is not occupied with ideas of good and evil but with a sense of survival. Survival, in that respect, is predominantly personal rather than social; it is also not strictly a matter of bodily wellbeing in the physical world, but rather a matter of mental integrity. Accordingly, denial can occur against one's own good in the long run; but it is by far more common as a mechanism that blocks information concerning the ill fate of others. In other words, denial theory asserts that from an emotional, egocentric point of view, knowledge of harm to others is worse than the very harm they endure, and therefore that knowledge is better eliminated from consciousness.

The denial thesis has a great explanatory power regarding people's apparent apathy when confronting overwhelming flow of disagreeable information in various circumstances, from violence by one family member against another, through national violence against some minority, to animal agriculture. On the other hand, claiming that someone is in denial is prone to manipulative use: it is an easy excuse for exempting a person from moral responsibility (assuming that one cannot consider her responsibility when in denial – at least not fully). Like other alleged mental phenomena, and especially non-conscious states, denial is not directly observable and therefore claims about denial are especially manipulable. These qualities make the idea of denial especially prone to criticism.

One major focus of criticism is the mental mechanism that sorts information out for either conscious consideration or suppression into unconsciousness. This mechanism is difficult to identify. It seems implausible that such a process would occur beyond consciousness, control and deliberation. Consciously knowing

incoming information is a matter of attention, and attention of any kind may always be guided by conscious deliberation. Hence avoiding attention is a matter of decision. Such a psychological reconstruction of denial theory calls for a *moral* rejection of denial, which is considered as an excuse for exemption from moral responsibility. Denial, redefined as self-deception, is denounced as a breach of moral responsibility – that is, evil behaviour and bad character.²¹⁶ For an Existentialist like Jean-Paul Sartre, the subtle difference between denial and lying is minor; denial is lying to oneself, and the concept "bad faith" marks denial with clear moral disapproval:

"To be sure, the one who practices bad faith is hiding a displeasing truth or presenting as truth a pleasing untruth. Bad faith then has in appearance the structure of falsehood. Only what changes is the fact that in bad faith it is from myself that I am hiding the truth. Thus the duality of the deceiver and the deceived does not exist here. Bad faith on the contrary implies in essence the unity of a *single* consciousness. [...] One does not undergo his bad faith; one is not infected with it; it is not a *state*. But consciousness affects itself with bad faith. There must be an original intention and a project of bad faith; this project implies a comprehension of bad faith as such and a pre-reflective apprehension (of) consciousness as affecting itself with bad faith. It follows first that the one to whom the lie is told and the one who lies are one and the same person, which means that I must know in my capacity as deceiver the truth which is hidden from me in my capacity as the one deceived. Better yet I must know the truth very exactly in order to conceal it more carefully – and this not at two different moments, which at a pinch would allow us to re-establish a semblance of duality – but in the unitary structure of a single project."²¹⁷

Beyond denial in the individual, the concept also refers to the repression of inconvenient or threatening information throughout society. As a sociological concept, denial does not need to rely on inaccessible unconsciousness. There are many levels to society, and some social groups may consciously deal with the threatening information unlike the conscious treatment by others. Most typically,

²¹⁶ Jones, *Moral Responsibility in the Holocaust*, chap. 4.

²¹⁷ Sartre, *Being and Nothingness*, 49. See also the rest of chap.2.

information on state crimes is circulated privately among many individuals and underground groups while it is blocked by the government from reaching the media and the political discourse, or even from being talked about out in the open. In that respect, the public sphere is comparable to the psychoanalytic consciousness, while the private sphere is parallel to unconsciousness. The system that blocks the information from reaching the public sphere may be anything from shared ideology and implicit social sanctions – to an official ban and specific punishments by an atrocious regime.²¹⁸ Cohen distinguishes between official denial by the state, and cultural denial, which culminates in the lack of mass media coverage of atrocities and social suffering. Cultural denial occurs when "Without being told what to think about (or what not to think about) and without being punished for 'knowing' the wrong things, societies arrive at unwritten agreements about what can be publicly remembered and acknowledged. People pretend to believe information that they know is false or fake their allegiance to meaningless slogans and kitsch ceremonies. This happens even in more democratic societies."²¹⁹

The individual concept of denial is commonly integrated with the social one.²²⁰ If personal denial is provoked by a sense of threat, no doubt that direct social threats, from social embarrassment to fear for one's life, expand and intensify the sense of threat that pushes the information away from consciousness. Furthermore, collective denial or cultural repression makes the information less accessible, and getting it

²¹⁸ For example, public discussions of the Final Solution were banned by Hitler when it seemed to raise criticism in Germany, see: Bankier, "Germans and the Holocaust," 95. Official denial, especially under Stalinism, may expand into "an entire rewriting of history and blocking-out the present," as Cohen explains in *States of Denial*, 10.

²¹⁹ Cohen, *States of Denial*, 10-11.

²²⁰ *Ibid.*, 132-133.

becomes challenging. But above all, when everyone around live as if your government is not committing crimes against refugees (while it does), or as if animals have not been tortured and killed for every meat/egg/milk meal (while they have) – it is easy to join the collective denial. Among similar deniers, the repression of known empirical facts cannot seem like a mental malfunction – it rather seems socially appropriate and mentally sensible. In a society of denial, denying is the right way to live. The course of denial, however, may go the other way around: widespread private denial contributes to the media's repression of relevant information and to repression in courts and in the parliament (e.g., consumer denial of the essential violence involved in animal products encourages the media and the legal system to ignore the subject). In conclusion, denial tends to involve the repression of information at several levels. Possibly any incident of denial involves a combination of personal interests and social norms reinforcing each other, and some issues involve some official policy as well.

It should be noted that the moral status of denial as a social phenomenon is similar to the status of the psychological phenomenon. In social terms, however, the repressed information is not claimed to have disappeared, and therefore the moral responsibility for this information is apparent.

- d. Avoiding inquiry: in complex issues, attaining empirical knowledge that is sufficient for moral considerations requires effort. The lack of sufficient knowledge may very well be not a result of actively avoiding information but a mere result of not trying hard enough to get it. On a personal level, an effort to get morally-relevant information means inquiring better-informed people around, taking the trouble to ask

more distant people, reading available sources, watching them or listening to them, searching for further sources, getting involved in direct observation – as well as making the mental effort to understand the meaning of the available information. All these efforts may nevertheless be far from sufficient for moral consideration in some cases. Learning complex issues requires cooperation among many people, with a division of labour in accordance with their time, skills, social contacts and physical access to sources of information. All these efforts require resources, and some efforts may even be risky.

Making such an investment must be motivated. Without self-interest, habits or mere curiosity, the inquiry must rely on moral motivations: people must be convinced that the subject is important enough to make the effort to study it. This is a somewhat circular demand: we must make a moral judgement of some information before having it. Conceptually, avoiding the effort does not add up to denial: as long as the information is unknown, it cannot be denied. Avoiding inquiry, however, like denial, has a moral aspect if some morally-laden information is already known, and in practice, avoiding inquiry commonly occurs when some factual clues should have motivate further inquiry. Bankier provides an accurate expression of the moral issue in practice, when he concludes his paper about the World War II ordinary Germans: "In one sentence: They knew enough to know that it was better not to know more."²²¹

Hitler's Minister of Armaments and War Production, Albert Speer, who infamously claimed that he did not know about the systematic extermination of Jews, has nevertheless described his lack of inquiry as a moral failure. In a much cited

²²¹ Bankier, "The Germans and the Holocaust," 98. See also 88, 92; and Jones, *Moral Responsibility in the Holocaust*, chap. 4.

passage from his memoirs, he describes his response to a warning from a close friend to never visit a certain concentration camp, i.e. Auschwitz, because "he had seen something there which he was not permitted to describe and moreover could not describe:"

"I did not query him, I did not query Himmler, I did not query Hitler, I did not speak with personal friends. I did not investigate – for I did not want to know what was happening there. [...] These seconds were uppermost in my mind when I stated to the international court at the Nuremberg Trial that, as an important member of the leadership of the Reich, I had to share the total responsibility for all that had happened. For from that moment on I was inescapably contaminated morally; from fear of discovering something which might have made me turn from my course, I had closed my eyes. [...] Because I failed at that time, I still feel, to this day, responsible for Auschwitz in a wholly personal sense."²²²

This passage reveals the nature of avoiding inquiry when confronted with some morally grave factual hints; the responsibility to inquire further is ever present. Speer's account implies that it may be too hard to draw the line between avoidance as an either passive state or an active one: "close my eyes" is an activity and it is clearly motivated by egocentric interests. Speer, however, builds his case away from full moral responsibility by focusing the question of knowledge and inquiry on a single incident; as factual hints that call for further inquiry were abundant around him, focusing on a specific hint functions as denial of all the other hints. Speer's case demonstrates how closely avoiding inquiry into morally-laden information is related to the repression of known information. Nevertheless, the passage probably seems awkward only to post-Nazi readers, and especially Jewish ones; in our view, the world of a Nazi official must have been full of moral calls for further inquiry. But in a

²²² Speer, *Inside the Third Reich*, 375-376.

society of deniers, such calls are rarely heard, and therefore the effort of further inquiry seems heavy.

From a psychological and sociological perspective, all these common obstacles to the process of having empirical knowledge about the misfortunes of others occupy the twilight between knowing and not knowing. However, the four obstacles can hardly stand up to moral scrutiny. If any of them seems morally acceptable sometimes (at least by some definitions of the obstacle) it is only in a trivial manner: when morally-laden information is nevertheless morally unimportant (for example, it seems morally acceptable if someone fails to understand, believe, acknowledge and investigate a rumour about the oppression of Saturnians by Jupiterians, or about her neighbour's habit of stealing a few grapes at the supermarket).

The obstacles enter the moral sphere only when the moral agent has already been exposed to some information about some morally-laden reality. The information could be incomplete, scattered and unclear, yet it induces moral responsibility in any moral agent as long as the information is explicit enough to provoke further investigation by a morally responsible, sincere, unbiased and courageous person. Undeniably, "explicit enough" is a vague criterion; nevertheless, information may be considered explicit enough if it would have provoked you to learn more in case it concerned your own interests. Here we reach the moral premise of this discussion: dealing with morally-relevant information should be counted as a morally-laden *action*. Although it seems passive in comparison with joining troops on the way to stop genocide, dealing with the relevant information – whether looking for it or ignoring it – is nevertheless inseparable from any moral action. In this view, rejecting morally-laden information is an unethical act.

Now, issues that deserve urgent moral consideration tend not to happen in a social vacuum. Not only colossal events such as genocide or animal agriculture have numerous witnesses, but even a very private, violent encounter, such as incest, tends to generate many factual clues that call people around for further attention.²²³ This analysis leads to a moral rejection of the four obstacles to knowledge. And bearing in mind the abundance of factual clues (and considering that knowing morally-relevant facts entails a responsibility to act in response) the resulting conclusion is inevitable: whenever something seriously wrong happens around, there is a moral obligation to know about it. Naturally, the exact meaning of "seriously" and "around" is open to various interpretations in specific circumstances. But the moral bottom line, supported by accounts of genocides, is this: *the moral responsibility to know morally-relevant facts does not depend on the specific mental state of the bystander, but rather on the reality around the bystander.*

The above discussion refers to bystanders in general. However, bystanders may be classified into the following functional groups: (a) bystanders who are also latent supporters of the crime; (b) bystanders that may have some influence on the crime if they will make the effort; and (c) distant bystanders that cannot affect the crime even if they know everything there is to know about it. There seems to be a difference between these groups in terms of moral responsibility. As for group (a), as taxpayers we pay for our government's actions, and as consumers we pay for our suppliers' actions; therefore we are influential participants in the actions of the army and the industries. Of course, participation calls for an urgent responsibility to know what the army and the industries are doing. The responsibility is less urgent in group (b) because such bystanders do not

²²³ Jackson, *Encyclopedia of Domestic Violence*, 383-384.

promote the crime by default. Only group (c) may not bear a moral responsibility to know, but this is a trivial group. It seems that no place on Earth is too far from large-scale, ongoing crimes: influence can take many routs, even when you are a resident of a distant country. If this is true, the responsibility to know about serious moral issues is virtually global.

The obstacles of misunderstanding, distrust, denial and failure to inquire may be hastily presented as instances of stupidity, hypocrisy, and moral degradation. In reality, however, they are all too common, and individuals and societies that experience such obstacles are rarely aware of them. The obstacles accumulate to a profound challenge on moral consideration and behaviour. We should therefore expect moral judgements to be very difficult to make in practice. Therefore people who are engaged in moral activity should anticipate the difficulty and work accordingly, i.e. work hard to get the facts. This demand applies even to ethicists who are used to theorizing beyond specific facts. Finally, various circumstances attract different patterns of attention in practice to morally-relevant information, and they require different patterns of attention in theory. In the next section I will examine these patterns.

4. The moral status of industrial exploitation

Why does industrial exploitation deserve special attention? The diversity of social relations gives rise to different moral understandings, theories, and meanings. In chapter 1 I referred to some of the implications of the differences between three types of relations: (a) the competitive interaction between free agents; (b) the exploitation / dependence relation between the capitalist and the mass of workers; and (c) the typical good will / total dependence in mother (or parent in general) / child relation. The first type of relations yields a conception of individualised, self-conscious, egocentric, equal forces in a continuous struggle or cooperation – while cooperation is conceived as a tool of advancing self-interests. Moral theories in light of this conception are restrainers of egoistic power. The second type of relations yields a conception of a continuous struggle among social groups throughout history, regardless of individual will – while solidarity within a group takes precedence over personal interests. And the third type of relations yields a conception of benevolence and cooperation within the private sphere, familial emotions being the basic social force, and moral theories in light of this conception focus on establishing and expanding family-like attitudes. Evidently, most human societies include a combination of powerful agents, classes and families – whose members occasionally belong to more than one group, and therefore they use different moral codes according to specific circumstances.

This title-short description of liberal, Marxist and feminist approaches to ethics is an elaboration of the general claim that specific social relations yield their systems of values (needless to say, this claim is descriptive rather than normative; acknowledging that some practical conditions tend to yield some morality does not mean the these

conditions generate the capability to tell right from wrong). Other types of social relations also yield specific systems of moral meaning. Indeed, well-ordered social relations yield fully elaborated moral systems, while violent, coercive relations do not tend to yield sophisticated moral reflections that provide a foundation to moral philosophy. As the industrial exploitation of nonhuman animals is in most respects the most coercive type of all social relation, it has expectedly not yielded a sophisticated morality. Yet violent relations are certainly connected with specific moralities; and as it is the case in any morality, empirical knowledge plays a major role in the formation and application of the moral values and attitudes in such relations. Therefore I will examine the industrial exploitation of nonhuman animals in terms of social relations, in hope to characterise the unique problems that this type of relations generates concerning moral competence in general and morally-relevant knowledge in particular.

My account will focus on the core of the relationship – agricultural facilities – where farmed animals encounter human power. That is where morally-relevant facts should be found and turned into knowledge. The direct encounter, however, is by no means the full picture regarding the morally-relevant knowledge. An essential part of the industrial relationship is its driving force – the consumers. A full account of what people know when they consider interspecific relations should include a detailed reference to consumer knowledge. Yet the supermarket and the dinner table – as well as the parliament, the courts, commercials, children books and any other cultural domain that relates to animal farming without a direct encounter with the living animals – cannot be regarded as sites where authentic empirical knowledge of the relationship is produced, since they are detached from agricultural facilities. Prejudice and fantasies about animal

agriculture, however, are certainly produced in these sites, often with hardly any relation to the agricultural reality. Indeed, the distinction between authentic knowledge and prejudice and fantasy is not clear-cut. Probably any knowledge from direct observation and involvement includes some elements of prejudice and fantasy, and any stated prejudice or fantasy includes some authentic empirical knowledge. This subject deserves a separate discussion, beyond the scope of this dissertation. Under the present limitations, I will make do with the commonsensical distinction between the site where the relationship takes place in practice, and any site where no living animals are found – which I will hence ignore.²²⁴

4.1. Varieties of distance and visibility

If knowing about others is crucial for developing a caring attitude towards them and for taking them seriously into moral consideration, then spatial-temporal closeness and visibility are highly important to morality. Indeed, closeness and visibility of others is neither a sufficient nor even a necessary condition for gaining knowledge about them. We can avoid showing interest in close and visible subjects and therefore fail to learn much about them, or rather show much interest in distant and invisible others and learn much about them through mediation. But despite the possible variations, in reality the closest (spatially as well as temporally) and most visible subjects are the ones we usually know

²²⁴ Admittedly, the problem is complicated beyond the conceptual analysis of "authentic" vs. "imaginary". Consumers of animal products do encounter farmed animals when choosing, buying, preparing, eating or wearing animal products. The animals are encountered dead or as embryos (eggs), secretion (milk), or tissues that have been removed from living animals (wool). This encounter is by far more direct, authentic and frequent than any other encounter between modern consumers and farmed animals. Furthermore, this encounter yields first hand familiarity with many facts about the animals, that is, about the living animals. The entire domain of consumerism, however, is effectively obscured by denial of the agricultural reality and by fantasies. Therefore, once again, it is a separate subject, beyond the present dissertation. See: Tsovel, "Alienated Contact."

about the most. Usually, they are also the most probable candidates for moral feelings such as empathy, care or guilt, as well as a sense of responsibility and serious moral consideration at large.²²⁵ This tendency is persistent enough to be regarded as an aspect of "human nature" – an actual limit on the spatial and temporal scope of moral interest; the limits have been clearer in pre-modern societies, as philosophers such as Aristotle and Hume have noted.²²⁶ This tendency, however, endures throughout modern societies despite the relevant complexities and anomalies that have evolved.²²⁷ The ones we live with are the closest and most visible. In most societies these are family members. In traditional societies there are close and visible groups beyond the family, and in complex societies some members live closely together with people outside rather than inside the family, though usually for a limited period, e.g.: in a boarding school or college, in the army, or working at a camp or at any working place abroad. In modern society pets are often just as close and visible as family members or even closer and more visible for single people, and in pastoral societies sheep, cattle and a few dogs or horses may at times be as close and as visible as or even more visible than family members.

"Knowing" may have various meanings in the present context. Writing on empirical knowledge and ethics, the sociologist Zygmunt Bauman identifies two categories of knowledge about close subjects: non-conscious experience, and cognitive reflection. The first category is "the knowledge we all have without knowing that we 'have' it – is the knowledge of 'being with' other humans," that is, the matter-of-fact feeling that the other person/s share with you similar perceptions, meanings, motivations,

²²⁵ Ginzburg, "Killing a Chinese Mandarin."

²²⁶ Aristotle, *Rhetoric*, bk. 2, chap. 8, pp. 2208-2209; Hume, *Treatise of Human Nature*, bk. 2, pt. 3, sec. 7, pp. 274-276.

²²⁷ Smith, "How Far Should We Care?" 17-20.

abilities, etc.²²⁸ Once this feeling is disrupted by misunderstanding, "objects become *visible* (that is, I am aware of seeing them, I see them as definite objects) – since there is now *distance* between me and them."²²⁹ The interest in this observation is the focus on non-conscience familiarity with close subjects. Surely, much of this latent knowledge affects the moral motivation towards the familiar subjects, and it could also be reflected upon and become usable for conscious moral decisions; in that sense, Bauman's focus on knowledge from "being with" others provides a further emphasis on the moral bias that is generated by closeness/distance. Despite his claim that visibility and knowledge are signs of distance, Bauman cannot plausibly claim that visibility grows with physical distance; obviously the opposite is true; and indeed, Bauman admits that closeness enhances visibility. But he insists on a more complex connection between physical distance and cognitive distance: empirical knowledge generates a feeling of closeness, and therefore "the scarcer and more perfunctory is my knowledge, the dimmer the objects appear – the 'further away' they are."²³⁰ This principle applies also to morally-relevant knowledge of others, and it reminds us convincingly that there is no *essential* connection between physical distance from another subject and the level of knowledge about her.

Closeness and visibility, however, do commonly provide a chance for observation and communication. A close and visible subject exposes its physical and emotional needs, desires and vulnerabilities, and its history of misfortunes, disappointments and successes. These details are exposed through an interactive search for information, which may go far beyond any search that does not involve personal contact: asking questions, conducting some simple tests to learn more about the subject's needs, desires, etc.,

²²⁸ Bauman, *Postmodern Ethics*, 147.

²²⁹ *Ibid.*, 148.

²³⁰ *Ibid.*

witnessing non-lingual behaviour, and paying special attention to whatever seems relevant at the moment. Furthermore, the information is exposed and understood as a sequence of events which you may remember narratively rather than as isolated facts. Therefore it is easy to connect pieces of information together and know how one event led to another, how some vulnerability evolved, how the subject in question may react to some conditions based on past experience, etc.

All this knowledge is crucial when you have to assess a morally-laden situation concerning the close and visible subject. Closeness and visibility allow you to recognize morally relevant attributes in the subject. For example, you may know what kind of distress either your child or your cat may suffer in case they have to change their diet, or if they have to leave home, or if they are forced into specific environments. You may regard these situations as evil according to your own moral conceptions: due to your sympathy and love for the subjects, or a sense of personal obligation due to their feeling of trust in you, or a responsibility you have for your own moral character, or due to your sense of social or religious duty. No matter what kind of information you need and for what reason you think that it is morally important, the required information is relatively accessible to you thanks to direct acquaintance.

Sometimes people feel, however, that they have much empirical knowledge (including morally-relevant knowledge) about distant and invisible subjects due to assumed similarities and shared identity. People of the same religion, nationality, etc. may indeed know some important facts about each other, and correspondingly they feel that they have mutual moral responsibility despite being total strangers. So some matters of empirical knowledge and moral interest do not depend on spatial proximity and

visibility; nevertheless, within a community of, say, a uniform national identity, no doubt that proximity and visibility do produce advantages in terms of morally-relevant empirical knowledge. The exception is communities that have been created through long-distance communication, and especially internet social networks, which culminate in the use of audio/video communication. Here mediating technology imitates many aspects of spatial closeness and visibility, and as a result people of mutual interest learn many facts about each other and to some degree they develop communal moral concern. This new phenomenon has been the subject of several studies.²³¹ The opposite phenomenon is estrangement among close and visible subjects. This is a fundamental aspect of modern urban life, and it has been studied since the late 19th century. Here spatial closeness and visibility do not yield knowledge and moral concern, but it rather emphasises the lack of relation to so many strangers. As Georg Simmel noted, "the bodily proximity and narrowness of space makes the mental distance only the more visible."²³² In a sense, urban estrangement is a state of resistance to closeness and visibility, or an imitation of distance and invisibility. The estranged individual avoids paying attention to close others and interact with them, and therefore fails to perceive them as proximity and visibility would imply. This prevents the formation of empirical knowledge about them.²³³

The occurrence of both virtual communities and urban estrangement implies that the connection between space and moral issues is complicated. Physical proximity and

²³¹ Smith, *Moral Geographies*, 96-98; Smith, "How Far Should We Care?" 1998, 21-23; Wellman and Gulia, "Virtual Communities as Communities;" Powers, "Real Wrongs in Virtual Communities;" De Laat, "Trusting Virtual Trust;" Briggie, "How the Internet Can Foster Friendship."

²³² Simmel, "Metropolis and Mental Life," 181.

²³³ Bauman, *Liquid Modernity*, 94-109; Bauman, *Postmodern Ethics*, chap. 6; Smith, *Moral Geographies*, 76.

visibility could be defeated by a steady reluctance to get to know others and care for them, and similarly, distance and invisibility could be overcome with the help of mediation. Morally-relevant knowledge and moral concern correspond with the disruption. These complexities have probably been latent in traditional societies, and they get into the spotlight as transportation and communication technologies improve. Furthermore, proximity and visibility may be overridden by very personal considerations. The identity of a party may often be regarded as morally more important than her closeness and visibility. Accordingly, most people do probably know about their child and care for her much more than they know and care about their domestic cat, and they may respect their boss more than their child.

All these truisms seem to support Bauman's view that spatial status itself does not entail any specific state of both knowledge and concern.²³⁴ However, the moral weight of various conditions and considerations do not contradict the general claim that *all other things being equal*, proximity and visibility *tend* to be associated with extensive morally-relevant knowledge and moral interest. It is important to admit a connection of tendency rather than necessity since all other things being equal, closeness and visibility may nevertheless give rise to *negative* thoughts and feelings rather than positive ones: envy, destructive rivalry, contempt, revulsion, hatred, projection of self-hatred, etc.²³⁵ Accordingly, the rich information concerning the close and visible individuals may be used against them. But such cases are less common than the opposite. In fact, proximity and visibility tend to support some positive moral interest even when they are imposed by

²³⁴ Bauman, *Postmodern Ethics*, 148.

²³⁵ Smith, "How Far Should We Care?" 18.

circumstances, as in the cases of camaraderie among most school classmates or soldiers, or the love of most parents to their unplanned children.

The moral merits that tend to develop towards close and visible subjects are important for understanding the moral faults that distance and invisibility tend to bring about – faults which are more or less a negative reflection of these merits. A considerable body of literature in moral philosophy addresses this issue. Most of it is focused on arguing that we *should* overcome the common *fact* that distance depresses moral interest.²³⁶ In a sense, any moral theory that emphasises the universality and impartiality of moral principles defies the reality of the distance/moral-indifference connection. But as David Smith writes,

"While the philosopher's solution – universalism expressed in the Enlightenment ideal of impartiality – may have worked at a theoretical level, premodern conventions of partiality continued to prevail in many contexts. [...] The Enlightenment discourse of impartial reason, along with such other innovations as (spatially restricted) rights of citizenship, served to mask the reality of continuing spatial discrimination in the exercise of beneficence, along with some far from benevolent practices (with extensive spatial scope) associated with colonialism and imperialism as well as with capitalism."²³⁷

This observation may seem too harsh regarding contemporary, progressive ethicists. And in any case, much of the universalist-impartialist literature is concerned with pure principles. Therefore the increased resources necessary for the application of the principles as distant grows – are irrelevant to this literature on its own terms. Nevertheless, most ethicists are probably not satisfied with abstractions as they aspire to say something meaningful about the actual world. Therefore some theoreticians

²³⁶ Singer, "Famine, Affluence, and Morality;" Smith, "How Far Should We Care?"; Smith, *Moral Geographies*, chap. 5; Sterba, "Welfare Rights of Distant Peoples;" Singer, *Ethics of Globalization*, chap. 5; Sterba, *Morality in Practice*, pt. 2; Held, *Ethics of Care*; Singer, *Life You Can Save*.

²³⁷ Smith, *Moral Geographies*, 120.

emphasise the actual bias in favour of the close community, and define an expanded moral community while keeping in mind the prevalence of partiality.²³⁸

It should be helpful to outline distance and invisibility. On the face of it, an entity that is located beyond direct sensation due to distance or a barrier, as well as an entity that has lived or will live in a different time, is categorically distant and invisible, and therefore devoid the morally-relevant advantages that tend to emerge from direct familiarity. Indeed, in a world of free, mobile agents, this definition may seem unreasonably technical, since distant and invisible subjects may be known through mediation – writing, photography, a report by a third party, etc. Yet mediation can rarely compete with the intensity of direct familiarity, and it cannot provide much of the information that one gets through being close to someone else. Much morally-relevant empirical knowledge is lost through mediation, and moral motivations are less likely to develop. Mediation, however, occurs in cases of special interest. Much more commonly, distance and invisibility make parties alien to each other. Bauman offers a sharp description of anonymity and knowledge:

"A truly anonymous Other is outside or beyond social space. Such another is not truly an object of knowledge – apart, at best, from a subliminal awareness that there is, potentially, a human who could be an object of knowledge. For all practical intents and purposes, she is not human at all, since humans we know are always 'specific' humans, classified humans, humans endowed with categorical attributes through which they can be identified. The space between the poles of intimacy and anonymity is made precisely of such classes and categories. The humans who inhabit that space do not have identities of their own, no 'personal' identities – they derive identity from the classes they 'belong' – or, rather, to which they have been assigned. And the assignment is accomplished in the process of the acquisition of knowledge. These humans we do not know; we know *of* them. We know about them in a roundabout way, through the information we have put together about the categories and specimens of which they are. We know

²³⁸ E.g.: Selznick, *Moral Commonwealth*, 193-206; Smith, *Moral Geographies*.

of them, as Schütz would say, through the process of *typification* – as types, not persons."²³⁹

This description is thick with moral meaning. Perceiving another party as "not human at all", as having no identity and as a specimen of some type – all these terms imply more than factual assumptions. They show a lack of moral interest (phrased in speciesist terms). Although it is possible to make a special moral effort and show moral interest in typified subjects based on very limited empirical knowledge about them (say, when I suspect some affinity between us, or when I suspect that they are in big trouble) more commonly unknown parties provoke no moral interest. The interest tends to fade away when distance and barriers make this party invisible.

Analysing the moral significance of distance and invisibility, it seems that the physical barriers themselves are rather trivial, in light of possible motivations to cross a distance and overcome barriers, as well as the physical capability to do so. In a society of free agents living in peace, distant and invisible people may become accessible to us under some provisional circumstances, like touristic interest on either side. A similar process may occur with some wild or feral nonhuman animals – when each side may be motivated by either curiosity or utility consideration. But wild and feral animals tend to object the proximity of human strangers, as some human parties do as well. So, collecting information about them and developing sympathy for them can occur mainly as a coercive act in the first place. This situation gives rise to a moral conflict between familiarity as a curiosity-motivated invasion to privacy, and familiarity as a condition for

²³⁹ Bauman, *Postmodern Ethics*, 149. Indeed, Bauman's description of anonymity refers to distance in the "social space", which does not necessarily overlap with the physical space. I believe that this observation is conceptually valid, but in practice the overlap is great. Bauman (165-166) is also careful to tell "social spacing" from "moral spacing" – a distinction that echoes the fact/value distinction – and he emphasizes that social closeness and intense knowledge do not necessarily overlap with intense moral concern. Once again this is a conceptually valid claim, but I believe that in practice the overlap is overwhelming.

the construction of morally-relevant knowledge and sympathetic relations. The conflict is apparent when the isolated party lives peacefully and without apparent danger to its existence and wellbeing.

When the party in question is in trouble or about to suffer from either a natural or an artificial force, overcoming its isolation is the party's own interest, and therefore it may initiate an attempt to be seen and heard. Isolated prisoners of war, kidnapped hostages or natural disaster survivors tend to make an effort to be seen and heard by the outsiders, or have their testimonies read, etc. Their initiative is inspired by their desire to be helped and their belief that outsiders may wish to help them. However, some isolated victims may be too desperate and depressed to believe in outsiders' help, or they may not know or understand such a possibility. In normal adult humans, it may occur under systematic, ongoing abuse or imprisonment. Giving up the motivation to escape or communicate outsiders tends to correspond with technical limitations and failures to do so. This may be the case of prisoners who are kept coercively isolated from outside witnesses, having limited means, if any, to make themselves noticed by potential outside witnesses – by writing, telephone, smuggled information, etc. Consequently, they cannot convey morally-relevant information to outside moral agents, and their distress meets ignorance and indifference.²⁴⁰

Imprisoned nonhuman animals have no indirect communication means in the first place. And if they manage to escape or be released – they will probably not try to communicate their experience, and in any case they hardly have the means to do so. Communicating their distress under captivity is probably possible only through direct

²⁴⁰ Başoğlu and Mineka, "Uncontrollable and Unpredictable Stress in Torture;" Toch, *Human Breakdowns in Prison*, especially chaps. 6, 7, 9, 10; Lutze, "Ultramasculine Stereotypes and Violence," 189-198; Reuters, "Austrian Kidnap Victim."

expression – calls, gestures, etc. Distress calls are common among a great variety of species; some calls may be a spontaneous expression of a mental state, but some are intentional attempts to communicate, including attempts to call for help. In such cases the addressee is a conspecific, especially a parent, but it could also be a human being nearby, if the distressed animal is cared for by humans. Much of the scientific/technical knowledge about distress calls is concerned with exceptional moments of distress, such as the castration of piglets in farms, or predator attacks among wild animals. Some studies also focus on more prolonged incidents of distress, such as cold stress or social isolation in young animals.²⁴¹

However, it seems that the tendency to communicate distress declines with time, and therefore constant distress under prolonged captivity is hardly communicated. It is doubtful whether captive animals retain enough motivation to communicate or express emotions that result from the general conditions of industrial agriculture (and laboratories, some non-industrial farms, pounds, etc.). Maybe communicating such long-lasting distress has no adaptive value because it is futile and since captivity has not been a part of the species' evolution. Moreover, the agricultural minimization of the animals' control over their environment may give rise to learned helplessness, which suspends communication.²⁴² Such apathic animals would avoid using even their limited means of communication. Presumably, the sheer volume of industrial agriculture makes it the most

²⁴¹ Perrone, "Distress Calls in Passerines;" Lehr, "Distress Call Reactivation in Isolated Chicks;" Blumberg and Albers, "Incidental Emissions, Fortuitous Effects," 233-235; G. Marx, Leppelt and Ellendorff, "Vocalisation in Chicks;" 61-74; Manteuffel, Puppe and Schön, "Vocalization of Farm Animals;" Hillmann et al., "Vocalisation of Domestic Pigs;" Illmann et al., "Maternal Responsiveness of Sows."

²⁴² McBride, "Feral Animal Studies in Animal Science;" Fox, *Farm Animals*; Morgan and Tromborg, "Sources of Stress in Captivity." The term "learned helplessness" has been invented to describe the apathy that overcomes animals that have been systematically tortured whereas any of their attempts to stop the pain was futile. See: Seligman and Maier, "Failure to Escape Traumatic Shock;" Overmier and Seligman, "Effects of Inescapable Shock;" Maier and Seligman, "Learned Helplessness: Theory and Evidence."

pervasive case of spatially isolated distressed subjects who lack the motivation to communicate with the outside world.

The spatial limitations of direct expression are obvious. Most sites of animal captivity are beyond outsiders' hearing/sight distance unless one makes an effort to get into range. Once in range, the caring human outsider may miss many vocal, visual and olfactorial messages that are unique to the observed species and are inevitably overlooked without special education and equipment. Furthermore, as the distressed animals may not try to address the human observer or may even be apathic, recognizing distress may have to rely on indirect signs that are noticeable only through considerable proximity.

Another aspect of this topic is the outsiders' effort to cross distance and barriers. From the outsiders' perspective, getting close to a party in trouble and getting information about it may be motivated by moral considerations, curiosity, professional duty, journalistic ambition, etc. Overcoming space and barriers necessarily requires an effort. The journalist Robert Leger explains:

"In the United States, journalists sometimes go to jail rather than give up a source. We fight with public officials over records and meetings. We miss dates or a kid's soccer game to cover a breaking story. While we seek to tell our readers, listeners, and viewers what is happening in their community, their state, or the world, we find ourselves facing a public that questions our motives. But rarely are American journalists killed for asking questions and seeking truth."²⁴³

The effort to collect information may become much riskier in the face of a violent conflict, a guarded facility, a natural disaster or a highly sensitive secret. The international New York based group, Committee to Protect Journalists, has published a guide to reporting in dangerous situations. The booklet presents the following statistics:

²⁴³ Leger, "A Dangerous Job."

"[...] all the risks of reporting in a conflict zone comprise only a small part of the risks journalists face worldwide. In fact, for every journalist killed in crossfire, three are targeted for murder. Between 1993 and 2002, CPJ research indicates that 366 journalists have been killed while conducting their work; of that total, 60 journalists, or 16 percent, died in crossfire, while 277 journalists, or 76 percent, were murdered in reprisal for their reporting. The remaining journalists were killed on the job in other situations, such as violent street demonstrations. [...] in 94 percent of the cases, those who kill journalists do so with impunity."²⁴⁴

The booklet goes into details about security training, protective gear from body armour to armoured vehicles, medical protection, and issues such as "What is the single most important strategy for long-term captivity?"; "How do you recognize signs of posttraumatic stress?"; "How do you know when you are in danger from your own government?"; and "How do you survive in hiding?".

Such a wide array of risks may seem beyond the worries of people who search for information about the distress of nonhuman animals, although the active protection of wild animals can be very risky. Game wardens are occasionally murdered in the West, and according to The Game Rangers Association of Africa, "Excluding those killed during the civil war, around 80 game rangers have been murdered in the DRC [Democratic Republic of the Congo] whilst on patrol."²⁴⁵ Apparently, such a level of violence poses a great risk also to anyone who enters territories of heavy poaching, logging, polluting, etc. with the intention to learn how wild animals are harmed by these activities.

Notably, entering the facilities of animal industries and documenting harmed animals there seems remarkably less risky than the missions mentioned above. The many arrests of animal rights activists and dozens of jail sentences in the UK, the USA, Austria

²⁴⁴ Committee to Protect Journalists, *Guide to Reporting in Dangerous Situations*, 6.

²⁴⁵ "The Game Ranger."

and other countries are concerned with other allegations, such as damage to property. In the USA, however, the 2006 Animal Enterprise Terrorism Act may be interpreted against unauthorized documenters, undercover investigators or whistleblowers in any business that uses or sells animals or animal products, if the exposed information has resulted in economic damage. Such actions could be judged as acts of terrorism that carry a penalty of up to 20 years in jail.²⁴⁶ This law singles out acts on behalf of nonhuman animals as an object for an especially harsh treatment by the USA authorities. Hypothetically, it makes attempts to get close to commercially abused nonhuman animals more dangerous than any parallel act in behalf of humans in the West. In reality, however, American "animal enterprises" have rarely used the legal option against unauthorised documenter. I am aware of a mere single conviction (under an older law) for such an offence.²⁴⁷

Of course, a documenter that enters a farm, a slaughterhouse, etc. without permission or undercover may be at risk of violence from workers, guards or watchdogs. Animal rights organizations tend to be silent on the issue of violence; I do not know of any case of severe violence against a documenter in this context, although sporadic reports indicate "almost severe" violence, as well as the destruction of cameras.²⁴⁸ My impression is that violence is uncommon – perhaps because most documenters have not been caught in the act. Beyond violence, entering an industrial farm or a slaughterhouse

²⁴⁶ Animal Enterprise Terrorism Act of 2006. For a review of AETA, its implications and the preceding Animal Enterprise Protection Act, see: Potter, "Animal Enterprise Protection Act;" Potter, "Analysis of Animal Enterprise Terrorism Act."

²⁴⁷ The documenter is Adam Durand of the Rochester (New York) group, Compassionate Consumers. In 2004 Durand and his colleges sneaked into the largest egg farm in New York State, Wegmans, documented the lives of the hens and published the results as a short film, *Wegmans Cruelty*. Three documenters were arrested, and on 16 May 2006 Durand was convicted of trespassing but acquitted of more serious offences. He was sentenced to six months in jail, a year of probation, 100 hours of community service, and 1,500\$ in fines. See: York, "Hen Activist;" "Jailing a Cage-Free Activist;" "The Great Eggscapes;" "News and Events."

²⁴⁸ For example of such violence against documenters during an attempt to get close to geese in a force-feeding operation in Israel, see: "Fighting the Force-Feeders."

may be very stressful for people who care for the animals, and the strain on undercover investigators is obviously very heavy. Again, information about the personal price paid by investigators is rarely published.²⁴⁹ Another kind of risk is faced specifically by whistleblowers – losing the job in the facility following complaints about the treatment of animals or sharing the information with outsiders.²⁵⁰

This list of risks, endured by individuals who overcome the spatial isolation of animal industries in order to learn about the animals' distress and share the information, is threatening enough to stop most people from taking such a task upon themselves. At first glance, however, these risks may also seem trivial, compared to parallel missions concerning prisoners of war, prisoners of a totalitarian regime, civilians under occupation, or threatened wild animals in many developing countries. This impression may be misleading, and it may have to do more with the rarity of infiltrations into animal industries than with the actual risk. On the other hand, it may often be the result of the hegemonic status of the industries. Public exposures from the lives of animals do not pose neither economic nor legal threat severe enough to arouse a violent reaction. In fact, medium sized and small facilities are usually unguarded; and in any case, guarding and fencing has to do more with bio-security and fear of theft than with fear of documentation and exposure. Furthermore, investigations occur almost exclusively in peaceful western countries; maybe infiltrating relevant facilities in Africa or in China is much more risky, but it has probably not been done except for a few investigations into Chinese specialist

²⁴⁹ An exceptional report has been provided by Gail Eisnitz, a Humane Farming Association undercover investigator of slaughterhouses in the USA. Summing-up eight years of investigations, Eisnitz claims that the stress caused her cancer. Eisnitz, *Slaughterhouse*, 113-114. Another example, from personal communication: in 2001, an undercover investigator with the Israeli Society for the Abolition of Vivisection exposed the abuse of monkeys in a brain research laboratory at the Hebrew University, Jerusalem; the investigator, by then an MA student, was caught and as a result quitted the university and left Israel in fear of trouble. See also: Pickert, "Undercover Animal-Rights Investigator."

²⁵⁰ Eisnitz, *Slaughterhouse*, chaps. 1-3, 5, and especially pp. 31, 41, 47, 49-50, 57-58.

industries that export to the West (fur, dawn) or African industries that import from the West (live cattle and sheep).²⁵¹

Discussing the issue of overcoming the isolation of industrially exploited nonhuman animals, some oddities emerge. The first oddity emerges from the fact that getting close to farmed animals is supposedly easy – one only needs to apply for a job on a farm, a slaughterhouse, or some other agricultural facility. Unlike jobs that involve the coercive control of people, security clearance is not an issue in this kind of job – practically anyone would be hired (an occasional exception may be some vivisection laboratories or any facility that have been infiltrated and exposed). And as long as one does not intend to photograph, document for an exposé, whistleblow or complain, none of the above risks is relevant. Therefore getting close to farmed animals is itself rather easy, and the above discussion seems excessive. This claim implies that spatial isolation as such is not the major obstacle to the animals' visibility under industrial conditions. Nevertheless, applying for a job in an industrial farm or a slaughterhouse in order to learn about the animals' distress is still a considerable effort. It also involves active participation in harming animals. Therefore people who are interested in exploited animals for moral reasons are not likely to apply for an agricultural job simply to satisfy their curiosity; they would do it with an exposé in mind, which is risky. (Indeed, one may develop a moral interest in the animals after already working in an industrial facility as an ordinary employee, and therefore learn about the animals without a special effort. Yet such an all-too-rare twist would lead to resignation or to risky whistleblowing).

²⁵¹ Hsieh-Yi et al., "Report on the Fur Industry in China;" "Down at All Costs;" Sidhom, "Welfare of Cattle Transport;" Animals Australia's Investigations.

A second oddity in the discussion of industrially exploited animals emerges from the fact that there seems to be a professional authority on these animals. If such an authority does exist, we may conclude that there is systematic, extensive knowledge about the relevant animals by people who spent much time near them. This authority is not undercover investigators but animal welfare scientists or applied ethologists. In fact, large animal protection organizations such as PETA and HSUS often release the results of their major undercover investigations with a supportive "expert opinion".²⁵²

Surely, there is nothing exceptional about the authority of scientific experts over laypersons, or about NGOs' use of expert opinion as an authoritative support of their own research. It is also common that experts do not have the most intimate familiarity with the subject of their testimony, but they rather have more general knowledge that is allegedly applicable to the specific case.²⁵³ The issue here, however, is morally-relevant knowledge, which may require more than close familiarity with the animals and scientific methodology; it may also require moral attentiveness. Now, although animal welfare science / applied ethology has emerged after 1965 in response to the public moral concern and the resulting legal initiatives over the fate of farmed animals,²⁵⁴ and despite the moral motivation of some of the scientists in this field, this discipline remains all too involved in the exploitative industries. It would have seemed odd if a human rights organization, releasing a report on a specific prison in an occupied territory, gave much weight to the opinion of a scientist that specializes in experimenting imprisonment conditions on prisoners, or to a developer of prison technology and execution equipment.

²⁵² "What the Experts Say;" PETA to Allamakee County Attorney; "Officials Agreed: Agriprocessors' Cruel Methods;" "Statements from Scientific Experts;" "Expert Statements on California Slaughterhouse." See also: "Scientists and Experts on Force-Feeding."

²⁵³ Walton, *Appeal to Expert Opinion*.

²⁵⁴ Lawrence, "Applied Animal Behaviour Science."

In such cases it would seem obvious that close familiarity and systematic explorations are insufficient as conditions for the construction morally-relevant empirical knowledge.

The scientific knowledge in these disciplines is also odd in spatial terms: the relevant scientific authority is hardly based on direct familiarity with industrially farmed animals. Despite the role that the public and the governments have assigned to animal welfare science / applied ethology, the study of the actual animal industries has been of marginal interest to scientists. For example, the January-April 2009 issues of *Applied Animal Behaviour Science* (the leading journal in animal welfare science / applied ethology) include 53 papers that present an original empirical study in farmed species; 49 of these studies were made in non-industrial facilities and/or under special experimental conditions.²⁵⁵ The scientists prefer to study animals in distinctive research units, trying to isolate environmental, behavioural or genetic variables under controlled conditioned.

The reality inside commercial facilities – just as it is, without manipulation and experimentation – is a potential subject of scientific observation.²⁵⁶ Apparently, it is a common approach in the study of nonhuman animals in nature, and in the study of many aspects of human society. Yet regarding farmed animals, this approach is rarely taken, and the industrial reality has remained but one, minor subject of study in animal welfare science / applies ethology. Of course, some scientists may be closely familiar with commercial facilities (e.g.: many experimented animals are bought from industrial

²⁵⁵ *Applied Animal Behaviour Science*, vols. 116, 117, and 118. The count includes 44 studies inside a research station, but some of them do not specify the location, so it may be a special setting or a special treatment inside a commercial farm. Only one (additional) study mentions a special treatment inside a commercial farm. 4 additional studies took place on pastures – inside experimental farms. The other 4 studies took place in groups of commercial cattle farms in Austria, Switzerland and Germany. I did not include in the count studies on horses.

²⁵⁶ An example of such study: Dawkins et al., "What Makes Free-Range Broiler Chickens Range?" Not surprisingly, this pioneer study, which "measured habitat preference of the chickens, using a statistical method previously used for wild birds," did not examine intensive farming.

facilities) but it is not their expertise; such familiarity is similar to the experience of industry workers. Furthermore, the scientists qua scientists probably do not visit commercial facilities incognito, and their presence may influence the behaviour of the local workers; as a result, the scientists may not see the agricultural routine. Therefore the relatively large body of scientific knowledge in animal welfare has rarely overcome the isolation of industrially farmed animals.

Accordingly, and despite the rareness, randomness and shortness of undercover videos, scientists often express surprise at their content. As one of the most authoritative animal welfare scientists, Donald Broom wrote in response to PETA's video taken at Pilgrim's Pride slaughterhouse in Moorefield, West Virginia: "I have visited many poultry slaughterhouses but I have never seen cruelty to chickens to the extent shown in this video."²⁵⁷ In short, the authority of animal welfare scientists or applied ethologists is commonly used for expressing opinions about conditions that are beyond their direct professional capacity, and about the mental life of animals that the scientist has never witnessed. Using undercover investigations as an object for expert opinion, the subject-matter is a very restricted documentation by someone else who did witness the specific animals closely for much longer, yet may have little further relevant experience and knowledge.

The reasonable argument for the significant role of the scientific expert is that laypersons cannot understand nonhuman animals without the help of a specialist, because the animals are too unlike us; also laypersons cannot understand the conditions of industrial agriculture, which are so different from anything in nature and in human

²⁵⁷ "What the Experts Say." Broom is one of six experts cited in this document; four of them express surprise or declare that the documentation depicts the worst acts of cruelty they have ever seen against chickens.

society. In other words: difference is more significant than distance. But this use of authority also implies that proximity and direct observation are relatively insignificant in the case of nonhuman animals since they could be known well enough through generalizations about typical conditions and typical animal populations. There is a reasonable argument here, too: the industry does aspire for maximum environmental uniformity and simplicity, and maximum uniformity in the genetic composition of the animals. Therefore generalizations on farmed animals – including the results of experiments that imitate industrial conditions – must be better-founded than generalizations on any seemingly parallel human condition. In that sense, proximity and visibility are relatively insignificant for the production of morally-relevant empirical knowledge, since, for example, studying a commercial flock of Ross 308 chickens in Iowa seems to reveal almost everything that you need to know about a matching commercial flock in Thailand.

It should be noted here that the analysis of animal welfare science / applied ethology vs. undercover investigations is almost hypothetical because in fact expert contributions to undercover investigations have been very rare. Much more commonly and systematically scientists work within their professional milieu and keep strong ties with the industries. Some of them also contribute their opinion to policy planning at state level, and most notably in Europe.²⁵⁸ Here generalizations about the animal industries are

²⁵⁸The Council of Europe has set up The Standing Committee of the European Convention on the Protection of Animals, which started publishing papers in 1979. The European Commission has established an independent Scientific Committee on Animal Health and Animal Welfare in 1997, and it was replaced in 2003 by the panel on Animal Health and Welfare. The privileged role of scientists (including various disciplines of study in farmed animals) is well-established in these committees; all the members of at least the last two committees are scientists: "Scientific Committee on Animal Health and Animal Welfare – Members;" "Panel Members;" However, the members of Britain's Farm Animal Welfare Council have more versatile background but currently without any representative from an animal protection organization. (Source: "Council Members").

ever more prevalent, without reflection about the methodological validity of generalizations, since there is no actual competition with information collected through more intimate familiarity with specific farmed animals. Under such persistence of generalization and typification, the original moral motivation may collapse into technocracy. Addressing this problem in general, relevant here is Bauman's assertion that moral concern is essentially specific. In his view, all the objects of "cognitive spacing" (the arrangement of measurable physical distances) and the objects of "moral spacing" (the distribution of felt/assumed responsibility) "remain forever specific and irreplaceable; they are not specimens of categories, and most certainly do not enter the moral space in virtue of being members of a category which *entitles* them to be subjects of moral concern. They become objects of moral stance solely by virtue of having been targeted directly, as those concrete others out there, by moral concern."²⁵⁹ Bauman formulates this idea as a matter of either "specific" or "specimen", while I believe that in fact specificity declines *gradually*, and so does moral concern. In any case, positivist animal welfare scientists may agree with Bauman's sharp distinction and claim that they deal with facts, not values. But since in the political context no one gets closer to the animals than they do, the scientists are eventually the ones who decide what is morally important; and without specifications, their moral decisions remain amoral.

Back to the issue of *any kind* of morally-relevant empirical knowledge from inside the animal industries, the socio-historical question seems not to be about riskiness or authority, but rather: "who are motivated strongly enough to pay the price for this kind of information?" Apparently, such motivation is very rare. This has to do with self-interests and ideology, which I will discuss in the next sections. In the present context it is worth

²⁵⁹ Bauman, *Postmodern Ethics*, 165. See also: Stafleu, Grommers and Vorstenbosch, "Animal Welfare."

pointing out that overcoming distance and barriers requires motivation, which in turn has to be based on some preliminary information and a critical assessment of this information. Now, considering people in trouble, such as prisoners of war, many outsiders will not be too impressed by the captors' promise that the prison camp offers good conditions and the prisoners are all well. The elementary knowledge that a human being is imprisoned provides some concerned people with sufficient motivation to learn more, and eventually act to liberate the captives. Some exceptions surely occur; yet regarding nonhuman animals, the mere knowledge of their captivity provides almost no moral agent with sufficient motivation to act in their favour. If some people care about imprisoned nonhuman animals at all, their willingness to act is aroused by more elaborated information concerning appalling living conditions, suffering and deaths. Therefore if the animals are isolated efficiently, common social/moral values will tend to allow this isolation to linger.

The issue, however, is more complex. Guessing that an isolated party suffers is not too difficult unless we, the outsiders, are fed with false information that withholds further attention. Mediators become crucially important once the isolated party meets serious difficulties to communicate outsiders directly. The mediators – including the media, charities, rescue teams, scientists and official supervisors, as well as the power responsible for the practice of isolation – distribute information about the environmental conditions and the well-being of the isolated party. This allows much manipulation of information. Regarding isolated nonhuman animals, the mediators are the only source of information that ever reaches outsiders. Information that has been collected through clear moral interest is very rarely exposed. More influential information is produced by the

agricultural system and other authorities. Nevertheless, the most common sources of information are the ones that sell well or tell good stories, with no intention to tell either lies or truths: commercial images on animal products' packages, on ads and in TV commercials, in addition to similar images and descriptions in children's literature, films and TV shows. These images hardly have anything to do with the reality of actual isolated animals. The result is a massive, daily exposure to this kind of information in the modern West, especially during childhood.²⁶⁰ The image of happy animals in pastoral scenery is what everyone knows about the agricultural reality, and it does arouse no moral motivation to look further. Thus false information preserves the distance and the invisibility of farmed animals in industrial systems.

4.2. Varieties of difference

The great majority of the literature on interspecific ethics is concerned with difference. More precisely, it is concerned with the question whether there is a morally-relevant difference between all humans and all nonhumans, and sometimes between other biological groups. The language of the ethicist David DeGrazia is typical:

*"Universalizability and formal justice imply that we should grant equal moral weight or importance to everyone's (relatively similar) interests, unless there is a relevant difference between the beings in question. Of course, the principle of equal consideration asserts that there is no relevant difference among beings – or some set of beings, such as humans – that justifies giving their (relevantly similar) interests unequal weight."*²⁶¹
[Emphasis in the original]

²⁶⁰ Bowd, "Young Children's Beliefs about Animals;" Singer, *Animal Liberation*, rev. ed., 105-106, 214-217; Paul, "Animals on Children's Television;" Lerner and Kalof, "Animal Text: Message and Meaning;" Freeman, "Media's Construction of Animals in Agriculture."

²⁶¹ DeGrazia, *Taking Animals Seriously*, 51.

Most commonly in interspecific ethics, the alleged difference marks a dichotomy: one either has the crucial trait or she/it does not have it; and correspondingly, one either has moral status or she/it does not. Most of the discourse in this discipline is concerned with either including some nonhumans in the privileged group or excluding them from it. In other words: the discourse is about rejecting claims for morally-relevant difference or establishing such claims.

The crucial difference is commonly a simplified, single trait. Some ethical discussions allow gradual progression in the moral standing of the objects of moral reflection – especially when considering the value of life, freedom, and functioning;²⁶² gradual progression is also applicable to moral responsibility.²⁶³ Such appeals to gradualness blur the clear-cut distinction between those who deserve moral consideration and those who don't; gradualness, however, is not pluralism of values but rather a matter of degrees of one trait or few traits. Throughout the discourse of interspecific ethics, the crucial traits are predominantly mental: the ability to suffer and enjoy (e.g.: Bentham and Singer); having beliefs, desires, perception, memory, etc. (Regan's "subject-of-a-life criterion"); reason or rationality (e.g.: Kant); moral agency; etc.²⁶⁴

The traits that are supposed to establish moral standing are presented in the discourse as essential to moral issues independently of any social context. Yet in fact they are relative, as they relate as a matter of fact to ourselves – humans, normal, adult, civilized, and intelligent; they are concerned with the difference/similarity in relation to

²⁶² *Ibid.*, 231-257.

²⁶³ *Ibid.*, 61-65.

²⁶⁴ Bentham, *Principles of Morals and Legislation*, chap. 17, sec. 1, n122; Singer, *Animal Liberation*, rev. ed. 7-17; Regan, *Case for Animal Rights*, 243-248; Kant, *Groundwork*, sec. 2, pp. 76-85 (4:425-436); DeGrazia, *Taking Animals Seriously*, 65-71 (including a list of references in defence of moral agency as the crucial trait, 65-66).

ourselves, whereas difference or similarity mean excluding others from or including them in the moral realm.

It is doubtful whether establishing moral standing on difference/similarity stands philosophical scrutiny even when analyzing a local, specific moral perplexity. However, more relevant to the psycho-socio-historical analysis of difference is the overwhelmingly overlooked fact that dividing the animal kingdom in two – human vs. nonhuman – carries dramatic epistemological implications, as well as moral and practical grave implications. The focus on a single trait or a single dividing difference tends to draw much attention to facts that conform to this division, while diverting attention away from other important traits and differences. The perception of the phenomena is therefore strongly biased, whereas the world is arranged into oppositions that carry ideological and practical implications far beyond anything that a careful observation and analysis of the actual difference could justify. Obviously, though, the human/nonhuman division cannot be accounted for as a single difference. Yet the discourse of interspecific ethics tends to narrow it down into a rather constricted set of mental traits.

Jacque Derrida is a prominent critic of prevailing binary oppositions, including the very conceptualization of "animal" as a single entity that signifies an opposition to "human".²⁶⁵ Notably, he is careful not to challenge the worldview that does maintain a substantial divide between humans and nonhumans, that is, "the limit about which we have had a stomachful, the limit between Man with a capital M and Animal with a capital A. [...] the thesis of philosophical or common sense on the basis of which has been built

²⁶⁵ See: Calarco, *Animal from Heidegger to Derrida*, 137-139.

the relation to the self, the presentation of the self of human life, the autobiography of the human species, the whole history of the self that man recounts to himself."²⁶⁶

Derrida, however, is interested in "limitophy". Therefore he looks at the complications at the human-nonhuman limit, aspiring to "multiply its figures, to complicate, thicken, delinearize, fold, and divide the line precisely by making it increase and multiply."²⁶⁷ Through this perspective, the well-recognized differences (which Derrida labels "abyssal rupture") between "animal" and "human" are but a mere part of the entire picture. Derrida thinks that "The discussion becomes interesting [...] once the frontier no longer forms a single indivisible line but more than one internally divided line," and therefore:

1. "This abyssal rupture doesn't describe two edges, a unilinear and indivisible line having two edges, Man and Animal in general.
2. The multiple and heterogeneous border of this abyssal rupture has a history. [...]
3. Beyond the edge of the so-called human, beyond it but by no means on a single opposing side, rather than 'the Animal' or 'Animal Life,' there is already a heterogeneous multiplicity of the living, or more precisely (since to say 'the living' is already to say too much or not enough) a multiplicity of organizations of relations between living and dead, relations of organization or lack of organization among realms that are more and more difficult to dissociate by means of the figures of the organic and inorganic, of life and/or death. [...] It follows from that that one will never have the right to take animals to be the species of a kind that would be named the Animal, or animal in general."²⁶⁸

Derrida emphasizes a "critical uneasiness" regarding the common use of the generalizing term "animal":

"Confined within this catch-all concept, within this vast encampment of the animal, in this general singular, within the strict enclosure of this definite article ('the Animal' and not 'animals'), as in a virgin forest, a zoo, a hunting or fishing ground, a paddock or an abattoir, a space of domestication, are all

²⁶⁶ Derrida, "Animal That Therefore I Am," 397.

²⁶⁷ *Ibid.*

²⁶⁸ *Ibid.*, 398.

the living things that man does not recognize as his fellows, his neighbors, or his brothers. And that is so in spite of the infinite space that separates the lizard from the dog, the protozoon from the dolphin, the shark from the lamb, the parrot from the chimpanzee, the camel from the eagle, the squirrel from the tiger or the elephant from the cat, the ant from the silkworm or the hedgehog from the echidna."²⁶⁹

This critique of epistemic generalizations and oversimplifications clarifies some of the bias in the division of the moral world into humans and nonhumans, or those who have a unique human trait vs. those who do not have that trait. This bias, as Derrida acknowledges briefly,²⁷⁰ carries dramatic moral implications, since the distinction between the moral standing of humans and the moral standing of nonhumans relies on the epistemic distinction between the groups (in fact, the moral and the epistemic distinctions reinforce each other). Everything that is unique to some species of nonhuman animals, to some community of animals, to individual animals, or to the life circumstances of the species, the community or the individual – is forced out of the moral discourse into the domain of nature or zoology, where morality is deemed irrelevant. When some nonhuman animals share morally-relevant traits (according to a specific theory) with humans – the facts are ignored. Shared social human-nonhuman reality is ignored or undermined, and it is rather considered as ecology or economy, or a projection of exclusively human affairs. And shared traits, such as emotions, are undermined in general, as they are considered low (or "animal") in humans as well as in nonhumans. Correspondingly, dissimilarities and other gaps between humans and any other animal species, in morally-relevant traits and circumstances, are overemphasized.

It is important to stress that a moral-philosophical discussion on the division of the moral world into humans and animals, or an epistemological discussion on this division,

²⁶⁹ *Ibid.*, 402.

²⁷⁰ *Ibid.*, 416.

are abstract analyses; such discussions may reflect some social views and practices, yet they certainly cannot be accepted as descriptions of the psycho-socio-historical reality. From this mundane perspective, divisions could correspond with the philosophical division, yet they could be either deeper or less clear-cut.

Regarding the psycho-socio-historical point of view, an introductory comment should be made. Those who are the most similar to us are the ones that we can usually understand the best – an understanding that contributes to moral competence when addressing moral questions on these others. We are familiar with their mental and physical traits, including needs, desires and vulnerabilities; we can easily recognize what may affect their wellbeing, including environmental, social and personal circumstances; and we can easily recognize their more or less articulate reactions and understand their meaning as indications of satisfaction, happiness, frustration, fear, anxiety, etc. Similar parties are also easily communicated, compared to less similar parties under the same conditions. This enables a relatively effective inquiry into their past and present condition and future expectations. (All these advantages may not overcome the philosophical scepticism concerning other minds, but their pragmatic value is apparent, i.e.: enabling to anticipate behaviour and other expressions).

Apparently, the differences between any two parties are endless. At the same time, it seems that good will and effort often enable us to overcome radical differences. Such efforts may include: learning morally-relevant facts about the other party and getting enough facts for making a valid moral judgement concerning it; accepting otherness; socializing with the other party; blurring the distinctions; acquiring some of its differentiating traits; etc. Which differences are actually overcome and in what sense –

this is a specific question that depends on the groups involved, the social circumstances and the differences under discussion. Therefore it is necessary to leave generalizations behind and move on to examine specific issues concerning specific groups of animals. Yet it is important to remember that the vast majority of human efforts to overcome differences have been invested in differences among human groups. Unfortunately, intra-human differences are often unlike human/nonhuman differences in many important aspects; nevertheless, it is the history and sociology of human affairs that serves as a model for projects of overcoming differences.

Even seemingly simple efforts to overcome differences among humans are in fact rather complex. Language translation across different cultures is a prominent example. In section 3.5. I mentioned translation as a core of misunderstanding; in the present context, the politics of translation should be stressed. Since translation is not a copy but rather a re-creation of the original text, it is susceptible to influences that have emerged in the process of its creation. A linguistic gap represents differences beyond language – in culture, values, history, social structure, environmental conditions, etc.; and accordingly, a translation reflects the cultural, political and sometimes military relation between the two cultures. Referring to translation in the colonial context, the literary theorists, Susan Bassnett and Harish Trivedi, explain that "translation is a highly manipulative activity that involves all kinds of stages in that process of transfer across linguistic and cultural boundaries. Translation is not an innocent, transparent activity but is highly charged with significance at every stage; it rarely, if ever, involves a relationship of equality between

texts, authors or systems."²⁷¹ Good will and effort, however, can lead to a meaningful translation of the most alien texts:

"Translation has been at the heart of the colonial encounter, and has been used in all kinds of ways to establish and perpetuate the superiority of some cultures over others. But now, with increasing awareness of the unequal power relations involved in the transfer of texts across cultures, we are in a position to rethink both the history of translation and its contemporary practice. Cannibalism, once the ultimate taboo of European Christians, can now be put into perspective, and the point of view of the practitioners of cannibalism can be put through the medium of translation."²⁷²

Reflecting on human-nonhuman relationships in this context, the best candidate for a translation equivalent seems to be careful direct observation, using the best of insights that cognitive ethology and animal welfare science can offer. Needless to say, this technique is by far less accurate and more prone to bias and manipulation than the translation of a cannibal's text. A further difficulty prevails even when once again we turn to the more promising communication between foreign human groups: there is a long way between putting very alien cultural practices in perspective, and developing an effortless intuitive understanding of the members of that culture. A substantial work is needed to develop a spontaneous feeling of the alien others' needs, desires and vulnerabilities concerning the issues at hand.

Biological differences between parties enhance the difficulties of knowing others. Nevertheless, these differences *as such* do not determine the level of difficulty. That level is rather determined by the combination of both the biological difference and the manner in which it is perceived and treated in practice. In section 1.5. I presented in some length critical reflections on the socio-historical construction of social groups (including groups

²⁷¹ Bassnett and Trivedi, *Post-Colonial Translation*, 2. See also: Tymoczko and Gentzler, *Translation and Power*.

²⁷² Bassnett and Trivedi, *Post-Colonial Translation*, 16.

of nonhuman animals) in the framework of naturalizing oppressive social relations. Social construction vs. essentialism is also central to the question of difference. Even differences that seem simply biological/natural in physical structure and performance lose their sharpness under close scrutiny. For example, many studies show that much of the actual difference in physical strength between men and women is a result of the way that the social environment encourages men to be more active than women – rather than a result of predetermined, innate difference.²⁷³ Similarly, disability activists and theoreticians point at the social construction of disability. Although some physical conditions, such as dysfunctioning legs, make some people physically different from most people, their freedom of movement and social integration depend to a much greater degree on the social acceptance of the difference, the economic investment in the design of human environment, and the construction of artificial environment and instruments.²⁷⁴

Epistemically, no trait of another party could be observed without the burden of our own conceptions, interests, values and ideas. And ontologically, in social beings no complex trait is a pure product of heredity and physical environment, but it is also a product of the social environment (and inasmuch as occasional sexual encounters are regarded as social, any animal is social – since free animals are born to a mother who had a sexual encounter with a father, regardless of solitary habits throughout adulthood). Nevertheless, the largest share of the popular, philosophical and scientific thought about nonhuman animals uncritically assumes some specific, fixed conceptions of their differences from us humans. The differences are regarded as predetermined, homogenous biological-natural-essential facts that do not require any social analysis and critical

²⁷³ Lowe, "Dialectic of Biology and Culture;" Hubbard, politics of Women's Biology, especially chap. 11.

²⁷⁴ Silvers, Wasserman and Mahowald, *Disability, Difference, and Discrimination*, 3, 15-16, 148-49, 178-80, 186-9; Koch, "Disability and Difference;" Koch, "The Ideology of Normalcy."

reflection. Yet as Derrida's comments (see above) imply – this naïve essentialism is ideological. Therefore I will attempt to examine further how cultural construction enhances human/nonhuman differences, and how it could override differences.

The differences in mental life or experience carry crucial moral significance under most theories of moral philosophy and modern common sense. So what aspects of these differences are socially constructed? Thomas Nagel's "What is it Like to Be a Bat?" is a prominent example for overstated essentialism in the service of difference formation. Notably, the essay's initial question and predictable answer (we don't know!) aims at an "abyssal rupture" between the entire mental lives of humans and bats.²⁷⁵ Nagel establishes the rupture, however, on specific biological claims, and therefore his essay is interesting as an example of the construction of natural/biological traits. The essay (which attempts to refute physical reductionism in the study of subjective experiences) takes bats as an archetype of alien life form, claiming that we humans cannot possibly know what bats' experiences are like. Nagel provides a convincing list of traits as an explanation for his choice:

"I have chosen bats instead of wasps or flounders because if one travels too far down the phylogenetic tree, people gradually shed their faith that there is experience there at all. Bats, although more closely related to us than those other species, nevertheless present a range of activity and a sensory apparatus so different from ours that the problem I want to pose is exceptionally vivid (though it certainly could be raised with other species). [...]"

²⁷⁵ Nagel's essay is not concerned with the *moral implications* of his assertion that we do not know what it is like to be a member of another species. Nevertheless, if his assertion is right, we surely lack much morally-relevant empirical knowledge about such animals, and this ignorance may be critical when attempting to solve ethical perplexities concerning them, since we may not know what is good or bad for them in specific circumstances. Many people use this problem as an excuse for excluding nonhumans from the universe of moral concern. This, however, is certainly not a reasonable moral conclusion, since morally-relevant knowledge is not restricted to "what is it like to be...". We do have many, many systematic and coherent *assumptions* on the mental lives of animals of very alien species; such assumptions are developed by animal welfare science and other disciplines.

Now we know that most bats (the microchiroptera, to be precise) perceive the external world primarily by sonar, or echolocation, detecting the reflections, from objects within range, of their own rapid, subtly modulated, high-frequency shrieks. Their brains are designed to correlate the outgoing impulses with the subsequent echoes, and the information thus acquired enables bats to make precise discriminations of distance, size, shape, motion, and texture comparable to those we make by vision. But bat sonar, though clearly a form of perception, is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine."²⁷⁶

Nagel presents this list of permanent differences as a proof for the inaccessibility of bats' inner life:

"It will not help to try to imagine that one has webbing on one's arms, which enables one to fly around at dusk and dawn catching insects in one's mouth; that one has very poor vision, and perceives the surrounding world by a system of reflected high-frequency sound signals; and that one spends the day hanging upside down by one's feet in an attic. In so far as I can imagine this (which is not very far), it tells me only what it would be like for me to behave as a bat behaves. [...]

To the extent that I could look and behave like a wasp or a bat without changing my fundamental structure, my experiences would not be anything like the experiences of those animals."²⁷⁷

These armchair assertions presuppose that an individual's experience is determined uniformly by heredity, with no account to the change of the individual's experiential world as a result of her specific (and to a large degree socially and environmentally constructed) experiential life history. If this was true, then other minds are either comprehensible to you or they are alien and incomprehensible – and there is nothing you can do about it.²⁷⁸ The only relevant question is whether you were born similar enough to avoid alienness. If, however, shared personal history and close, empathic familiarity

²⁷⁶ Nagel, "What is it Like to Be a Bat?" 438.

²⁷⁷ *Ibid.*, 439.

²⁷⁸ I deliberately refer to alienness and incomprehensibility and not to the *inaccessibility* of other minds because if the inaccessibility of other minds was the entire issue, Nagel should not have bothered to appeal to bats for an example – any other mind could do, since any other mind is categorically inaccessible, whether a bat's or your twin's. The appeal to bats is convincing, however, because unlike inaccessibility, the *alienness* or *incomprehensibility* of other minds is a matter of degree, and bats seem especially alien from a human point of view.

affect the degree of alienness among humans, then biological, "fundamental structure" is only a part of the picture. In fact, "fundamental structure" itself is possibly changeable, and therefore we may become more or less similar to one another. Even Nagel's attempt to use a "safe" example of a species that seems totally unlike our own wanes in the face of particular facts. His extreme example calls for a unique counterexample: in a personal account in *New Scientist*, Daniel Kish, a blind man from infancy, describes how he uses echolocation (clicking his tongue and listening to the echoes) as an efficient sense that enables him to find his way in the world and even ride a bike. Kish has developed this skill spontaneously very early in his life, and now he successfully teaches the skill to others.²⁷⁹

Kish's skill refutes Nagel's assertion that sonar "is not similar in its operation to any sense that we possess, and there is no reason to suppose that it is subjectively like anything we can experience or imagine."²⁸⁰ In Nagel's terms, Kish is more familiar than most people with what it is like to be a bat. In fact, in this particular sense, Kish is somewhat more *like* a bat than most people (of course, no one knows whether Kish experiences echolocation like bats do, or his many typical human traits make the experience very different; yet the point is that ecolocating was supposedly among the most prominent traits that make bats so different from humans). The lesson here is not that human "fundamental structure" changes from person to person (which is true as well) but rather that the hereditary potential allows versatility of realization through external conditions and through training. Kish demonstrates this insight clearly, speculating that "Humans probably used to rely on echolocation far more in the days before artificial

²⁷⁹ Kish, "Echo Vision."

²⁸⁰ Nagel, "What is it Like to Be a Bat?" 438.

lighting, when we had to find our way round in the dark. The readiness with which people learn sonar suggests to me it may be an inbuilt skill."²⁸¹ Nevertheless, sighted, modern, urban people, such as Nagel, do not even imagine such a biological potential in themselves.

One of the implications of this discussion is that even species differences may be diminished to a greater degree than we usually believe; or rather that the impression that some human/nonhuman differences make an "abyssal rupture" relies on changeable biological facts and on a changeable point of view. *This does not make the rupture less real, but rather less essential.* For the sighted, modern, urban philosopher, echolocating is fundamentally alien indeed, and the special, unheard-of efforts that are needed for learning to use echolocation may seem as bizarre and challenging as changing one's own "fundamental structure" by means of medication, surgery or even magic.

Overcoming human/bat differences is rarely a task of moral significance, but many other species are fully relevant to moral discussions since they are commonly exploited. With so many species, it may be helpful to scale them by degree of similarity or dissimilarity, keeping in mind that even though differences contain socio-historical elements, overcoming many of them requires a great deal of good will, effort and special conditions, which are uncommon. Therefore the differences that we should consider here correspond to the actual common conceptions of a specific culture – and not to the potential of diminishing some of the differences. Keeping this comment in mind, the "scale of difference" does not necessarily follow phylogenetic classification. Functional similarities are sometimes much more significant than taxonomic kinship. Human-like size, sociability, omnivorousness, diurnality, terrestriality, etc. are often more significant

²⁸¹ Kish, "Echo Vision."

than being a primate, or even a mammal. Pigs are in many ways more human-like than the tiny, leaper, huge-eyed Philippine tarsier (a primate), and macaws are functionally more similar to us than water shrews (mammals).

Nevertheless, concerning commonly exploited species, a scale of difference that takes functional traits into consideration would probably correspond to biological taxonomy: farmed mammals are perhaps more similar to us functionally than farmed poultry, and farmed fish are certainly further away on the scale. The classification according to taxonomic and functional differences combined – rather than solid moral argumentation – may help to explain why some people call themselves "vegetarians" whereas they eat birds, and why even more "vegetarians" eat fish. Similarly, animal welfare legislation worldwide tends to be more attentive to mammals than to birds, while fish are largely ignored. These patterns of abstention and legislation are motivated by many factors, but the moral element is a major one. Indeed, moral arguments for these patterns are prevalent, and it is hard to tell where a non-moral reaction to dissimilarity ends and where a moral argument begins. For example, is the relative disregard of fish an intuitive reaction to their difference and invisibility, or is it the result of a conscious conviction that fish suffer less than mammals? Moreover, when the claim that fish have limited emotional abilities serves as an argument for less consumer and legislative concern for them, is this conviction carefully thought of and scholarly based, or is it a rationalisation based on the bias inspired by difference and invisibility?

The patterns of abstention and legislation are also heavily affected by economic considerations. Interestingly enough, major economic considerations correspond to the scale of difference. For example, entire cultures abstain from eating pigs; and if the

anthropologist Marvin Harris is correct, the origin of the religious prohibition on eating pigs has been derived from the economic impracticability of keeping domestic pigs in arid countries, since they cannot feed on grass and hence they "compete" with humans on scarce grains.²⁸² This economic argument applies as a matter of fact to a human/pig functional similarity, compared to cattle and sheep that thrive best on plants that we do not digest (and they may also be exploited for milk). This does not mean, however, that the human/pig relative similarity has prompted any moral interest concerning them; in fact, they have been paradoxically saved from farming and killing thanks to the special *low* status of "uncleanness". In short, it seems that the human/pig relative similarity coincides *accidentally* with economic considerations. Accidental match is also the probable explanation for the fact that the treatment of farmed animals as a vegetable-like mass or as industrial raw material is at its worst in fish, while large farmed mammals are treated more like individual animals.²⁸³ Surely, many species other than pigs are not eaten by Jews, Muslims, and others. Similarity to us humans or close relations with some of us are not reasonable explanations to most of these abstentions, since many of these species, such as shellfish and most insects ("unclean" for Jews) are both unfamiliar to humans

²⁸² Harris, *Cannibals and Kings*, chap. 11; Harris, *Good to Eat*, chap. 4.

²⁸³ I believe that the relatively more individuated treatment of large farmed mammals is a pragmatic adaptation to their large size, slow growth rate and slow breeding. Similarity to humans and moral concern seem not to be a factor here, as the industrialization of cattle and sheep has probably never stopped for moral considerations (morally-motivated legal restrictions are typically a result of public *reaction* to existing agricultural reality). I am not aware of any facts that indicate that if cows could breed and grow as fast as chickens, the agricultural system would have stopped from industrializing them like it did to chickens. Similarly, the fact that fish are treated as a mass with no reference to individuals whatsoever, whereas chickens may sometimes attract individual attention (e.g. when a farm worker detects dying individuals) is the result of the technical fact that farmers do not see underwater as they do see in a terrestrial shed. In fact, chicken farming is generally more industrialized than fish farming (but again, this is a result of technical considerations). Having said that, it is noteworthy that the pioneering attempts to implement some unnatural, abusive agricultural practices, such as artificial milking or artificial incubation, have provoked some morally-motivated protest within the contemporary agricultural community. But the protest has soon faded away while economic considerations and new habit took over. For a historical elaboration on the industrialization of animals, see: Tsovel, "Alienated Contact."

and very unlike them. Harris explains all these "food taboos" in terms of sensible economy and ecology – uneaten species are too valuable to eat, or useless as a source of meat.²⁸⁴

Other anthropologists assign a much greater importance to issues of classification and meaning, in which difference/similarity are among the major factors. In his book on the symbolic meaning of meat, Nick Fiddes concludes that the globally widespread aversion to the meat of many species is a result of their morphological and/or functional similarity to us (as well as their special closeness and familiarity – in the case of pets and working animals). Carnivores, monkeys, and domestic rodents are allegedly similar to us – carnivores share with most humans their eating practices (which are overstressed for symbolic reasons); monkeys look very similar to us and are considered as kin; and rats and mice live in our homes and eat our food. Therefore eating these species would be *metaphorically equivalent to cannibalism*.²⁸⁵ (Of course, the taboo on cannibalism itself calls for an explanation – which would focus mainly on social stability, as well as on similarity).

We see that the analysis of difference/similarity is sometimes interrelated with issues of visibility, closeness and familiarity. These interrelations are fundamental. Looking back at Nagel's text on bats, one of his short comments is revealing: "anyone who has spent some time in an enclosed space with an excited bat knows what it is to encounter a fundamentally *alien* form of life."²⁸⁶ If this sentence sums-up Nagels' own

²⁸⁴ Harris, *Cannibals and Kings*, 201-203.

²⁸⁵ Fiddes, *Meat: A Natural Symbol*, chap. 9. Metaphorical cannibalism is not the only symbolic factor – following Mary Douglas, Fiddes also refers to classificatory ambiguity as a source of cautiousness in eating habits, and claims that mice and rats are among the species that are hard to classify (domestic/wild) apart from their functional similarities to us.

²⁸⁶ Nagel, "What is it Like to Be a Bat?" 438.

familiarity with bats, then it reveals that bats are alien to him – as to almost any other human being – not only because of the great differences between the human body and behaviour and the bat body and behaviour, but also because they are virtually unfamiliar. Under such conditions, difference and unfamiliarity blend easily, while any differencing element attracts special attention and gains extra weight. A bat in an enclosed space is more alien than a domestic cat in identical circumstances not only due to physical and behavioural greater bat/human dissimilarities, but also because of our social relations with both species. Many of us are quite used, for example, to cats reclining inside the top drawer of the bedroom closet, but a bat hanging from the bedroom curtain is unlike anything that most of us have seen. Indeed, a horizontal drawer is more bed-like than a vertical curtain; nevertheless, in a possible world where bats normally occupy human homes and cats are wild, elusive, nocturnal predators – or better, unfamiliar at all – finding a cat sleeping in the top drawer would dramatically enhance the weight of any difference.

Regarding humans, *familiarity turns into similarity* quite easily. Friends develop shared interests; married couples develop similar habits and beliefs; immigrants slowly become like the locals; and even conquerors may assimilate into the conquered culture. All these similarities are not exclusively mental – shared culinary habits, physical activity and some environmental factors practically mould the body. At first glance, these examples of deep involvement seem contrary to the objective, uninvolved demands of both informational and moral inquiries. Certainly, most of the scientific discourse assumes that empirical knowledge is best attained by uninvolved observation and experimentation; and much of the moral discourse assumes that uninvolved reason should

reach the best moral conclusions. The first subject deserves a thorough critical analysis, which is beyond the scope of this dissertation, and the second subject is at the heart of the second chapter. In the present context I would mention only the prominent breach of uninvolved objectivity within science – the methodology of participant observation in ethnography and other humanist disciplines. Since the early 20th century, at least, observing people through involvement with them has been acknowledged as a methodology of acquiring empirical knowledge about them – even though the observer and her methodology endure a constant tension between the scientific ethos and the personal assimilation into the subject of research. Therefore participant observation is always under suspicion by both the scientific community and the observed community. The sociologist Danny Jorgensen summarises the risks and benefits of participant observation from a scientific point of view:

"In everyday life, there is a fine line between who we pretend to be and who we are. Traditionally, participant observers have been warned about crossing the line. The participant observer who does this is said to have 'gone native' or 'become the phenomenon'. [...] When this happens, the researcher may be lost to the community of science perhaps never to return; [...]"
One of the principal advantages of participating while observing, however, is the possibility of experiencing the world of daily life as an insider. Sometimes this only can be accomplished by becoming the phenomenon and experiencing it existentially.
Membership is a privileged point of view, and ultimately it is acquired only by lived experience."²⁸⁷

The "fine line" in Jorgensen's description is conventional. In reality, the observer has "gone native" to some degree way before crossing the line. In terms of difference, participation, unlike ideal uninvolved observation, is a process of change: the observer

²⁸⁷ Jorgensen, *Participant Observation*, 62-63. See also the next two pages, and: Angrosino and Perez, "Rethinking Observation: From Method to Context."

becomes somewhat more similar to the observed. Successful scientists keep the change under the control of their original identity; yet a more dramatic change is often a risk.

Such a risk is by far less likely in the case of studying nonhuman animals. Unlike wives and husbands, people hardly become similar to the dogs and cats they live with. Similarly, most zoological observations are effortlessly uninvolved, and the very idea of participant observation is still avant-garde. The anthropologist-philosopher Barbara Noske has identified the potential of importing anthropological methodology into the study of nonhuman animals:²⁸⁸

"If the science of anthropology would shed its a priori notion of animals as beings unworthy of anthropological approach, and would share its insights with critical ethologists, it might grow into an integrated science of humans and animals alike under the name of anthropo-zoology or zoo-anthropology."²⁸⁹

Noske presents a list of exceptional people, "not many of them mainstream scientists," who have tried "to participate in animal societies and to understand the meaning animals give to the world. To do this one must try to empathize with animals, to imagine what it is to be a wolf, a dolphin, a horse or an ape."²⁹⁰ Nevertheless, had the effort been restricted to imagination, these works would have been no more than an illustration to Nagel's claim that we cannot know what it is like to be a member of another species since we are too different. The pioneers of this kind of zoo-anthropology – much like anthropologists who encounter people that speak an unfamiliar language – have made efforts to understand the communication systems of the animals, and also learned how to *use* these systems despite their human body. Communicating with wolves by means of

²⁸⁸ Noske, *Beyond Boundaries*, chap. 7

²⁸⁹ *Ibid.*, 170.

²⁹⁰ *Ibid.*, 167.

"wolf language" and letting them lead the shared experience add up to a substantial step into knowing wolf experience, or into becoming a wolf, so to speak.

Surely, communicating with animals in their "language" is only a step towards greater similarity. Noske stresses that the key to go ahead through such steps is the willingness "to meet the animals on their own ground instead of expecting them to take steps towards us and making them perform according to our standards."²⁹¹ (Such expectations must be the reason why the close relations with pet cats and dogs hardly ever make people even slightly more similar to them). Now, even exceptional researchers *initiate* their own participant observation. And when they study nonhuman animals, they do not move in with the animal community – unlike many ethnographers (at best, zoologists leave their home community and establish a human camp in the area around their subjects). Therefore "meeting the animals on their own ground" remains the free choice of the researcher – a choice made from the privileged and alien position of ordinary human life.

Some very rare people, however, did have neither free choice nor a human society to go back to, and as a result they became remarkably more similar to their nonhuman adopters. These people are feral children that have been raised by wolves, gazelles, and some other species of mammals and birds. Noske dedicates most of her review on the "anthropology of animals" to the rare (and not very reliable)²⁹² reports on feral children. Apparently, some of these children have been perfectly socialized into the adoptive pack or herd. The children did not only communicate well as wolves, etc., but their body has also developed characteristics of the adoptive species, such as superhumanly keen senses,

²⁹¹ *Ibid.*

²⁹² See: Ward, "Children Raised by Wolves."

indifference to weather, very high speed, and quadrupedal posture; and they behaved accordingly – sniffing the air for danger, eating directly from the ground, etc. Eventually, they have seemed to *experience* the world much more like their adoptive species than like ordinary humans. Noske concludes: "In becoming one of the animals by virtually crossing the species boundary, these human beings not only have met the Other, they have almost become the Other."²⁹³ Needless to say, being adopted by sheep is too high a standard for any zoo-anthropologist who wishes to study sheep, but the ideal of feral children indicates that overcoming much of the difference is a matter of circumstances and effort.

The case against the essentialist views on the scale of difference needs further elaboration from another perspective. As we have seen, differences – including the ones that we perceive as either taxonomic or functional – are not fully and uniformly predetermined by nature in a narrow sense (i.e.: by heredity). Life circumstances also affect differences. Normal humans in a well-ordered society share with many sentient animals in nature basic freedoms such as: freedom of movement and choice of whereabouts, freedom to perform social, sexual and parental choices, and freedom to choose what to do in general. These freedoms are very unlike life in captivity; yet the free life of a wild animal is also unlike the free life under civilization (e.g.: a pet's life). The human life in a gatherer-hunter society is very much unlike our own life, and in many substantial aspects it is more similar to the life of some wild animals. As our closest living evolutionary relatives, apes demonstrate in the wild many similarities to pre-civilized humans; but even a purely functional similarity is substantial, as is the case of wolves. The zoologist Juliet Clutton-Brock stresses the remarkable similarity between the

²⁹³ Noske, *Beyond Boundaries*, 167.

two species during the last ice age, claiming that "it is a biological link based on social structure and behaviour patterns that are closely similar because they evolved in both species in response to the needs of a hunting team."²⁹⁴ Clutton-Brock follows this strong link through the domestication of wolves into dogs, and she claims that the link "endure[s] today and have become adapted to life in sophisticated, industrial societies."²⁹⁵ Hence the human/dog similarities derive from the original link; but contemporary pet dogs share with humans many aspects of life (and subsequent similarities) that are as alien to their canine ancestors as they are to our own ancestors: living in air-conditioned homes, using doors, sleeping on beds, watching TV, being driven in cars, keeping away from traffic, etc.

Much of a contemporary pet dog's life is very familiar to us, and some aspects of it are also significantly similar to our life. The integration of dogs and cats into our domestic life, however, is unique. Even pets of other species are most commonly kept in cages and therefore they live very different lives, especially when it comes to birds who would use a vast living space if released. Now, the life of industrially exploited animals is by far more alien to us – farmers included. Indeed, farmed animals (and especially birds) do live in artificially-lit, climate-controlled buildings, surrounded by artificial devices which they sometimes have to operate (e.g.: nipple drinkers), and they eat artificially manufactured food, consume drugs and get driven by vehicles. In that sense their life is modern like our life and unlike the life of their wild species members. Lacking freedom, however, the similarities to either modern human life or to wild life are superficial. The list of overwhelming differences is undoubtedly the crucial one. An extremely

²⁹⁴ Clutton-Brock, *Natural History of Domesticated Mammals*, 49.

²⁹⁵ *Ibid.*

overcrowded living space, a constant and inescapable interaction with peers, living constantly on feces and urine, having an exceedingly minimal control over your environment, a total dependence on the artificial life-supporting system, an utterly uniform age group, an awfully dull environment, constantly coping with disability and illness, a frightening occasional appearance of a farmer, and eventually a series of violent attacks between the farm and the slaughter device – all these are central elements in the reality of industrially farmed animals. Nothing in this reality and life experience is similar to the reality and life experience of these species in the wild, and as a result, an industrially farmed animal is a substantially different animal than a wild animal of the same species.²⁹⁶ Therefore the question "*what is it like to be a chicken?*" is meaningless because it is biologically based with no reference to the effect of different conditions on "being like". The question "what is it like to be a wild chicken?" is an entirely different question than "what is it like to be an industrially farmed chicken?" (And there are countless intermediate versions in between these extremes).

In addition, none of the elements that describe the lives of industrially farmed animals is similar to our own normal life experience. Most of the above list, however, could be integrated into a description of the life of prisoners in exceptionally harsh prisons – especially if the prisoners have no idea why were they locked up and what does await them. Evidently, some crucial differences do persist: the human prisoners have memories of freedom and a concept of freedom, they anticipate far future events that may provoke fear, despair, hope or detachment from the present, they do not suffer from

²⁹⁶ Admittedly, the analogy is more complicated since domestication and artificial selection have caused major biological changes that make the farmed/wild analogy inappropriate. Even a farmed/feral analogy is inappropriate since artificial selection has deprived the animals of their survival abilities if released to the wild.

hereditary disabilities, etc. Without overlooking the differences that remain between humans and, say, chickens under similar imprisonment conditions, it is nevertheless reasonable to surmise that such prisoners are more similar than ordinary people to industrially farmed animals. Similarities may be found in a wide range of mental and physical adaptations and reactions, perhaps including constant anxiety, despair regarding any control of your fate and environment, indifference to a certain low level of hygiene and crowdedness, no seasonal and day/night awareness, etc. Surely, almost any member of a well-ordered society has some first-hand familiarity with anxiety, learned helplessness, adjustment to filth and overcrowdedness, or losing track of the natural cycles – and this familiarity should be enough to make these concepts meaningful to her, factually and morally. But just as babysitting here and there does not teach you much about the experience of motherhood, so is the ordinary human experience too alien to the experience of industrially farmed animals. Consequently, *all other things being equal*, the similarities put the victims of harsh imprisonment in a better position than ordinary people to know some significant aspects of "what it is like to be an industrially farmed chicken", as well as to acquire cognitive empirical knowledge about these birds.

So should animal welfare scientists get arrested and thrown to the worst prison in order to be better animal welfare scientists? And should philosophers do the same in order to be better ethicists? Perhaps we all should; but we wouldn't – and this is the core of what makes some socially constructed differences impossible to overcome. This is not an essentialist impossibility regarding the alteration of biological facts, but rather a psycho-social impossibility to go through experiences that no one would agree to endure. No person in her right mind would like to become similar to an industrially exploited

animal. In fact, despite the prevalence of much stronger motivations to know what, say, gulag prisoners have gone through, hardly anyone would like to become similar to them, as means of factual inquiry. It seems that you do not need to know that much in order to develop a deep abhorrence against anything that has to do with such an imprisonment system. Confronting such self-evident evil, increasing similarity to the victims seems an excessive, senseless methodology of inquiry. When evil reaches such heights, it seems that no further detail you may learn about it could justify this evil against other interests. Something seems wrong even with studying the nuances of that evil in an attempt to reduce local elements within it. And if the last assertion is right, the entire project of animal welfare science is wrong.

4.3. Ideas of industrial domination and exploitation

Domination and exploitation are conceptually distinct: the first category is about limiting the freedom of another party, while the second is concerned with taking something unjustly from it. One may be exploited without being dominated (e.g. in a financial transaction) and similarly one may be dominated without being overtly exploited (e.g. in an ordinary prison). Domination and exploitation, however, are commonly interconnected. Any socio-historical account of either the systematic and lasting domination of some group or the systematic and lasting exploitation of some group – must very likely refer to both categories. With the industrialization of nonhuman animals in mind, separate reviews of domination and exploitation will unavoidably be repetitive and the distinction may seem too artificial. Therefore I will review the phenomena as one history, one social reality; nevertheless, as the separate conceptual analysis of these

concepts is illuminating, I will keep alert to the specific aspects of any of the two categories.

This section will open with comments about the domination and exploitation of resisting and potentially-free subjects. Next, I will discuss the question of dominating "non-subjects" – from ideas about the domination of nature with and without specifying nonhuman animals, through ideas about the domination and exploitation of nonhuman subject as material, natural resource, and into the development of industrial practices against nonhumans.

Most of the discourse on domination and exploitation regards liberty as a moral ideal and as a socio-historical option – maybe even a natural possibility. Feminists, post-colonialists, Marxists and others refer to a reality of prolonged, systematic oppression, yet they do not regard it as inevitable. Instead, they seem to believe that liberty may be restored – and the breach of liberty must be explained in light of this possibility. There is a great intellectual interest in resistance to dominating and exploiting forces, as there is an emancipatory interest in the highlighting of resistance. Similarly, there is much intellectual interest in trends of cooperation with the oppressors – cooperation that is perceived as a disturbing failure or collapse of natural resistance. Such conceptions certainly take domination and exploitation as *social categories* concerning subjects and agents. In that sense they refer almost exclusively to humans, and they are definitely irrelevant to industrialized animals. Therefore I will skip much of the mainstream discourse on domination and exploitation, and discuss resistance very briefly.

Concerning the domination/exploitation of free agents, how and why their resistance breaks down is a central question. Direct physical force can break a victim

down, but constant, active application of physical force is an inefficient means of domination – fear is by far more efficient (on the use of coercive technologies that replace direct physical action, see the next sections). Fear may be based on a memory of violence and some apparent presence of a similar force that may be reactivated. This simple manipulation shapes many kinds of human relationships, such as hard labour slavery or domestic obedience, as well as human-nonhuman relationships – the exploitation of equines and oxen for carrying loads, wild animal circuses, etc.²⁹⁷ In that sense, fear is an internalized medium of domination, yet it is still directly dependent on external factors: when the actual cause of fear is gone – fear may disappear, and domination/exploitation may be challenged.

Domination (and possibly exploitation as well) is deeper when the very motivation to resist it has been eliminated. It occurs in various circumstances: when fear turns into innate subordination, independently of external circumstances; when harsh and uncontrollable conditions (e.g.: in laboratories and farms)²⁹⁸ generate constant despair or learned helplessness; when the dominated/exploited party does not know or understand any alternative; when effective, positive reinforcement is linked to being dominated; when subordination develops into a culture that has its own dynamics of self-preservation; or when being dominated is rationalized. The last two examples are probably exclusively human; the rest are common in nonhumans as well.

The elimination of resistance is at its peak when the dominated/exploited party is voluntarily subordinate, resisting change or even defending its master. Long-lasting

²⁹⁷ E.g.: Bodor, "Control of Slaves," 402; Hayes, *Illustrated Horse-Breaking*, for example: 37-41; Blanchard, *Power of Positive Horse Training*, 9-10; Creamer and Phillips, *The Ugliest Show on Earth*, chap. 5.

²⁹⁸ Seligman, *Helplessness*; Wechsler, "Coping and Coping Strategies."

domination/exploitation tends to generate a subordinate identity. In fiercely coercive relations, the result may be described (maybe too simplistically) by the notions of "natural slave" and "domesticated/tamed animal".²⁹⁹ An inclination to cooperate with the exploiter, however, occurs also in less coercive and more complex social systems; ideas that have been distributed by the exploiter, cultural habits, and affirmative rationalizations – these are dominant factors in such systems, and they construct "ideology" and "false consciousness" (see section 1.2.).³⁰⁰ Voluntary subordination tends to be less restrictive than coercive subordination, but in a sense it is also deeper, since the dominated/exploited party has no motivation to break free, and the dominators/exploiters do not have to put much effort in maintaining their status. This type of relations probably occurs exclusively among humans.

Speaking of active resistance, of broken resistance and of cooperation assumes the subjectivity of a *responsive agent*. This means that although the victims may lack any protection of legal rights and other social norms, the relation is nevertheless perceived as social. The variety of relevant social relations is great: trained pet keeping, traditional animal farming, human interaction with feral animals, military occupation, minorities under state control, criminals under state control, etc. The industrial exploitation of nonhuman animals (which always entails domination as well, so I will not mention this additional category unless necessary) is beyond such relations. Indeed, the process of industrialization is gradual, so the differences between industrial exploitation and other relations seem to be a matter of degree, not of kind. The deep and numerous

²⁹⁹ Aristotle, *Politics*, bk. 1, chaps. 5-6, pp. 1989-1992; Price, "Behavioral Development in Animals," especially sec. 5.3; Jacoby, "Slaves by Nature?"

³⁰⁰ Jost, "Negative Illusions;" Adam, *Survival of Domination*, especially 69-114; La Boétie, *Discourse on Voluntary Servitude*; Eagleton, *Ideology: An Introduction*, especially chap. 1.

idiosyncrasies of industrial exploitation, however, mark a unique phenomenon. Maybe the most prominent difference between industrial exploitation and other forms of coercive relations is the persistent impression that there is absolutely nothing social about the industrialization of animals: it is merely an industrial practice, beyond sociality, beyond morality.

The industrial exploitation of nonhuman animals is a modern phenomenon. It is a specific, technological development that has emerged during the eighteenth century, although its ideological origins may be traced sometime earlier, in the scientific revolution and its Christian foundations. Admittedly, referring to intellectual historical developments as the "origins" of industrial practices is awkward. Evidently, no early modern intellectual planned or anticipated the animal industries. Even within a limited period and a specific country, it may be impossible to pinpoint direct, causal connections between intellectual conceptions and agricultural practices, and in any case demonstrating such connections requires meticulous historical research, far beyond the scope of the present work. Furthermore, many aspects of the industrial developments could be accounted for in terms of economic developments and technical considerations, without reference to general intellectual developments. Nevertheless, the intellectual *Zeitgeist* is worth examining due to the strong correlation – in time as well as in content – between the coercive ideas and the coercive practices.

The thinkers I cite promoted the domination of nature in general and industrialization in general. Such ideas do not necessarily have moral implications, and it is not my intention to explore the possible moral meaning of dominating nature and industrialization in general. The moral drawback I wish to stress is the lack of special

attention to exploited animals as objects of domination and industrialization. In the texts I review, nonhuman, sentient animals are perceived indiscriminately as "nature", without any attention to the moral difference between sentient nature and non-sentient nature. This sweeping generalisation has grave results: when nature is regarded as an object of systematic knowledge, domination and exploitation – so do all nonhuman animals.

I do not argue that classifying nonhuman animals as "nature" rather than "society" or other category that clearly entails moral status has been a novelty at the dawn of animal industrialization (although the distinction between "nature" and "society" or "culture" became exceptionally dramatic in this period). Nor do I claim, of course, that an instrumental attitude towards nature has been new then. Nevertheless, the combination of these cultural trends created an environment receptive to unprecedented technological pressures on farmed animals.

In his book, *Nature's Economy*, the historian Donald Worster presents a detailed review of the historical conflict between the Greek (Arcadian) tradition of harmonious life with nature, and the imperialist, rational attitude towards nature, nonhuman animals included. Worster claims that Christianity has contributed to science the conception of nature as a locus of threatening and even malicious forces that must be subdued. More than any other religion, Christianity separated "Man" from the rest of creation, nonhuman animals included.³⁰¹ Following Nicholas Berdyaev, Worster maintains that Christian faith, overriding the pagan animistic view of nature, severed man from nature emotionally; "Therein lay the seed for development of the rational objectivity that characterizes modern science, the notion that knowledge requires a strict repression of the

³⁰¹ Worster, *Nature's Economy*, 26-27.

viewer's subjective feelings about the object studied."³⁰² This is "the gift of objectivity", which enables the enhancement of domination over natural objects. Additionally,

"[...] Christianity may have also contributed to science a technological or mechanistic picture of nature. By denying to nonhuman entities soul or indwelling spirit, Christianity helped reduce man's perception of nature to the status of a mechanical contrivance. [...] The mechanistic view of nature provided the scientist with a world reassuringly predictable because it was devised by a rational mind and made to obey a strict set of laws; it gave the engineer confidence that his own contrivances were part of a divine plan and hence acceptable expressions of piety."³⁰³

In another historical study of the history of environmental ideas, *The Domination of Nature*, William Leiss reviews Max Scheler's concept of *Herrschaftswissen* – "knowledge for the sake of domination." This concept characterizes the new science:

"[...] scientific knowledge is a type of understanding which stands apart from all value-judgement and value-determination, and the objects of scientific knowledge are themselves necessarily value-free. In Scheler's view this is the key to understanding modern science as the highest possible development of *Herrschaftswissen*: "To conceive the world as value-free is a task which men set themselves on account of a value: the vital value of mastery and power over things."³⁰⁴

"One means of understanding the mode of abstraction which guides modern science is to realize that it devalues the cognitive significance of all those things (sense-qualities, final causes, aesthetic values) which do not aid in man's domination of things; simultaneously, it asserts the cognitive priority of those aspects of natural phenomena which fit the scheme of prediction and control [...]."³⁰⁵

Francis Bacon (1561-1626) is a prominent representative of this new, coercive approach, which targets nonhuman animals by implication. In his 1620 *Novum Organum*, he maintained that "Human knowledge and human power meet in one; for where the cause is not known the effect cannot be produced. Nature to be commanded must be obeyed;

³⁰² *Ibid.* 28.

³⁰³ *Ibid.* 29.

³⁰⁴ Leiss, *Domination of Nature*, 109. Scheler's relevant essays, are "Problems of a Sociology of Knowledge" and "Cognition and Labor," collected in a volume entitled *Die Wissenformen und die Gesellschaft* (Society and the Forms of Knowledge).

³⁰⁵ *Ibid.* 110.

and that which in contemplation is as the cause is in operation as the rule."³⁰⁶ Bacon endorsed an allegedly value-free science and rejected the concern for the malevolent use of scientific knowledge-power, but in fact he promoted a strict ideology: "Only let the human race recover that right over nature which belongs to it by divine bequest, and let power be given it; the exercise thereof will be governed by sound reason and true religion."³⁰⁷ Worster concludes that "In the Baconian ideology, by startling and yet clear progression, the good shepherd of the Christian tradition has become a scientist and a technocrat. Science offered the means for building a better sheepfold and creating greener pastures."³⁰⁸

A somewhat different line of argumentation was taken up by another, more explicit ideologist of the unrestrained domination of nonhuman animals, René Descartes (1596-1650). Descartes' mind/body dualism credited humans with rational souls and kept them apart as the only possessors of such souls, while the rest of the creation has been deemed uniformly soulless. In his 1637 *Discourse on Method*, Descartes, following William Harvey's experiments and conclusions on the blood circulation,³⁰⁹ recommends the dissection of "the heart of some large animal with lungs" as a demonstration of the mechanics of the animal (nonhuman as well as human) body. After demonstrating triumphantly that the natural body is just like any man-made "automata, or moving machines," though much more refined since it has been designed by God, Descartes is left with the religious and social mission of proving that the human body carries another, essentially different quality: a soul. His evidence, namely that humans can use language

³⁰⁶ Bacon, *New Organon*, bk. 1, aphorism 3, pp. 67-68.

³⁰⁷ *Ibid.* aphorism 129, p. 163.

³⁰⁸ Worster, *Nature's Economy*, 30.

³⁰⁹ Guerrini, *Experimenting with Humans and Animals*, 23-37.

and their actions imply the command of reason – is eventually based on the contingent conception of rather simple machines and on simplistic, superficial knowledge of nonhuman animal behaviour.³¹⁰ From this point onward, materialism could reasonably eliminate the intervention of a soul, as indeed suggested by later thinkers such as La Mettrie in his *Man, a Machine* of 1747 (and once the concept of the immortal soul has been abandoned and consciousness was considered a mere product of material body, consciousness in nonhumans could be acknowledged once again).³¹¹

Descartes did not pay attention to the moral, psychological or ideological meaning of acquiring knowledge through cutting an animal to pieces, although he may have felt somewhat uneasy about it.³¹² In any case, it seems that the Cartesian scientist may gain a special sense of power through dissection. Although the organic complexity of the vascular system does not allow a full sense of omniscience as simple mathematically-analysable objects do allow, the dissected animal body may allow a profoundly mundane sense of domination. This has been an essential aspect of dissection since its classical origin and through the renaissance, especially where dissection was legal and public (in nonhumans as well as in humans): the body is invincibly manipulated by hand with no mediation but a knife; it is cut, dismembered, and its parts are re-organized. Furthermore, the animal is killed – and so the dissector demonstrates his power to kill or to reach and own the dead body. In dissection as well as in vivisection, the act of the analysing,

³¹⁰ Descartes, *Discourse on the Method*, pt. 5, pp. 131-141. See also reviews of Descartes' views of this subject, based on various treatises and letters: Grene, *Descartes*, chap. 2; Clarke, *Descartes: A Biography*, 331-336; Huxley, "Hypothesis that Animals Are Automata."

³¹¹ La Mettrie, "Man, A Machine." See also in the same volume, Leibner, "Introduction;" and Huxley, "Hypothesis that Animals Are Automata," 237-242; Thomas, *Man and the Natural World*, 33.

³¹² In a 13 November 1639 letter to Mersenne, Descartes wrote about his habits of watching the butchers killing animals, and taking home parts he wanted to dissect; he wrote apologetically: "It is not a crime to be interested in anatomy [...] and I do not think that any intelligent person could blame me for that." Cited in Clarke, *Descartes: A Biography*, 104.

omniscient scientific mind is merged with the dissecting, omnipotent, scientific body. (Vivisection promotes even further acts of total domination, such as restraining the living animal while vivisecting; these practices, however, are beyond Descartes' text). Needless to say, this psycho-moral interpretation is alien to Descartes' own explanations – as well as to the meaning that other dissectors or vivisectors ascribe to their activity. But if we agree with some critics, who claim that these practices involve a ritual of power and sacrifice in the name of masculine reason,³¹³ then *Discourse on Method* is a landmark in the course of this development.

From Descartes purely philosophical point of view, the dissected machine-body raises no moral question whatsoever; without the exclusively human soul, it is mere matter. Descartes' followers went further, and denied that nonhumans feel any sensation. In Keith Thomas's words, "the cry of a beaten dog was no more evidence of the brute's suffering than was the sound of an organ proof that the instrument felt pain when struck. Animal howls and writhings were merely external reflexes, unconnected with any inner sensation."³¹⁴ So the Cartesian position was "the best possible rationalization for the way man actually treated animals,"³¹⁵ and it was soon used widely as a justification for unrestrained vivisection; Descartes himself mentioned that his theory is favourable to humans "whom it absolves from suspicion of crime when they eat animals".³¹⁶ Yet

³¹³ Luke, *Manhood and the Exploitation of Animals*, chap. 5. See also critical reviews of human dissection: Sawday, *The Body Emblazoned*; Richardson, *Death, Dissection and the Destitute*.

³¹⁴ Thomas, *Man and the Natural World*, 33. See also Guerrini, p. 45; Huxley, 218-219; Andrew Pyle, *Malebranche*, (London: Routledge, 2003), 241-242, 251-252.

³¹⁵ Thomas, *Man and the Natural World*, 34. Compare to Huxley's argument that "considering the terrible practical consequences to domestic animals which might ensue from any error on our part, it is as well to err on the right side, if we err at all, and deal with them as weaker brethren, who are bound, like the rest of us, to pay their toll for living, and suffer what is needful for the general good." (Huxley, "Hypothesis that Animals Are Automata," 237)

³¹⁶ Maehle and Tröhler, "Animal Experimentation from Antiquity," 24-28. The quoted comment (p. 26) was written in 1649.

Descartes' thesis was more than an excuse for violence: Descartes thought that we understand – or can understand – how animals are built and operate. This kind of knowledge allows full domination through subtle manipulations – not necessarily violent ones – as one operates a machine. In fact, such knowledge allows, at least theoretically, an *interference* with the very structure of the animal, or even the *creation* of an artificial animal.

Descartes did not express such ideas, but they were soon to follow. The eighteenth century Europe saw an enthusiastic interest in mechanical imitations of moving animals. Jacques Vaucanson's "defecating duck", presented in Paris in 1738 along with two mechanical musicians, marks the most ambitious artificial recreation of a living animal at the time. The mechanical duck could make many duck-like gestures, swallow kernels of grain and defecate. Although it did not actually digest the food, Vaucanson took much pain to reproduce not only the outward appearance of a natural duck, but also its inner structure, its organic materiality, and eventually – its natural functions.³¹⁷ No doubt that Vaucanson's artificial biology was much too unlike the real thing to be used for actual acts of domination and exploitation of living birds, but it demonstrated a possibility of doing so, once living animals are perceived as sophisticated machines that could be re-created in every aspect.

Meanwhile, the Baconian attitude towards nature flourished. Worster presents Carl von Linné, or Linnaeus (1707-1778) as the most influential follower of the Baconian ideas on the domination and exploitation of nature. In the last two sections of his seminal

³¹⁷ Riskin, "Defecating Duck," 599-609.

1749 essay, "The Oeconomy of Nature,"³¹⁸ Linnaeus explains his religious, enthusiastic argument for the exploitation of nature:

"Lastly, all these treasures of nature so artfully contrived, so wonderfully propagated, so providentially supported throughout her three kingdoms, seem intended by the Creator for the sake of man. Every thing may be made subservient to his use, if not immediately, yet mediately, not so to that of other animals. [...]

In short when we follow the series of created things, and consider how providentially one is made for the sake of another, the matter comes to this, that all things are made for the sake of man; and for this end more especially, that he by admiring the works of the Creator should extoll his glory, and at once enjoy all those things, of which he stands in need, in order to pass his life conveniently and pleasantly."³¹⁹

This view turns the entire natural world into a resource for human use or exploitation, and it makes religious duty and the worship of God inseparable from the exploitation of nature. At first glance it may seem like a groundless excuse for any exploitation of nature, but Linnaeus explains: since in practice "man" exploits nature unlike any other animal, this must be righteous.³²⁰ This is a "might makes right" argument, or more accurately: reason allows knowledge that generates power, which is self-justifying. Linnaeus demonstrates how human power reaches throughout nature, using the domination of nonhuman animals as the first example: "By help of reason man tames fiercest animals, pursues and catches the swiftest, nay he is able to reach even those,

³¹⁸ According to the contemporary academic system in Sweden, doctoral students defended the ideas of their *praeses* (teacher-supervisor), and "Oeconomy of Nature" was such a dissertation, defended by one of Linnaeus' students, Isaac J. Biberg, and so Biberg's name appears on the title page. Historians, however, tend to ascribe the essay simply to Linnaeus. See "The Linnaean Dissertations."

³¹⁹ Linné and Biberg, "Oeconomy of Nature," sec. 20, pp. 123-124.

³²⁰ Considering Linnaeus' preaching, my anachronistic use of the term "exploitation" must be clarified. In my view, there is a continuous scale of use/exploitation of natural resources, with "use" by humans and other animals at one end, and "exploitation" – perhaps exclusively by humans – at the other end (in fact, at the end of the scale is "industrial exploitation", see n334). The difference between "use" and "exploitation" is admittedly elusive. By the term "use" we tend nowadays to indicate minimal waste, destruction or harm to the used resources; the waste/destruction/harm tends not to exceed the user's true needs (which are of course hard to define); and the use of the term is essentially amoral. Conversely, "exploitation" tends to refer to a wasteful, destructive or harmful use of resources, and/or use beyond the user's true needs; and the term is thick with negative moral meaning. The moral meaning implies an act by a moral agent, possibly against moral patients.

which lye hid in the bottom of the sea."³²¹ Linnaeus is not simply indifferent to the moral problems that may arise from such an ideology of power (at least when it comes to power over sentient animals) – he stresses that being an active exploiter is a religious duty. And despite the passionate admiration for the work of the Creator, Linnaeus implies that "man" may do better work: "By the help of reason he increases the number of vegetables immensely, and does that by art, which nature, left to herself, could scarcely effect."³²² Indeed, Linnaeus does not mention "improvements" in animals, but his industrious enthusiasm seems to fit any agricultural endeavour. Apparently, hubris was not a problem for him; God's creation could, and probably should, be improved by rational agriculture.

Worster emphasizes that the Linnaean and Baconian ideas about the exploitation of nature, nonhuman animals included, were quite widespread in Europe and in America. The English and American Linnaeans "were eager to enlist in Lord Bacon's imperialist cause: 'the enlargement of the bounds of Human Empire, to the effecting of all things possible.' The study of ecology was for them a means to the vigorous conquest of the living world. On the continent, too, the influence of Bacon was strongly felt in the eighteenth century; [...] Reason was to be the weapon by which this empire would be won."³²³ The reasoning was overtly utilitarian, that is, the value of different species – and their consequent recommended treatment – was determined according to their utility or lack of utility for humans. Worster claims that the utilitarianism of the Linnaean ecology "strongly echoed the values of Manchester and Birmingham industrialists and the English

³²¹ *Ibid.*

³²² *Ibid.*, 124. See also: Worster, *Nature's Economy*, 36.

³²³ *Ibid.*, 51.

agricultural reformers of the same period," and it was shared by the emerging theoreticians of political economy, such as Nehemiah Grew and Adam Smith.³²⁴

This trend culminated in Thomas Ewbank's (1792-1870) book of 1855, *The World a Workshop*. Although not as influential as the earlier essays mentioned above, Ewbank's is nevertheless a vivid expression of a fully industrial age, by a writer who has already witnessed some industrialization of animals. Ewbank, an English factory worker who turned into an American manufacturer of copper tubing and a United States Commissioner of Patents, as well as a prolific writer,³²⁵ conceived the entire natural world and the place of humans in it in industrial terms. In this metaphoric scheme, God is the Divine Builder and Divine Proprietor, and the world is a factory, or rather a well-arranged stock of materials for human industry: "Material natures require something to do as well as reflect on; this is indispensable to their being – the purpose of it."³²⁶ "Man", who is the "tenant and manager of the factory,"³²⁷ has a special role in this scheme: "What then was it that was so conspicuously to mark his connexion with the earth, and more than anything else proclaim him lord or lessee of it? It was the character he was to assume as a MANIPULATOR OF MATTER. The earth was to be a manufactory and he a manufacturer."³²⁸

Ewbank considers animals as one category of "matter" or "material" (the other two are minerals and plants). In his industrial worldview, the life of the animal is integrated in the factory as one stage among others along the production process. The whole living animal is no more noteworthy than her dead limbs under some preliminary processing:

³²⁴ *Ibid.*, 53.

³²⁵ Bate, "Thomas Ewbank," 113.

³²⁶ Ewbank, *World A Workshop*, vi.

³²⁷ *Ibid.*, 99.

³²⁸ *Ibid.*, 21. See also: Worster, *Nature's Economy*, 53-54.

"Elaborators who provide materials for clothing and food operate chiefly on the soil and its products. While some devote themselves to fibrous substances, to cereals, sugar, fruits, and roots, others convert grass, corn, and potatoes into beef, mutton, and pork, into wool, hair, horns, and hides – operations that are as truly arts of manufacturers as the casting of types or building of ships."³²⁹

Ewbank is well aware that "man cannot originate living organisms"³³⁰ – the full equivalent to shipbuilding – but the "manufacturer" is nevertheless not limited to mere enhancement of natural processes:

"Indeed, those whose producing apparatus are plants and cattle [...] diversify products, and evolve them with equal certainty and uniformity as operatives on inert matter. They improve them, too, as do engineers and manufacturers, who, to obtain better results, alter or exchange their machinery. Precisely on the same ground do planters and herdsmen introduce new seeds and breeds."³³¹

Half a century later, Willet M. Hays, who was "a great benefactor to plant breeding and the founder of the American Genetic Association (AGA),³³² wrote specifically as an expert on artificial selection:

"As science, inventive genius, constructive skill, business organization, and great market demands at home and abroad have pushed forward things mechanical, so should ways be found of improving these living things which serve as machines for transforming the substance of soil and air and the force of the sun's rays into valuable commodities. The problem of improving these living machines is not mechanical; it is vital. [...] As one machine is more efficient than another, so the blood of one generative cell, or of a small group of generative cells combined into an efficient varietal or breed unit, is more valuable than another."³³³

Hays' general idea is already present in Ewbank. As far as I know, the pioneers of industrial animal agriculture were not as eloquent writers as Ewbank, but maybe no agricultural theorist of his time could better express the philosophy of industrial animal

³²⁹ Ewbank, *World A Workshop*, 99.

³³⁰ *Ibid.*, 98.

³³¹ *Ibid.*, 99.

³³² Troyer and Stoehr, "Willet M. Hays."

³³³ Hays, "Breeding Problems," 197.

agriculture. It is intriguing that the tubing manufacturer and patent commissioner could describe the principles of industrial animal agriculture so clearly, as if a copper factory experience provides all the general information one needs to know about industrial farming. As I mentioned earlier in this section, it is difficult to pinpoint a casual link between ideas such as Ewbank's and the actual practices; the philosophers were not necessarily influential innovators, but rather, they may have been articulate witnesses of existing practices; and in any case these practices evolved at least partially in response to specific, economic and technical considerations. Whatever the source of correlation between the ideas and the practices may be, no doubt that it is striking, from justifications to the domination and exploitation of nature, to the principles of animal industrialization.

From the historical review of ideas at the dawn of industrial animal agriculture, I will turn to an account of the industrial developments themselves, and examine the subject from three angles: the control and manipulation of natural functions; long-distance and mechanized control; and genetic control. I do not intend here to provide a systematic historical account of the industrialization of animal agriculture – this mission is far beyond the scope of this work. Rather, my aim is to map distinctive types of domination and exploitation as they have appeared in the process of industrialization. This requires some historical, technical notes about the technologies or methods that initiated the new types of domination and exploitation, but a full historical account would be excessive.

Concerning the inevitable moral, negative implications of the following descriptions, it is noteworthy that industrial exploitation should not be perceived as absolutely unique and as a total deterioration of older practices. Beyond the apparent fact

that most industrial practices developed gradually, many specific elements of industrial exploitation, such as tight confinement, or the treatment of animals on mass, have precedence in pre-industrial time; or rather, it could be argued that industrialisation itself has ancient and mediaeval precedence. The uniqueness of fully industrial agriculture often lies in the combination of various elements and not in specific, isolated ones.³³⁴ Furthermore, industrial domination and exploitation do not necessarily involve more animal suffering and deprivation compared to older practices, nor is the attitude of industrial farmers towards the animals necessarily more instrumental.³³⁵ Again, the increase of suffering and deprivation, as well as the more alienated attitude towards the animals, are an overall tendency and not a principle that governs every historical detail.

4.4. Control and manipulation of natural functions

Many coercive social relations involve some control and manipulation of the dominated individuals' natural functions, such as movement, eating and drinking, or social, sexual

³³⁴ I do not wish to provide criteria in attempt to define "industrial" contra "proto-industrial" – I believe that a conclusive list of criteria would be arbitrary and the debate on the limits of the "industrial" would be excessive. Some Roman, mediaeval and early modern agricultural practices involved large scale enterprises much beyond self-consumption, facilities that hold many animals, tight confinement, consciously selective breeding, artificial incubation, specialized facilities or equipment, or rational management with profits in mind. Pragmatically speaking, it seems to me reasonable to claim that industrialization occurred when most of the above characteristics appeared together, along with many others, such as division of labour and specialization, scientific agricultural research, breeding "single-purpose" animals, automatization of the agricultural equipment, etc. Many of these elements did not appear *together* in the eighteenth century – certainly not in a single enterprise. But the first examples that I would use for eighteenth century Industrial farming contain a considerable concentration of such characteristics.

³³⁵ For example, Varro, *Rerum Rusticarum*, bk. 3, chaps. 4-11. In his treatise, written c. 98 B.C., the Roman writer describes the force-feeding (cramming) of a few species of birds as well as hares, a practice that could be completed with confinement in small cages, breaking the legs of the birds or plucking their tail and wings (pp. 303, 305-306, 313-315, 322). A Roman aviary could contain as much as 5,000 pigeons or thrushes, the latter fully confined (pp. 288, 300). For a broad review of this subject, see: Ghigi, *Poultry Farming*. Concerning 16th and 17th centuries Britain, Thomas (*Man and the Natural World*, 92-95) describes deliberate slow slaughter methods, castration, keeping pigs, lambs and poultry in very small and dark confinement, blinding fowl, cutting off their legs or nailing them to the floor. He also mentions many poultry and pigs in small confinement in London. Despite this, Thomas maintains that "relations with domestic animals were more intimate than such bald facts might suggest." See also: Johnson, *Factory Farming*, 23.

and parental behaviour. Industrial exploitation obviously involves intensive expressions of a large variety of such controls. It is important to note that unlike distance, invisibility and difference as they appear in industrial animal agriculture, the control and manipulation of natural functions in industrial agriculture is highly specific. Common knowledge and intuition are totally insufficient for a serious understanding of this subject, since the control and manipulation of natural functions in the animal industries – as well as long-distance and mechanically mediated control, and genetic domination (the subjects of the next sections) – are essentially unlike any other socio-historical phenomena. Therefore in the present section and the next two I will describe aspects of agricultural history that are necessary for the moral understanding of these unique forms of domination and exploitation. The descriptions may often seem technical rather than social or moral. Such an impression is the very result of the fact that the agricultural reality has hardly been discussed outside the communities of agriculture and its supporting science and technology. In fact, even when considered uncritically as mere "history of technology," animal agriculture has not attracted much attention from historians, and hence I had to use many primary sources. In order to avoid an overflow of technical details, I omitted some of the descriptions from the main text and left some information in footnotes.

Free movement is perhaps the primary natural function that is likely to be impaired in victims of coercive relations. The simplest means of controlling one's freedom of movement is direct physical restrictions through physical contact. It is, however, a relatively ineffective practice, since the physical involvement of the dominator binds him throughout the entire contact. Indirect physical domination, by ropes or chains, restraint

devices, gun threats, etc. – is by far more effective and lasting. Therefore it may be used less randomly, as a systematic tool of power by one party against another. Ropes, chains and restraint devices could be regarded as means of environmental domination, but artificial and natural barriers are perhaps more typical to this category. Fences (simple, barbed or electric), walls, canals, etc. are more effective against entire populations, compared to individual means of restraint, and hence they are more commonly used against them.

Barriers control the distribution of vital resources such as food and water, or the means to attain food and water. These essentials may also be deprived of otherwise free subjects, but when confining a party in a small area the control of essentials is virtually unavoidable. The combined control of both movement and essential resources is the essence of imprisonment, as it occurs in facilities such as jails, concentration camps, zoos, intensive farms, etc. Imprisonment typically involves further environmental control, which may include the deprivation of company or forced company, and the deprivation of preferred activities or forced activities. In all these respects, the domination of intensively farmed animals may seem, at first glance, like yet another kind of imprisonment. Nevertheless, beyond some similarities it is essentially unlike imprisonment, as I will soon elaborate.

Before discussing industrial exploitation specifically, it is also worth mentioning another group of practices that aim to control natural functions: mutilation. Mutilation that has deprived the dominated subjects of their means of defence/attack sustains domination much more effectively than constant direct violence, and in some respects it is more effective than confinement, restraint or fear. Mutilation used to be a prevailing

practice against enslaved humans,³³⁶ but nowadays it is used almost exclusively against nonhumans; such mutilations are among the standard agricultural practices, most commonly as means to prevent aggression damages among stressed, crowdedly confined animals: dehorning cattle, tail and teeth clipping in piglets, debeaking female chicks in the egg industry, etc. Castration is another form of mutilation, which aims to suppress resistance at the hormonal level, as well as cause changes in muscle and fat development. Mutilations are fully incorporated in industrial agriculture; however, they retain a primitive quality, as if they were meant to "solve problems" that should have been solved more refinely (e.g., through artificial selection, or improved environmental control) without the less efficient effort of individual acts of violence. Indeed, mutilations are ancient, yet Xenophon's words are as relevant today to some interspecific relations as they were in the 4th century BC – as much as they are irrelevant to modern human, intraspecific relations:

"vicious horses, when gelded, stop biting and prancing about, to be sure, but are none the less fit for service in war; and bulls, when castrated, lose somewhat of their high spirit and unruliness but are not deprived of their strength or capacity for work. And in the same way dogs, when castrated, stop running away from their masters, but are no less useful for watching or hunting. And men, too, in the same way, become gentler when deprived of this desire, but not less careful of that which is entrusted to them; they are not made any less efficient horsemen, or any less skilful lancers, or less ambitious men."³³⁷

Apparently, the control of natural behaviours and even natural inclinations is old and widespread in many social relations. It has not developed into the distinctive mode of industrial exploitation of animals, however, before the eighteenth century. An account of

³³⁶ Tougher, *Eunuch in Byzantine History and Society*, especially chaps. 1, 3; Bullough, "Eunuchs in History and Society;" Taylor, *Castration*, 159-184; Stephens, "Mutilation;" Winston, "Indian Slavery in the Carolina Region," 439.

³³⁷ Xenophon, *Cyropaedia*, bk. 7, chap. 5:62-63 (p. 289); see also: Clutton-Brock, *Natural History of Domesticated Mammals*, 37.

early industrial farms is provided by the historian Peter Mathias. Mathias describes the emergence of these farms as an expansion of newly established large grain factories. Breweries and distilleries around London and in Scotland established large pig farms as an economically rational solution for their industrial waste. The factories processed barley, corn and wheat into malt, beer, alcohol and starch, and the by-products were used to fatten pigs. In the beginning of the eighteenth century factories already held thousands of pigs in each single farm. About a hundred years later, some English distilleries held hundreds of cows, and in the mid nineteenth century New York distilleries held thousands of cows; the New York dairy farms also fed the cows with kitchen and slaughterhouse waste.³³⁸ The use of industrial waste as feed has since lost its central role in the development of the animal industries, yet it is still common.

Since the early incorporation of animals into factories, the factory logic determined a specific kind of industrial domination over their lives – a far cry from the traditional husbandry conception and techniques. The concentrated production of feed and the entirely artificial feeding replaced the natural activity and skills that occupy most of the animals' activity hours in traditional, small-scale farms (and of course in nature). Foraging, with all its mental and physical significance, became obsolete from the industrial point of view and impossible to perform from the alleged animal point of view. At the same time, the agricultural space lost its traditional agricultural function as a source of full or partial subsistence for the animals, which is generally controlled by the farmer yet without much pressure to determine its exact size. Under the industrial regime, the living space of the animals became an expensive, strictly managed resource that is deemed well-operated only as long as it supports the basic life functions and the capacity

³³⁸ Mathias, "Brewing and Distilling Industries."

to grow and fatten, lactate or reproduce. The life-supporting elements were artificially imported into this space, and the unwanted elements were exported – all this without compromising the space's economic size. In other words, the spontaneous self-management in the semi-natural ecology of traditional farming was replaced by resource management that governed the entire intercourse between the farm and the outside world.

In the early industrial farms, this new reality meant that many animals were crowded into a very small space; they were brought food and water, and there had to be some artificial cleaning of the enclosure, which in practice could be poor.³³⁹ As the industrialization of animal farming progressed, the control of incoming resources and outgoing waste increasingly became more carefully calculated, designed and elaborated. Mathias notes that the early dairy industrial farms were already using a slated or netted floor that allowed easier waste management.³⁴⁰ This invention of netted/slated floor reached a higher level of architectonic control with the invention of wire cages, predominantly for poultry. The production of battery cages as lifetime confinement facilities for hens started around 1930 in the USA. The cages were designed to house single hens, and in the 1950s they were replaced in the egg industry with multi-bird cages.³⁴¹ The rows (batteries) of wire cages allowed the droppings to fall out of the bird's

³³⁹ Mathias, *Ibid.*, 89, 92, mentions clean facilities for pigs and oxen in the late 18th century.

³⁴⁰ *Ibid.*, 91-92.

³⁴¹ Harrison, *Animal Machines*, 59-60; FAWC, *Welfare of Laying Hens*, pt. 2, "History." The invention of batteries of small, barren, wire cages is much older than 1930, and it started with the design of poultry train cars (some of them contained much wood rather than wire). Such cars were patented since 1884, and a detailed description is provided in a 1888 patent by the most prolific early registered inventor: Jenkins, Poultry-Car. Wire battery cages were also used for a 8-10 day process of fattening poultry; for an early (1913) description, see: Collis, Chicken-Feeding Coop. Many similar patents were issued later, but wire cages for individual hens, designed for their entire laying period, were patented but two decades later: Olson and Young, Hen Battery; Raymond, Battery Laying Cage. Raymond explains in 1933 that "On scientifically managed poultry farms it is quite customary to house laying hens in multiple or battery type cage, in which each hen is provided a cage." The use of such cages did spread slowly. For example, as late as 1961 only 20% of the British egg industry used them, according to Johnson, *Factory Farming*, 27. The use of wire cages developed at about the same time in smaller industries: Lebas et al., *Rabbit - Husbandry*,

living space and kept the hens away from the parasites on the floor. The use of cages also released the designers from the constraint of the earth's flatness – into more economic and fully artificial three dimensional designs.

The history of agricultural confinement is essentially a history of replacing the natural or semi-natural ecology of traditional farming with artificial, fully controlled ecology. Within this framework, a major challenge has been to increase the number of animals per space unit and building bigger facilities – without losing profit due to increased morbidity and mortality. In the emerging poultry industry in the early 20th century, permanent indoor confinement was impractical since the lack of sunlight resulted in rickets and other disorders. This has changed around 1930, after a decade of experimentation in sunlight exposure/deprivation and in the application of feed additives that contain vitamin D.³⁴² The feed additives made sunlight obsolete from an economic point of view, and gone was the last incentive to let the chickens range outdoors. Gradually, a lifetime of indoors confinement became standard in the poultry industries worldwide, followed by increasing confinement in the pig and the dairy industries.

The growing control of free movement had its drawbacks ever since, and the agricultural scientists have made a constant effort to overcome the disadvantages of the artificial system by altering the artificial conditions and tightening the control. As chickens' feeding became fully artificial, nutritional ignorance led to severe medical

Health and Production, "Historical background" in chap. 1, and chap. 6; Macomber, "Cage or Coop." See also: SCAHAW, *Welfare of Animals Kept for Fur*, 41-42, 47-48, 50, 53-55, 59-61.

³⁴² Coates, "Fat-Soluble Vitamins in Poultry Nutrition," 261; Sawyer, *Agribusiness Poultry Industry*, 65-66. A husbandry manual of 1928 demonstrates that the use of cod liver oil as a source of vitamins D and A, as well as the use of windows that allow ultra-violet radiation to pass through, were familiar a few years earlier: Crum, *Intensive Poultry Culture*, 54-56, 118-126. In fact, cod liver oil was prescribed for the treatment of rickets in human in 1824, and in 1906 dietary factors were identified as necessary for the prevention of the disease, according to: Wolf, "Discovery of Vitamin D," 1299.

problems, which were gradually solved.³⁴³ Infectious diseases, however, remained a continuous problem – a seemingly inevitable result of confining many animals together in a small space. In the late 1940s, the introduction of antibiotics into the poultry industry provided some weapons against the damages of mass confinement, yet it also resulted in a further intensification of confinement possible – more animals together, more crowdedly.³⁴⁴ The electrification of poultry farming allowed further isolation of the birds from the outside world, replacing much of the already indirect sunlight with artificial light, which soon turned from an imitation of daylight into a regime of totally artificial lighting programs;³⁴⁵ and introducing controlled climate in an attempt to neutralize the effects of extreme weather and to overcome the climatic results of overcrowdedness (high temperatures and high levels of humidity, gases, dust and airborne pathogens).³⁴⁶ Similar technologies were gradually adopted in other animal industries.

³⁴³ Sawyer, *Agribusiness Poultry Industry*, 65-69.

³⁴⁴ Bud, *Penicillin: Triumph and Tragedy*, 165-168; Sawyer, *Agribusiness Poultry Industry*, 66-67. Bud, 168, adds that the early use of antibiotics enabled the development of long distance transports of calves around Western Europe – a practice that involved mixing ill calves with healthy ones (the "surplus" males of the dairy industry that were sent away for fattening),

³⁴⁵ Using artificial light has old origins: a book published in 1803 described the existing Spanish method of waking the sleeping hens and make them go to eat under torch light (according to: Baker, "Increasing Winter Egg-Production in Spain"). Prolonging the hens' waking hours in order to make them eat more and lay more eggs was used in the USA at least as early as 1895, and by 1920 it became in general use commercially, according to: Milby and Thompson, "Effect of Artificial Light on Reproduction in Poultry," 41. Using electric lighting for this purpose was experimented successfully in 1913 in England, according to: Luckiesh, *Artificial Light*, 203-204. The earliest US lighting patent uses electric bulbs was issued in 1919: Kitchen, *Poultry-Plant Construction*. Milby and Thompson (*Ibid.*, 41-42) stress that only by 1930 it has been suggested that the increased laying is a result of hormonal changes, stimulated by light; experiments in various wavelengths started by 1937. The next decades saw a careful analysis of artificial lighting in terms of photoperiod (light/dark duration), illuminance (light intensity) and wavelength (colour). These variables were examined on chickens ("layers"/"broilers"), turkeys and other birds, in various ages and environments, as tools of manipulation of physical activity, feed consumption, sexual physiology and behaviour, sexual maturity, egg production, growth rate, feed conversion, body fat and body composition in general, aggressive behaviour, and welfare variables (especially since the mid 1990s) such as metabolic diseases, visual anomalies, skeletal deformities, and circulatory problems. See contemporary reviews: Lewis and Morris, *Poultry Lighting the Theory and Practice*; Olanrewaju et al., "Lighting Programs for Broiler Production;" Lewis and Morris, "Poultry and Coloured Light."

³⁴⁶ Heating devices have long preceded the emergence of total confinement in the poultry industry. Once artificial incubation was used, artificial brooders became necessary to warm the chicks. An early (1878) patent heats the brooder's space with air heated by kerosene, gas or steam: Renwick, *Improvement in*

All these artificial variables are the culmination of a process that started with domestication. It is a process of increasing environmental and biological domination through the use of the animal's nature against them.³⁴⁷ At the same time it is a process of increasing rejection of natural potentials and functions, or deeming them redundant. If domestication made some survival skills and social skills redundant (e.g., individual and social defence from large nonhuman predators) as well as some biological characteristics (e.g., camouflage), the gradual intensification of animal agriculture have launched an attack on complex behaviours. Artificial incubation, which has been practiced as early as ancient Egypt but became reliable in the colder West only by the second half of the 19th century, has made the entire category of hen motherhood redundant.³⁴⁸ An 1882 New York Times article demonstrates the industrial sense of triumph over natural motherhood: "Although we may give a setting hen credit for the best possible intentions, it must be admitted that she is a very clumsy bird. She will tread on her eggs, and will leave more or less of them out in the cold. Besides, her capacity to hatch eggs is limited by her size."

Chicken-Brooders. Heating the drinking water and feed was also customary; see an early (1896) example of such a device, that was also planned for heating the entire poultry house: Strong, *Poultry Feeding and Watering Device*. Ventilation was a well-acknowledged project since the early poultry train cars, and it became important in poultry houses with the increased confinement. In 1927, "Ten stations at present have active projects on poultry house construction and ventilation", wrote Kelley in his "Report of Committee on Ventilation Research", 168. By then, electricity was already used for this purpose: Power, *Forced-Ventilation System*. Gradually climate control became more refined, aiming at exact air velocities and rate of air exchange at bird level, as well as specified maximum concentrations of noxious gasses, dust and airborne pathogens, and optimal levels of humidity and temperature. For a contemporary index on this subject, see: Poultry U: Ventilation. For a short review, see: SCAHAW, *Welfare of Chickens Kept for Meat*, 52-56, 58-59.

³⁴⁷ Netz, *Barbed Wire*, 18.

³⁴⁸ Artificial incubation has been practiced on a large scale (thousands of eggs in a single facility) by ancient Egyptian specialists since about 3,000 years ago. It has also been practiced in China as early as 246 BC. The practice was imported from Egypt to the colder Europe by the mid 1600's, without much success at first. Various incubator models were used in the 19th century, and Charles Edward Hearson's incubator, patented in England in November 24, 1881, is considered the first device that contained a reliable heat regulator, see: Lawrence, *Breeding, Rearing, and Fattening*, 78-105; McKenzie, *Popular Poultry-Keeping for Amateurs*, 35-39; Martin, "Development of Artificial Incubation of Eggs;" Hearson, *Apparatus for Hatching Eggs*. The technology of artificial incubation has been accompanied by heating devices for chicks, called "brooder", "artificial mother", "foster-mother", "chicken-rearer or "metal hen", see: Sutcliffe, *Incubators and their Management*, 3, 10-13, 99-101.

These alleged faults are overcome by artificial incubation.³⁴⁹ A later poultry guide cites more advantages of artificial incubation, and concludes: "We still fail in some minute particular to copy Nature [i.e. the incubating hen] exactly; but in what that particular consists, remains to be discovered."³⁵⁰

Similarly, artificial insemination made the entire category of sexual behaviour redundant wherever it was used. This technology was introduced into agriculture in the early 20th century and gradually it became standard in the turkey industry and much of the dairy industry, as well as becoming very common in other mammal industries.³⁵¹ In an agricultural reality where sexual behaviour has already been dominated by tight environmental control, artificial insemination eliminated the few remaining elements of attraction, courtship, choice, rejection and physical intimacy between animal couples, in addition to eliminating the act of copulation. Female or female-like decoys remained necessary to arouse the males of the larger species and make them ejaculate into an artificial vagina. Where spontaneous ejaculation could not be secured, electric stimulation or strong manual pressure came into use, especially in smaller animals.³⁵² Artificial insemination disconnected reproduction from sexual behaviour and from the actual

³⁴⁹ "Artificial Incubation" (*New York Times*, 1882). In fact, the hens' "clumsiness" and the resulting economic incentive to incubate eggs artificially is a side-effect of severely impaired motherly skills due to artificial selection for increased egg production; at least this was the case in the 19th-20th century West: See: Sutcliffe, *Incubators and their Management*, 2.

³⁵⁰ *Ibid.*, 10.

³⁵¹ According to Foote ("History of Artificial Insemination," 1-10), artificial insemination (in a dog) has been preceded by Spallanzani in 1784, but only in 1897 experimenters started to develop techniques on several mammal species. Two years later Ivanov (also transliterated as Ivanov or Ivanoff) started to experiment artificial insemination in various farmed species in Russia, and agricultural researchers in other countries soon followed suit (unlike Western countries, the Russians qualified many expert inseminators, and therefore artificial insemination did spread more slowly in the West: Anderson, "Artificial Insemination in Light Horse Breeding." According to V. K. Milovanov, artificial insemination in Russian farms started in 1909 in mares, 1928 in ewes, and 1930 in cows. During 1938, 120,000 mares were artificially inseminated in Russia, 15 million ewes, and 1.5 million cows. Up to 15,000 ewes were inseminated with semen from a single ram. Cited in: Pincus, "Artificial Insemination in Russia."

³⁵² See: Rasbech, "Artificial Insemination."

encounter between animals. It freed insemination from animal nature and bounded it instead to agricultural objectives: insemination across long distances, over considerable time gaps, between a single male and thousands of females, between oversized males and small females (in turkeys), and sometimes across species.

It may be said that under the industrial regime *the category of behaviour itself became increasingly redundant*. Social, sexual and parental behaviours, as well as foraging, hunting (in "fur bearing" animals), defence from predators, navigation, nest building and the choice and manipulation of shelter – were all replaced by farm management. Along with these behaviours, intelligence, emotions, experience and knowledge turned redundant just as well. Furthermore, even most simple behaviours, such as natural body movements, turned into unnecessary skills that in any case cannot be realized: running, flying, climbing, swimming and even walking (in a battery cage the feed and water supplies are always a few centimeters away from the animal). The only behaviours that have not been targeted for elimination (although often restricted or manipulated) are basic life-supporting functions: eating, drinking, sleeping, standing, lying down, breathing, turning the head, etc. The motivations to express these behaviours – if "behaviours" is indeed the right term for them – were left essentially unchallenged as well. Every other behavioural aspect of the animal's life became dependent not on her nature but on the motivations, expertise and equipment of the farm operators.

The process of eliminating behaviours has never been completed, and it still continues, alongside a growing counter-movement.³⁵³ Throughout the process, the

³⁵³ The agricultural counter-movement that endorses de-intensified farming started in the 1960s, as a result of a public and legal pressure and the emergence of new markets for the products of less intensive methods (especially in Europe). No doubt that "free-range" and "organic" farming have retained many lost

agricultural system encountered many difficulties in its attempts to eradicate specific, natural behaviours.³⁵⁴ As natural behaviours have been effectively eradicated by walls, bars, artificial light, nutritional manipulations, etc., the persisting animal psychology spawned new behaviours that are virtually unknown in natural life conditions. These behaviours were recognized as "vices" or abnormalities that must be controlled. Aggressiveness, which may lead to cannibalism (although cannibalism may also originate in non-aggressive motivation) is probably the most prominent "vice" in intensive poultry and pig industrial farms, and it has become an object of elimination efforts through mutilation, nutritional supplements, genetic manipulation (artificial selection), light manipulation and more.³⁵⁵

The elimination of behaviour leaves mere physiology in. Physiology, however, evidently became an object of manipulation even more enthusiastically, since "production" is straightforwardly physiological. Of course, animal physiology has not become redundant as behaviour did, but it did become *essentially inadequate or insufficient*. From an industrial agricultural point of view, the animal necessarily eats too much, grows too slowly, wastes resources on uneconomic body parts and functions, gets

behaviours, but it is doubtful whether the existence of such farms have mitigated mainstream industrial farming.

³⁵⁴ For example, broodiness, or the natural inclination of hens to incubate and stop laying, was fought when the egg industry started to intensify. Broody hens were punished by confinement in a small cage with a floor that does not allow sitting – until the entire industry moved to such cages permanently. See: Sutcliffe, *Incubators and their Management*, 3; Lamon and Kinghorne, *Practical Poultry Production*, 150-151. Genetic and pharmacological techniques to eradicate broodiness were developed as well, and the development of these techniques continues for free-range birds and breeding flocks. See: Guemene, Kansaku and Zadworny, "Incubation Behaviour Expression in Turkey Hens;" Romanov et al., "Genetic Control of Incubation Behavior;" Sharp, "Immunological Control of Broodiness."

³⁵⁵ For a review, see: Newberry, "Cannibalism;" Rodenburg and Koene, "Feather Pecking and Feather Loss." See also: Sanctuary, "Vicious Habits and Cannibalism;" Kjaer and Sørensen, "Feather Pecking and Cannibalism." See also concise practical guides concerning cannibalism: Chauhan and Roy, *Poultry Diseases, Diagnosis and Treatment*, chap. 12; Clauer, *Cannibalism: Prevention and Treatment*; Scheideler and Shields, "Cannibalism by Poultry." On aggression in pigs: McGlone and Pond, *Pig Production*, 301-311; Schrøder-Petersenf and Simonsen, "Tail Biting in Pigs."

sick or dies too easily, produces not enough offspring and eggs, etc. The ever unsatisfied criteria may also be much more specific, e.g. the prevalence of a specific enzyme or gene – insofar as they are instrumental to the more general criteria. This is a concept of physiology as an object that must be controlled and improved constantly – by genetic, nutritional, pharmacological or environmental means.

If domestication replaced the fatal but momentary act of domination over nonhuman animals, i.e. hunting, with fully social relations of domination, the industrialization of agriculture turned these relations into mechanical, chemical and biological cause-and-effect relations. In that sense, the intensification of animal agriculture is not only a matter of a tightening agricultural regime, or increasing the control over natural skills, choices and physiological traits. It is rather a re-definition of what the farmed animal is: she is (or rather "it" is, as correct English has always asserted) a machine. Not a Cartesian machine that has been recognized as such through the general knowledge of her physical structure, but rather a mechanics' machine: an object that the professional operator knows how to operate through careful learning of the manufacturer's instructions and routine daily experience; and a manufactured object, an updated model that is expected to be replaced sometime soon with a more advanced one.³⁵⁶ This fast-changing hi-tech world is flooded with new technological developments, and so it is flooded with highly elaborated technical instructions, such as manuals that

³⁵⁶ "Machine" and "mechanic" are metaphors rather than an exact description. As such they could be stretched further (e.g., sick animals are "fixed" or "disposed of" rather than treated in a full medical sense) but they may also be misleading (e.g., domination as a social category that indicates the relation between strong sovereigns and weak subjects is never fully eradicated even within the most mechanized relations). Other metaphors may also be illuminating (e.g., the living animals as "plants", "raw material", or "consumer products"; or the agriculturalist as "manager" or "manufacturer"). I will not elaborate on these additional metaphors since they are not required for the discussion on the control of natural functions.

breeding companies distribute for proper management of their "products" (i.e. specific animal strains).³⁵⁷

At the opening of this section I addressed the question of similarities between the imprisonment of humans and the agricultural domination of nonhuman animals. The review of agricultural methods reveals unique aspects of animal agriculture, yet some similarities between the control and manipulation of humans and farmed animals are also revealed. Our human, modern environment is also highly artificial, and it moulds our mental life and behaviour. We too live on floors and under ceilings devoid of vegetation and soil, surrounded by walls; and our connection with the outside world relies on the mediation of pre-prepared food, a sewage system, air-conditioning and electronic media; and our daily cycle depends on electric light. Furthermore, our very bodies are manipulated and shaped by science-based education, training, furniture, exercise devices, nutrition, pharmacology and surgical intervention. These conditions characterise the lives of free people, and even more so the lives of prisoners. The prominent theoretician of modernity as a process of tightening control over human existence, Michel Foucault, outlined this process and traced its origin around the time of early animal industrialization:

"The classical age discovered the body as object and target of power. It is easy enough to find signs of the attention then paid to the body – to the body that is manipulated, shaped, trained, which obeys, responds, becomes skilful and increases its forces. [...] La Mettrie's *L'Homme-machine* is both a materialist reduction of the soul and a general theory of *dressage*, at the centre of which reigns the notion of 'docility', which joins the analysable body to the manipulable body. A body is docile that may be subjected, used, transformed and improved."³⁵⁸

³⁵⁷ See, for example, the manuals of "Ross Products" in the Ross website. Ross is one of the leading "brands" of breeders for the chicken meat industry.

³⁵⁸ Foucault, *Discipline and Punish*, 136.

Foucault carefully recognizes that the control and manipulation of the human body is nothing new; the historical novelty lies in the specific variation. Likewise, despite the striking human/nonhuman correlations under artificial ecology and body control, animal industrialization is markedly unlike any other form of social relations – human/human relations as well as human-nonhuman relations. Foucault's account is about a "technico-political" type of domination. In his review, the "man-machine" – whether free or imprisoned – remains evidently metaphorical; or at least the "man-machine" concept is concerned with some very unique machine: an active agent whose *behaviour* is the major object of shaping. Contrarily, industrial agriculture has been concerned with creating an almost non-behaving body, an almost inactive body, an almost fully machine-like non-agent. Notably, although animal agriculture (working animals excluded) has always been interested in the animal body as mere body, prior to industrialization it relied heavily on the behaviour of the animals as the major medium for developing the desired body and bodily products. This has changed in the course of agricultural industrialization.

Foucault's descriptions focus on manipulations that serve goals, which are often alien to the manipulated subjects and have been forced upon them. Forcing prevails despite the fact that the regime described is not based on the appropriation of bodies – in contrast with slavery,³⁵⁹ as well as with animal agriculture since the dawn of domestication. The Foucauldian regime, however, targets the well-acknowledged members of the society in question, and the goals of disciplining them are allegedly the goals of society at large; this becomes ever more clear when considering people outside authoritarian institutions as objects of artificial manipulations. Contrarily, in animal agriculture, often before industrialization and certainly since the industries have evolved,

³⁵⁹ *Ibid.*, 137.

the animals are absolutely outside society, and the goals of industrial agriculture are absolutely alien to the animals' alleged goals: maximum bodily production of commodities at minimum cost.

In the intra-human regime there are wide overlaps and confusion between punishment and correction, cure and manipulation, or consumer choice and corporate exploitation. In industrial animal agriculture there are no such confusions: here exploitation is everywhere, unambiguously. The artificial environment and treatment is nothing but a direct, well-calculated instrument of enhanced production.³⁶⁰ Even the very well-developed veterinary medicine in industrialized farming is hardly about cure or well-being. It is not only one of the major means to allow mass confinement by reducing illness and death in tightly confined and genetically weakened animals, but also a direct tool for enhancing "production". For example, antibiotics are used very widely on farms for non-medical purposes; as early as 1946 an antibiotic formula came into experimental use in pigs as growth promoter and a feed conversion improver. It soon became standard in meat industries – before the human health concerns provoked some moderation of such use.³⁶¹ In conclusion, although artificial ecology and body control are ever expanding universal phenomena since the 18th century, their expression in industrial agriculture is exceptional. Farmed animals are perceived as nothing but production units; accordingly, anything in their nature which does not contribute to production is a target for elimination

³⁶⁰ For example, climatic elements are used as means of controlling the "performance" of broiler chickens: Dagher, *Poultry Production in Hot Climates*, especially chaps. 2-3; Ryder, Feddes and Zuidhof, "Field Study to Relate Heat Stress;" May, Lott and Simmons, "Effect of Environmental Temperature;" Deaton et al., "Effect of Brooding Temperature;" Xin, "Mortality and Body Weight." Some reviews on lighting as means of control: Olanrewaju et al., "Review of Lighting Programs for Broiler Production;" "Controlling Light in Broiler Production."

³⁶¹ Bud, *Penicillin: Triumph and Tragedy*, 66-67; Carpenter, "Effect of APF Concentrate," 657.

efforts, without the contradicting motivations that characterise the control and manipulation of modern citizens at large, school children, soldiers, prisoners, pets, etc.

4.5. Long-distance and mechanically mediated control

Efficient means of domination enable the few to rule the many through minimum effort. As I have mentioned in section 4.3., breaking resistance is a highly efficient element of domination; and doing so by provoking constant fear or educating for cooperation is typically intra-human. The equivalent in nonhumans is domestication and taming. But industrial animal agriculture goes much further.

A preceding sign of industrialization is the growing number of animals per agricultural worker.³⁶² The numerous animals become anonymous, as they appear as *masse* – an entity that has its own traits and behaviour, and hence it is treated differently than an aggregate of individuals. Correspondingly, the utilitarian, functional perception of the subjects tends to gain dominance over more multifaceted perceptions. The decline of attention to the individual's well-being, though probable, is not a necessary result of such a process: declining personal attention could indicate less personal pressure and more freedom.

Evidently, dominating large numbers of either people or nonhuman animals has a long history, and reviewing the richness of relevant phenomena is beyond the scope of this work. In any case, ruling many people, even in a totalitarian regime, is essentially unlike controlling a large number of cattle, at least as long as the ruler perceives the

³⁶² This change, marked by the changing ratio between the agricultural and the urban population, started in Europe in the late Middle Ages, and it was probably the fastest in England. See: Bairoch, "Agriculture and the Industrial Revolution;" 6, 12, 24-25, 35-36; Clark, "Labour Productivity in English Agriculture," 228-232.

people as members of his own community, or if he sees an upraise as an actual danger to his regime. Now, if a traditional shepherd of a few hundred (at most) sheep, goats or cattle may retain some degree of personal familiarity with the animals, while the shepherd may believe that the animals get a fair bargain – protection in return for their milk and wool, and rarely their meat – such relations are impossible in larger flocks who are left to fend for themselves.³⁶³ The anthropologist Richard Tapper distinguishes between these different types of domination by rephrasing the Marxist concepts of relations of production (admittedly, the analogy is quite limited since "production" in Marxist terms relates to work rather than to physiological functions, and "relations" do not include routine killing). Tapper's suggestion includes the presentation of "tamed" animals' pastoralism as parallel to lord/serfs feudal relations.³⁶⁴ Tapper stresses that herding "untamed" animals parallels different relations of production:

"In ranching, the modern form of pastoralism [...] animals are herded in large numbers, extensively, and with no close pastoral relations with the owners of the ranch. They are considered more autonomous than in pastoralism: in earlier, more-open ranching the animals were in effect undomesticated, and ranged, grazed and bred with no control other than the annual round-up for branding, castrating and the 'extraction of surplus'. In later, closed systems there is more control, exercised not under the contractual system inherent in pastoralism, but by use of superior force (even violence) and technology. [...] the cattle 'barons' of the Texas ranges should perhaps be termed 'sultans' – or 'moguls'."³⁶⁵

Such a model of loosening control due to the increase of animal numbers is typical of pasture economy. Agricultural systems that rely on artificial feeding are quite different. Artificial feeding of large flocks did not evolve from large flock pastures, but rather as an economically rational utilisation of feed surplus or very cheap feed, or as a gradual

³⁶³ Trow-Smith, *British Livestock Husbandry 1700-1900*, 4-5, 9; Trow-Smith, *British Livestock Husbandry to 1700*, 135-139.

³⁶⁴ Tapper, "Animality, Humanity, Morality, Society," 52-54.

³⁶⁵ *Ibid.*, 53.

expansion (due to growing efficiency and growing market demand) of small, artificially fed flocks, mostly under some degree of confinement in the first place.³⁶⁶ As in the case of pasture, the move towards larger intensive farms also prevents personal familiarity between the caretakers and the animals (one worker for thousand cattle, or per tens of thousands of poultry).³⁶⁷ Confinement, however, increases the amount of labour in proportion to the growing number of animals: providing food and water and removing manure. The reaction of the expanding industries to the growing demand for labour was the introduction of *automatic devices*.

Before getting into details on issues of automatic labour, it is important to note that the decline of personal familiarity between shepherds or caretakers and the animals has also resulted, historically, from the shortening of the time-span that animals remained under the control of any specific caretaker. For example, the lifetime of birds in the "broiler" industry nowadays is less than 5-6 weeks, compared to 16 weeks by the early 20th century;³⁶⁸ and in any case, "layers" used to be a part of the same industry as "broilers" and they were kept for years. More generally, the shorter familiarity period has

³⁶⁶ Large enterprises of pigs' and cows' artificial feeding were prevalent around breweries, distilleries, and other sources of feed in Britain and later in the USA, throughout the 18th and 19th centuries, as I have described above, following Mathias, "Brewing and Distilling Industries." The American system of cattle feedlots (grain fed confined cattle) started around the 1920s and expanded in the 1960s and 1970s. According to an industry report ("Beef Cattle Feedlots"), "The grain-growing region of the Midwest dominated the U.S. cattle feeding industry in the 1970s. Huge American grain surpluses caused by government price supports provided cheap food for livestock and made cattle feeding a standard practice in the nation's beef industry. [...] If grain was drawing a satisfactory price, farmers would sell it outright. But if farmers were unsatisfied with the price of corn, barley, or oats, they might market their grain indirectly by feeding it to cattle or hogs." See also: Corah, "Development of a Corn-Based Beef Industry", 3635-3636; Klopfenstein, "Feedlots." The American poultry industry never used wide pastures – confinement facilities grew gradually since lifetime confinement started in the 1920s. See: Sawyer, *Agribusiness Poultry Industry*, especially chaps. 3, 5, 9; Boyd, "Making Meat," 639.

³⁶⁷ Klopfenstein, "Feedlots;" Khan, *Broiler Farm Production Manual*, 40.

³⁶⁸ 16 weeks (112 days) relate to chickens of 1923, weighing almost 1 kg. at slaughter, according to: Horowitz, *Putting Meat on the American Table*, 126. The distributors of the popular "Ross 308" chickens (see: Product Overview) determine "target weight range" of 1.75-2.5 kg. The birds reach this range at 32-41 days (*Ross 308 Broiler*, 6-7).

resulted from at least four factors: a) exploiting relatively more animals for meat only ("single-purpose animals") which unlike milk, eggs and wool, takes minimum growing time; b) faster growth and shortened fattening period to "slaughter weight", due to systematic genetic and nutritional manipulations; c) splitting animal farming into well-defined stages that take place in specialist facilities in different locations (e.g., in the egg industry: hatchery, pullet house and layer cages – in addition to at least two separate parent generations); and d) expanding the employment of hired hands in farms, who may work there less steadily than old fashioned farmers.³⁶⁹

None of these factors imply a weakening control over the lives of the animals. They rather indicate a fragmentation of the acts of control and their locations, and at the same time a shift of control from the personal treatment by a single farmer – to the industrial management by a wide agricultural system. A shortened cow's life, for example, does not merely entail that the industrial farm worker knows less than his predecessors about his particular cows and therefore he lacks some means of manipulating these cows. Keeping cows alive for a shorter time also means that most of the manipulation changed its character and location. Now the central aspects of the manipulation are science-based and more physiological than behavioural (through genetics, biochemistry, and artificial environment); they are planned and produced in specialized facilities, and they are aimed at the entire industry rather than at specific animals or specific farms.

The central element of long-distance control, however, is the use of automatic devices. There is extensive literature on the influences of automatic equipment on human

³⁶⁹ For a concise review of these factors, see: Tsovel, "Alienated Contact," 348-350. On early intensive breeding of sheep and cattle, mainly for meat, see: Trow-Smith, *British Livestock Husbandry 1700-1900*, chap. 2; and for information on the departure of the "broiler" industry from the general poultry industry, see: Sawyer, *Agribusiness Poultry Industry*, 23-23, 37-38, 42, 49-53.

life, yet much of it focuses on the worker in a mechanized environment. Literature that refers to workers who have to adjust to automatic movement may be directly relevant to working nonhuman animals, although much of the contrast between mechanized and non-mechanized human work, which attracts the writers' attention, is irrelevant to nonhuman working animals ("beasts of burden" never had the privilege of initiative and interest in their work, which characterizes human non-mechanized work). Adjusting to automatic movement is less relevant to other forms of agricultural exploitation – for milk, eggs, meat, etc. Some aspects of the mechanized working environment, however, are relevant to both workers and all farmed animals. For example, Marx noted that industrial machinery is essentially in conflict with the workers: the automatic machine is made to work incessantly, while the worker needs rest and change; and under capitalist management, the automaton is "animated by the longing to reduce to a minimum the resistance offered by that repellent yet elastic natural barrier, man."³⁷⁰ This observation could be loosely expanded and include the perpetual pressure of the agricultural automatic equipment against the resistance and forced elasticity of farmed animals.

Furthermore, the separation of mental work from manual work under scientific management – especially around machinery – results in an industrial reality where "The physical processes of production are now carried out more or less blindly [...] The production units operate like hand, watched, corrected, and controlled by a distant brain."³⁷¹ This claim by the socialist political writer, Harry Braverman, entails that the manual worker turned into mere body. Therefore it may be plausible to examine farmed animals – who certainly turned into mere bodies under agricultural management – in

³⁷⁰ Marx, *Capital*, vol. 1, chap. 15 ("Machinery and Modern Industry"), sec. 3.b. ("Prolongation of the Working-Day").

³⁷¹ Braverman, *Labor and Monopoly Capital*, 125. See also the rest of his chap. 5.

terms that describe work under capitalist management. This kind of parallelism inspired at least one theorist, Barbara Noske, to go further than local analogies. Noske rephrases Marx's four aspects of alienation as an enlightening description of industrial animal agriculture: alienation from product, from productive activity, from fellow-animals, from surrounding nature, and from species life.³⁷² Noske stresses that "Whereas before [industrialization] the animal's subsistence cycle was to a large extent left intact, we now have come to the stage where the animal has almost totally been incorporated into human technology." She points out that at earlier stages of domestication the domesticated animals could relate to the new human-nonhuman society and new ecosystem, and she concludes: "But under industrial capitalism these systems are no longer intact so that animals have become reduced to mere appendages of computers and machines."³⁷³

Noske's observations (much like Tapper's, above) seem to touch some genuine shared human/nonhuman fate. Yet the Marxist terminology must also go through a series of awkward adaptations when it relates to farmed animals: a) discussing nonhuman non-voluntary physiological processes in terms of human habitual (and maybe intentional) working movements; b) discussing the body of the animal, her offspring or her secretion as if these are manufacturer's products, the animal being a manufacturer; c) equating the genetic and direct physiological manipulations on the body of farmed animals (in addition to the behavioural manipulations) with the mere behavioural manipulations on the body of workers; d) ignoring the fact that the major critical concern regarding the impact of automation on human workers is the redundancy of their old-fashioned manual work and the resulting loss of livelihood, while no significant parallel exists concerning

³⁷² Noske, *Beyond Boundaries*, 18-20.

³⁷³ *Ibid.*, 20.

farmed animals; and e) underestimating the significance of the fact that while machines caused a radical loss of autonomy at work in the human world, the essence of exploitation for milk, eggs, meat, etc. has already been strictly coercive way before the industrialization of agriculture, and in that sense any animal agriculture is essentially alienating. In short, mechanization did certainly have a revolutionary, devastating effect on the lives of farmed animals, but the Marxist language of alienation and other analogical conceptions may demand too much effort in recognizing the limitations of the analogy. Therefore I prefer to continue the discussion through a direct account of automatic equipment in agriculture.

The *raison d'être* of automatic equipment are replacing human labour more cheaply, and doing things that humans cannot do. In the animal industries, these general goals of automation are expressed more specifically as two major missions. The first mission is controlling the animals through minimum human attendance and active coercion – whereas control includes limitations on movement, transportation, killing, etc. The second mission is replacing natural ecology with artificial ecology while using minimum human labour. This includes a constant supply of food, water, heat, fresh air, light, etc. Automatic agricultural equipment appears in various types and degrees of automacy, which could be roughly classified into four groups: manipulative architecture – structures that administer control without any activation; animal-activated devices that also frequently make use of gravity; power-activated systems that use a constant source of energy such as electricity; and computerized systems that are programmed to react flexibly to changing conditions.

Fences are probably the oldest type of manipulative architecture, and they have probably predated domestication. A fence prevents escape, blocks herbivores from getting to crops and other vegetation (or train tracks and roads), and protects from predators; it controls social, sexual and parental encounters; and it does all that without human attention, without watching eyes, and with no frightening gestures or armed hands. A fence makes much of the shepherd's contact with the animals unnecessary; in a sense, it is an automatic shepherd.

Wood fences and sometimes also stone fences or hedges can fulfil these functions efficiently. The labour and capital invested in the construction and maintenance of the fence, however, influence the size of the fence, and hence also the size of the confined flock and the frequency of workers visiting the site and the level of their involvement in the life of the animals. The invention of wire fences (iron or steel wires stretched between solid posts) dramatically reduced the investment in the construction. Decades after such fences were widely available in the USA, the 1874 addition of barbs to plain wire (later also used as stretched spirals and cross-spirals) made it highly effective in controlling the movement of large quadrupeds.³⁷⁴ Reviel Netz describes the effectiveness of the barbed wire in terms of education. Referring to the use of barbs that anticipated barbed wire, Netz claims that "by causing pain, the fence could create the habit of its own avoidance. [...] the cow's habits and skills were enlisted against her. Rose's fence acted not on the cow's skin alone but also on her memory and judgement, and these were ultimately used for her control."³⁷⁵ This kind of education without the presence of an educator changed

³⁷⁴ Glidden, *Improvement in Wire-Fences*. Natural barbs were used in hedges much earlier, and the Glidden's barbed wire was preceded by less effective applications of metal barbs. See: Netz, *Barbed Wire*, 24-30.

³⁷⁵ *Ibid.*, 26.

the entire human relation with grazing animals, first in the American West, and soon throughout the world.³⁷⁶

"As humans learned more about animal pain, animals learned more about human violence. Animals learned to avoid barbed wire [...] cows were generally expected to pick up such knowledge through sheer experience. Their knowledge was apparently transmitted between generations, by the experience, for example, of calves following their mothers [...]. To close the circle of mutual knowledge, finally, the stage was reached when manufacturers, exploiting the knowledge gained by the animals, produced more conspicuous barbs, now functioning not only as instruments of direct violence but also as a more indirect instrument of intimidation [...]. This transition was essentially completed by the end of the 1880s, when the success of barbed wire as a tool for education of cows can be considered complete."³⁷⁷

The invention of educating or taming electric fences has preceded the success of barbed wire. An early inventor of an electric-wire fence wrote about his 1881-2 patent that "an animal coming in contact with negative and positive wires will receive an electric shock, which will so alarm and impress it that after having received one or more such shocks it will always avoid coming in contact therewith."³⁷⁸ The technological interest in electric fences grew by the late 1930s, and unlike barbed wire they could be set as mere sources of pain without causing wounds.³⁷⁹ Requiring a considerable investment, however, electric fences never got to be a dominant element in human-nonhuman relations.

Beyond electric fences are virtual fences – a remote echo of a barbed wooden frame that cows wore as a collar that would injure them if they press it against a fence while

³⁷⁶ *Ibid.*, chaps. 1-3.

³⁷⁷ *Ibid.*, 36-37.

³⁷⁸ Connelly, *Electric-Wire Fence*, 2. This is the earliest patent of an electric fence that I know of, but Connelly presents his invention as an "Improvement in Electric-Wire Fences."

³⁷⁹ Netz (*Barbed Wire*, 34-36, 38) describes wounds, followed by a fly attack and screwworm infestation, as an apparent, widespread effect of late 19th century barbed wire fences. Contrarily, although an electric fence may be fatal, inventors were careful to note that it is harmless. For example: Stanley G. Klumb, *Electric Fence*, 2.

trying to pass it.³⁸⁰ Australia's national science agency (CSIRO) presents such an experimental system: "The animals wear collars containing software that identifies where the cows are and emit a sound when the animals approach the boundary. This tells the animal the fence is there, just like a cow can see a conventional electric fence and learn to avoid it."³⁸¹ In a similar MIT-USDA experimental device, the sounds are an old-fashioned cowboy song, or barking dogs and hissing snakes.³⁸² Yet in both systems, as the CSIRO explanation continues, "If an animal decides to continue past the virtual fence line it will receive a small electric shock in a similar fashion to a conventional electric fence." The system is adaptive: "Signal timing and duration are based on the behaviour of the cow. Experiments have shown that animals can learn about a virtual fence for the first time in less than an hour and avoid the fence boundary."³⁸³

In these experimental systems, "automatic shepherding" reaches new frontiers of domination over long distance: "The virtual boundaries are drawn entirely by global positioning satellite (GPS) and exist only as a line on a computer."³⁸⁴ The MIT-USDA system developers are concerned that their invention makes human presence – and livelihood – obsolete, and therefore they convince their interviewer that "The technology won't eliminate the need for cowboys; instead, the focus is to shift their labor from physical to cognitive. Ranchers and cowhands will no longer have to spend time building and repairing fences. Instead, they'll devote more time to leading animals to areas with better nutrition while protecting natural resources."³⁸⁵ Under such a system, controlling

³⁸⁰ Netz, (*Barbed Wire*, 24-25) presents this 1873 unsuccessful invention as the inspiration of Glidden's barbed wire.

³⁸¹ "Fencing Livestock In – Virtually."

³⁸² Dabovich, "Herd Headset-Wearing Cows."

³⁸³ "Fencing Livestock In – Virtually."

³⁸⁴ *Ibid.*

³⁸⁵ Dabovich, "Herd Headset-Wearing Cows."

animals becomes a purely "cognitive labor" done in an "air-conditioned office" with virtually no need to ever set an eye on a cow or even on a picture of a cow. This remote-control system is much like some decades-older military technology. Yet if operating an unmanned aircraft is operating a machine against (human) animals, the new agricultural work is operating a machine and (nonhuman) animals as one, integrated system. Noske claimed that nowadays "the animal has almost totally been incorporated into human technology;"³⁸⁶ yet the virtual fence is beyond "almost". When the human worker does not have to leave the office (as long as the animals are allowed to graze) the actual animals appear to her as mere moving parameters on a virtual map – much like "players" or "guns" in a computer game. As long as the system works without an apparent malfunction the "cowboy" does not need to rethink the system's artificiality and enquire what the actual animals go through.

The interest in the discussion on fences and long-distance control lies in the balance between control and freedom, that is, the freedom of the animals to convert one commodity (vegetation) into a more expensive commodity (animal products) while minimum human labour is used. This, however, is not the industrial tendency. Industrial manipulative architecture is epitomized not by fences, but by *three-dimensional enclosures*, and most notably by cages – another ancient invention. If fences often involve manipulations on behaviour, cages are generally inescapable and therefore behavioural manipulations are generally irrelevant to their structure. As cages do not enclose a natural area (wide enough cages would be much too expensive to construct and maintain) caged animals cannot fend for themselves. Therefore the use of cages necessarily entails intensive care. Such care is the major project of sophisticated

³⁸⁶ Noske, *Beyond Boundaries*, 20.

agricultural automation, but cages as such are perfectly "automatic" even in their most primitive form: they were made to replace a guard against escaping, and they do so very effectively (of course, cages are not uniformly effective; some models, for example, are more lasting than others, and predators may attack through the cage bars; but the success of the cage is already embodied in a simple, wooden poultry coup).

In fact, cages develop from mere manipulative architecture into automatic devices only when some freedom is involved, and the hens' natural dispositions are taken into consideration in the planning of the artificial facility. Thus, opening a chicken coop in the morning into a range and closing it in the evening has been the subject of many inventions that intend to transfer the burden from the hands of the farm worker into the automatic mechanism. Poultry-activated doors have been invented at least as early as 1889, using the weight of the chickens on the roosting perch to move a lever that closes the door as they assemble at night and opens it as the chickens get off the perch in the morning.³⁸⁷ The mechanism uses the hens' natural disposition to roost together in the same elevated location and to come down in the morning. Decades later, an inventor of a similar mechanism explained that opening and closing the chicken house is still done manually, and "Because of the early hour which they should be released they are often neglected and are compelled to remain penned in."³⁸⁸ The poultry-activated devices were replaced later by electric doors with a timer. Such devices are currently popular in backyard coops.

³⁸⁷ Schroeder, Poultry House. A similar, smaller-scale mechanism operates doors of nesting boxes. This function is required due to the henhouse artificial crowdedness (allowing hens to lay without the intrusion by other hens) but it does probably not replace a farmer's work. Such automatic doors exist at least as early as 1876: Haise, Improvement in Nests for Fowls. Other versions appeared over time, at least as lately as 1958-61, see: Strombald, Hens' Nests.

³⁸⁸ Hawff, Releasable Door Fastener.

On the route of industrialization closing the doors permanently proved more profitable. Yet if foraging may be considered as "work" by the animals, the introduction of permanent captivity made the farmers lose this free work, and they had to replace it with human work. Furthermore, while foraging is easily supervised from afar, supplying feed is more difficult to do without direct involvement. Accordingly, the major objects of automation are the daily subsistence requirements: feeding, watering, and due to crowdedness – removing excrement. Automizing the last domain is more than saving work; as one inventor of a semi-automatic cleaning device wrote, "Many attempts have been made to construct a practical, self-cleaning dropping board to relieve poultrymen of the most disagreeable drudgery connected with their business."³⁸⁹

Before the invention of fully automatic cleaning systems, manipulative architecture played a significant role in making animal confinement feasible. The drainage of liquid excrement and leach over sloping floors is an ancient invention.³⁹⁰ A floor made of pierced boards at some height over a manure pit improves the drainage and the dissociation of the excrement from the animal body. Slatted floor (parallel lathes with narrow gaps between them) is even more effective. Such floors were used for the tight confinement of calves at least as early as the 18th century, and they significantly reduced the need for manual cleaning.³⁹¹ Slated floors made of wood, metal or plastic are still common in calf, pig and hen husbandry. The introduction of wire cages for poultry and

³⁸⁹ Rainwater, Dropping Board for Use in Poultry Houses, 1.

³⁹⁰ Describing sheep husbandry around the 1st century BC, Varro stressed that "The stable should be [...] on cleared and sloping ground so that it can be easily swept out and kept clean, for moisture not only rots the wool of the sheep but their hoofs as well and causes scab." Source: Varro, *Rerum Rusticarum*, bk. 2, sec. 2, p. 200.

³⁹¹ The author who described the early use of slatted floor stressed that "the area underneath the floor, as well as the floor itself, should be cleaned, whenever they become wet or dirty." See: A. C. H., A Farmer, *Rural Recreations*, 50-51. Regarding the 18th century use of holed boards in the Essex' veal industry, see: Trow-Smith, *British Livestock Husbandry 1700-1900*, 23-24.

other small animals allowed virtually no accumulation of excrement on the cage floor, bigger floor/manure pit distance, and consequentially the issue of manure cleaning could be removed from the list of frequent farm tasks.

The accumulation of manure under cages still leaves much occasional dirty work under the entire area of the cages. In large cage systems this became a considerable burden that attracts automatic solutions. An 1896-7 patent that was invented to save the cleaning work in open hen houses provided the basis for automatic cleaning of large cage systems: a wide, rotating belt stretched between two rollers and placed underneath the entire length of the roosting perches. Once in a while a farm worker had to rotate the crank-handle: the belt with the droppings on it would be driven to a blade pressed against one of its ends, and the droppings would be scraped and fall into a box.³⁹² This invention could have eliminated the need to shovel birds' excrement, yet it was not very successful at first. It proved more essential to the development of large cage systems of several batteries or tiers one over another, in the 1930s: here the rotating belts saved not only labour, but also space, which is costly in a three-dimensional confinement system. Battery cage systems did not use such belts as isolated devices anymore, but rather as one system for an entire set of batteries.³⁹³

The introduction of electricity and water pumps³⁹⁴ into cleaning mechanisms has freed the farm personnel more than ever from "the most disagreeable drudgery connected

³⁹² Dimock, Roosting Device for Fowls.

³⁹³ In the earliest available patent of this kind (1932-7) the belts of all the tiers are connected through chains, so a single handle could move them all: Olson. Hen Battery. However, some later patents of battery cages still had a less automatic cleaning mechanism.

³⁹⁴ An early (1933-7) example of the use of pumps is linked to the perception of the farm as a factory: "By a system of flushing the shelter stables, the milking room and the cow lanes both the solid and liquid values of the manure are carried into a catch basin and the considerable quantity of water thus brought into the catch basin is utilized to leach out the soluble values from the manure into a sump." In: McCornack, Dairy Plant, 2.

with their business" while supposedly keeping the animals from rotting alive in their excrement. Yet distancing farmers from this source of inconvenience and risk (through other automatic means as well) also had other implications. By now, the farmers – or at least farm management in large companies – did not have to share with the animals the adverse effects of concentrated ammonia and other irritating and dangerous gasses, liquids, pathogens and inorganic particles that abound in tight confinement.³⁹⁵ Hence automation, combined with the increasing scale of farms and the growing division of agricultural labour, have left the management with pure economic considerations, untainted by an animal/human shared living/working space. This development would not have been noteworthy if the automation of manure removal was completed successfully, and all the farm personnel were safely away from excrement concentrations. But such a sanitary success has never been accomplished, even in the most automated facilities. In fact, some industries, most notably the "broiler" industry, did not develop any automatic manure removal mechanism; "broilers" live in the same excrement-soaked litter throughout their lives, protected from the effects of filth only by their very young slaughter age.³⁹⁶

Furthermore, the relation between farm workers and animal manure has not been a simple story of distancing. As some human intervention is still required in any automatic agricultural facility, huge facility complexes are sustained by workers who spend many hours a day inside such facilities. Respiratory diseases and other ailments are the

³⁹⁵ Done et al., "Pathological Findings in Pigs;" Wathes et al., "Aversion of Pigs and Domestic Fowl;" SCAHAW, *Welfare of Chickens Kept for Meat*, 52-57; Kristensen and Wathes, "Ammonia and Poultry Welfare;" Morrison et al., "Gases and Respirable Dust."

³⁹⁶ This claim is true for the industry in general, but many attempts have been made to use the poultry house's space more efficiently by confining "broilers" in several tiers of cages. This technology allows a use of automatic manure belts, as seen in a recent system: AviMax: The Multi-Tier Battery.

inevitable result.³⁹⁷ Thus the health of the workers has become one of the variables that the management must consider – from safe distance. The preferable solution, from an economic point of view of "good management", is neither investing considerably more resources in cleaning nor reducing crowdedness, but rather isolating the workers from the foul air around them.

If the automation of cleaning succeeds in both saving work and relieving the disgust and risk, the automation of feeding and watering merely saves work – but it does save more work. In fact, the automation of feeding and watering may be a major precondition for the increasing size of confinement facilities. Otherwise, large facilities would have probably been too costly. More than any other domain of automation in agriculture, automatic feeders and waterers are mechanical replacements of the work of a caretaker. In small, non-commercial confinements, feeding and watering is potentially an activity of bonding between the farmer and the animals: the animals trust the farmer and they are happy to see her, and the farmer is pleased by the interaction with content animals, and she keeps an eye on their eating, drinking and other behaviours. Automatic feeders and drinkers, however, do not necessarily replace such "idyllic" relations: when the number of confined animals has increased and the mission of feeding and watering them has become more burdensome, or simply when a farmer does not have the time for taking care properly of a few animals, automation replaces an already alienated relationship and it is likely to improve the availability and quality of the food and water. This kind of "automatic caretaker" is essentially unlike a busy, human caretaker: it

³⁹⁷ For an updated bibliography about the health risks of poultry workers, see: Just, Duchaine and Singh, "Aerobiological Perspective of Dust." About pig workers, see: Asmar, Pickrell, Oehme, "Pulmonary Diseases Caused by Airborne Contaminants;" Charavaryamath and Singh, "Pulmonary Effects of Exposure to Pig Barn Air."

provides perpetually, yet it responds inflexibly (at least in most devices) and therefore any dysfunction could turn disastrous.

An early automatic feeding device, described in 1829, summarizes the principles of "automatic care" for more than a hundred years to come:

"Economy is the great recommendation of this poultry feeder. It is made to hold half a quarter of grain, not one particle of which can be lost. When once filled, it requires no more trouble, as the grain falls down into the receiver below, as the fowls pick it away; and the covers on that, which are opened by perches, and the iron cover above which is secured by a padlock, completely keep the grain from the rain, so that the fowls get it always quite dry, and as nothing less than the weight of a hen on a perch can lift a cover on the lower receiver, sparrows, and other small birds, are completely excluded, whilst the small cross bars through which the fowls pick, prevent cattle and other large animals from getting at the grain. It is astonishing with what facility the fowls learn to leap upon the perch, and so open the cover of the receiver which covers the grain."³⁹⁸

Humans design and construct this device and they set it to work (refill it) from time to time, but otherwise it makes its own artificial ecology through gravity, bird experience and knowledge of the artificial environment, bird action, and both structural and mechanical self-protection from rain, dirt, and larger/smaller animals. It seems that an entire range of domination – from control to care – is retained without human presence. The agricultural writer is thrilled with the success of the major missions of "automatic care": saving work; preventing direct waste of expensive feed; and preventing feed decay. A fourth task is fulfilled here as well: compelling the birds to exercise as they work for their food. This task has been insignificant in the design of devices for free-ranging animals (when exercise is mentioned in that context, it means getting out of the coop and forage or search for deliberately scattered grain).³⁹⁹ The issue of exercise bothered

³⁹⁸ Baird, "Improved Iron Poultry Feeder," 405.

³⁹⁹ A 1886 example: Stoddard, *An Egg Farm*, 44, 47, 49, 53, 67, 71-72, 77, 82, 86. It was probably the same author who invented a brooder with a manually-operated device that mixes cereals with "hay,

inventors of automatic feeders when confinement expanded. Between the turn of the 20th century and the 1920s, the artificial ecology that has been created by automatic feeders tried to imitate natural ecology. Several inventors perceived the provocation of exercise as one of the tasks of long-distance caretaking, and so chickens had to climb or fly to the feeders-exercisers, peck a lot or walk in search of automatically scattered food.⁴⁰⁰ This conception was totally overcome later by the trend towards growing crowdedness.

The automation of water supply posed different technical problems, as water flow is much more manipulable than the flow of grain, yet water is more easily contaminated. As in the case of early automatic feeders, the early automatic waterers constantly provided a small amount of fresh water that was discharged from a much larger reservoir due to animal action and gravity. The action here was usually mere drinking, without "exercise". Two distinct mechanisms (atmospheric pressure and float-valve) were used to make the covered water reservoir correspond to the water level in the open drinking trough and release water into it when the water level declined due to drinking or evaporation.⁴⁰¹

chopped straw, chaff, or forest-leaves" and distributes them, "and thus compel[s] the chickens or grown fowls to scratch to obtain the food, and thus obtain the necessary amount of exercise." Source: Stoddard, *Poultry Brooder*, 1.

⁴⁰⁰ Despite the 1829 Scottish device described above, most of the late 19th century poultry feeders were no exercisers. The earliest American invention of a bird-operated feeder-exerciser may have been filed in 1893 (Whitten, *Poultry Feeder*). The popularity of similar inventions declined around the time that battery cages came into use in the egg industry, yet the connection is uncertain. Clinton Dowling's belated (1944-7) *Feeder and Exerciser* was issued when battery cages were already prevalent in the USA – yet it was suggested for "livestock" as well.

⁴⁰¹ One method relied on atmospheric pressure and an accurate positioning of the reservoir, the trough and the passage between them against one another. In 1885, Bates' *Drinking Fountain for Poultry* may be the earliest of such patents. This method has gradually become less popular than others. The text of the (probably) latest patent of this kind reveals that it was meant to relieve the technical ineptness of using water tank trucks or trucks that carry water barrels in the 1950s: Patterson, *Portable Livestock and Poultry Waterer*. It seems that atmospheric pressure became impractical as the use of regional, high-pressure water systems came into use. Another, more lasting method relied on a float that rises/falls with the water level and pushes a handle that opens/closes a valve at the opening of the water supply pipe. Jonson's *Improvement in Float-Valves for Horse-Troughs* is among the earliest of such patents (1872-3).

Many early feeding devices were planned with the animals' behaviour in mind, as instruments of control and manipulation that aspire to give the animals some compensation for deprivations that occur under confinement. The planning of early drinking devices involved less attention to the users' behaviour (with the major exception of the animals' tendency to contaminate the drinking trough) and it was rather focused on solving practical problems in hydrodynamics. Nevertheless, from the perspective of the farm personnel all these devices save work in a similar manner, they make the connection with the animals less intense, and they require coping with a great weight of feed or water in each filling of the automatic devices, compared to simpler troughs.

The early automatic devices did not change one important aspect of farmed animal care: each device is still treated separately. A feeder or a waterer of these types is added to the facility with a certain number of animal users in mind for each device; it is not a part of the plan of the facility. In that sense an early automatic feeder or waterer is still more an instrument of care for confined animals and less a component of a factory.

The trend towards overall watering systems started around the time of the early separate automatic devices, but mostly in trains. The transportation of animals to remote American slaughterhouses posed unparalleled pressure for efficiency and for tightening control, since the space in the train car and the time during transportation are evidently more expensive than the space and time on the farm. Around 1880, dozens of watering and feeding systems for cattle, pigs and sheep on train cars were patented.⁴⁰² One of the inventors explained: "Heretofore cattle have been carried packed tight in cars without food or water for long distances, and when unloaded for feeding and watering, besides a

⁴⁰² A simple watering and feeding trough, positioned at the train station along the train track and available simultaneously to all the cattle onboard without downloading them (heads out only) was patented in 1876: McPherson, Device for Feeding and Watering Stock in Cars.

serious loss of time, great difficulty is experienced and cruelty used in forcing them back again into the cars."⁴⁰³ More than automation on farms, automation on trains appears as an urgent need for saving animals from torture and death, after essential, direct human care has been severely compromised or neglected. The challenge was to water and feed the animals onboard. The automation of feeding was very limited, but watering all the animals in the car simultaneously was achieved by attaching a water tank to the roof, and connecting it to all the individual troughs through a system of pipes. Opening a single valve at the top delivered water to all the animals promptly. In cattle, the system served about eight animals at once, and in poultry it could serve 72 cages at four levels by 1890.⁴⁰⁴

On farms, watering systems (rather than separate devices) developed slowly. A 1914 inventor suggested such a system, and explained that one of the objects of his invention is to provide "a device especially adapted for watering poultry, so arranged that any number of cups may be constantly supplied with running water, so that the water may always be fresh," and also "a system of poultry watering fountains which may be disposed at widely separated locations in different poultry houses." The potential for industrialization seems apparent, yet note the humble scale the inventor had in mind: "a system which will work as well with 100 cups [for drinking] as with a limited number.

⁴⁰³ Burton, Stock-Car, 1.

⁴⁰⁴ Nolan, Poultry-Car. Similar systems for pigs in two leveled (double decked) cars often failed, since "the hogs are huddled together in such numbers upon the decks of the car that it is almost impossible for the hogs in the central portions of the car to reach the watering-troughs at the sides of the car. A source of great loss in the transportation of hogs is due not merely to death from thirst, but in warm weather to the intense heat." Source: Street, Apparatus for Sprinkling Water upon Hogs, 1.

This object has been attained in my own poultry plant, where the system has worked successfully with twenty-eight cups [...]."⁴⁰⁵

The application of general, automatic watering systems into cages started around 1940. The inventor of one of the early battery cage patents, and probably the earliest general watering system in cages, already had a clear conception of the hen house as a factory, which must be managed as one complex entity:

"In order to care for a great number of hens properly, they must be caged in close proximity to each other. Such close housing may however lead to fighting among the occupants and the spreading of disease. The occupants must be watered and fed and kept clean without the necessity of removal from the cages and with as few motions and as little labor as possible, and it is, therefore, not expedient to care for the occupants as individuals. The watering, feeding and cleaning systems must be especially adapted to the batteries of cages and form as much a part of them as the floors and walls and egg collectors."⁴⁰⁶

This description summarises much of the essence of animal industries: the facility is intended to provide all the animals' subsistence requirements without a trace of natural ecology; a major purpose of the design is saving work and space; the object of "care" is the entire population in the facility; and the animals' natural reaction to these conditions are perceived in terms of anomalies that should be eliminated. This system epitomises the loss of old empirical knowledge on chickens (e.g., they cannot thrive without exercise) and the conscious emergence of new knowledge: "It has recently been found that hens are better producers and better fitted for market when kept confined in cages during their

⁴⁰⁵ Jackson, Device for Watering Poultry, 1. The patent is based on an outer source of water, a mediating reservoir, and a float-valve mechanism that controls the flow of water to an unlimited system of pipes. Notably, Jackson's interest in running water was more about the prevention of freezing and less about saving work. It is also a bird exerciser. This invention was preceded by a simpler patent that could potentially operate a large system of watering points, but apparently it has not been successful: Friedrich, Fountain for Watering Stock.

⁴⁰⁶ Ingraham, Poultry Cage Apparatus, 1. The watering system in this patent is similar to Jackson's, but with a separate reservoir for each battery or tier of cages, controlling the flow of the water to the drinking cups in this tier.

entire productive life. When segregated in this manner it is a simple matter to determine which hens are productive and which not, and confinement improves the quality of the meat."⁴⁰⁷

This statement implies that the knowledge of animal husbandry is irrelevant anymore (evidently, the process of redundancy started much earlier). Husbandry, in this context, allows domination over animals through balancing between the imposition of limits on their natural inclination – and the use of these inclinations as they are expressed naturally. The irrelevance of this conception is not only due to direct contradictions between the old assertions and the new ones, but also because of the different approaches to agriculturally-related information. An inventor of early "husbandry-type" architecture, devices and techniques had to manoeuvre between intuitive ethological observations, veterinary records, engineering analysis and "production" records. Eventually, he had to come up with ethological, veterinary, or engineering solutions that enhance "production". Under a fully industrial regime, ethological observations and solutions have been omitted, and collecting the relevant information does not allow intuitive manoeuvring anymore: you must have an objective, clear-cut method that allows exact measuring of "production". Evidently, isolating the animals in identical barren cages qualifies as such a method. This mindset is expressed above by an agricultural engineer, but note that he expects the farmer to follow the same route: it is the farmer's daily task to measure "production" in the new way.

Later watering systems surpassed the invention described above in terms of a single coordinated system, especially when nipple drinkers came into wide use, since the late

⁴⁰⁷ *Ibid.*

1980s.⁴⁰⁸ A nipple drinker is usually a tiny, very loose valve in the lower side of a water pipe, and very weak pressure – such as a chick pecking at it – discharges a drop of water. It is practically a part of the water pipe and therefore designing a network of pipes already includes the drinkers. More importantly, agricultural engineers overcome the physical limitation on the flow of solid feed. Until then, feed had to be stored over each eating trough. In 1950 engineers invented very long troughs with a chain inside, moving automatically and carrying grain with it over any desirable distance.⁴⁰⁹ This invention completed the long-distance control of the animals in the facility, yet other appliances had to follow suit in order to sustain larger facilities: automatic egg collectors, artificial lighting and forced ventilation. It is not necessary to go through the historical development of these technologies, since electric lighting and ventilation did not replace human work (except for turning switches on and off and pulling curtains up and down), and automatic egg collectors employ rotating belt technology that is similar to automatic manure removal appliances.⁴¹⁰

The major point here is the emergence of the agricultural facility as one system rather than an ad hoc aggregation of devices in a given space. A 1961 inventor, who claimed that his patent was the first facility that conveys automatically all four elements (feed, water, manure, and eggs) stressed that a major advantage of his design over

⁴⁰⁸ Nipple drinkers are potentially less susceptible than old drinkers to contamination, spillage or freezing. Models that were patented in the mid 1980s had commercial success, according to: Rader, Poultry Nipple Drinker. The basic mechanism was invented earlier. Rader himself issued a nipple drinker patent in Germany as early as 1971 (D222271), and a pipeline with nipple drinkers is already described in 1932, in: Sadleir, Poultry Waterer; a nipple drinker patent underneath a water tank was issued two years earlier (Wysong, Poultry Drinking Fountain).

⁴⁰⁹ The earliest filing date for an invention of this kind is 1950 (Smallegan, Poultry Feeder). A similar result was soon achieved by a perpetually revolving screw along the entire length of the feed trough: Wallace and Wallace, Poultry Feeder.

⁴¹⁰ The economic incentive for collecting egg immediately after laying and transferring them into a cooled compartment is stronger than the motivation for constant manure removal, and therefore the full automation of egg collecting emerged earlier (1939-41): Apple, Egg Cooling Apparatus.

uncoordinated systems is removing extra conveyor belts and other components "tending to increase capital and maintenance charges."⁴¹¹ This expression marks a growing tendency towards harmonization among the various elements of the agricultural facility, and their incorporation into one, functioning ecology. For example, contemporary ventilation systems are an integral part of manure removal – aiming at the manure for drying and reducing ammonia emissions, or filtering and practically washing off harmful airborne particles and germs before releasing the air back to the outside world.⁴¹²

The ideal behind such systems could be compared to the ideal of 19th century American raids on feral cattle: the animals grow without direct human intervention until it's time to "harvest" them. In practice, no artificial, agricultural ecology reached that level of self-management or long-distance management. For example, up to date almost no automatic device can evacuate dead animals, treat sick ones or repair malfunctioning equipment. But the human corporeal presence in the agricultural facility has become deeply problematic. Human workers need appropriate space, air and light, and these resources have been gradually dwindled out of industrial animal facilities.

The 1961 patent demonstrates another aspect of industrial domination. If early automation focused on the human caretaker as the object of replacement and improvement, now agricultural engineers endeavoured to improve and replace the older automatic devices. The unmediated contact with farmed animals became less and less relevant to the new set of mind. The old patterns of agricultural domination have been gradually pushed beyond the horizons of the agricultural world, and good agricultural management meant more and more the knowledge of operating machines.

⁴¹¹ Cole, Automatic Laying Cage Battery, 1.

⁴¹² UNIVENTStarter: Manure Belt Battery Cages; MagixX: All-Purpose Exhaust Air Washer; OptiSec: High-Capacity Manure Drying Tunnel; The Belt Battery.

All the mechanisms described above are rather rigid. The next step of automation – as in the case of virtual fences – is *responsive mechanisms*. Unlike virtual fences, these mechanisms are not merely limiting, but they are rather life-supporting; they do not interfere with the freedom of movement in a given environment – they rather create the environment. Responsive mechanisms could be classified into environment-oriented mechanisms and animal-oriented mechanisms. Two qualities characterize all these mechanisms: a) they are equipped with artificial sensors; and b) they are programmed to respond differently to different data from the sensors.

Thermometer is probably the oldest kind of artificial sensor used in the animal industries. As I have noted above, the invention and application of thermostats in artificial incubators from about 1881 onwards have been the condition for the success and expansion of artificial incubation.⁴¹³ The artificial thermostat was the modern replacement of the ancient Egyptian, highly specialised class of hatchery operators, living inside the hatchery building and functioning as human thermometers and humidometers.⁴¹⁴ If the Egyptian hatchery specialist – each and every specialist – had a physical sensation of the environmental requirements of chicken embryo's development, the modern agricultural researcher or engineer relied on the mediation of instruments to get parallel knowledge, and much of this knowledge was in fact transferred into the machine. Theoretically, the incubator operator does not need to know anything about chicken embryo's development, but only on the proper operation of the incubator.

The use of thermostats was soon applied to brooders since they have been practically the same apparatus as the early incubators, or at least about the same size. The

⁴¹³ Above, n348.

⁴¹⁴ Martin, "Development of Artificial Incubation of Eggs."

application of thermostats as instruments of automatic climate control in poultry houses developed decades later.⁴¹⁵ The early devices replaced simple actions that a farm worker used to initiate intuitively: opening/closing ventilation windows or curtains, turning the heating device on/off, etc. Since the 1950s, more sensors came into use and the automatic tasks became gradually more complex – for example, keeping the proper level of heat and moisture at floor level (i.e. chicken level) rather than at human head level.⁴¹⁶ The introduction of computers into animal farming facilities gradually released the automatic control systems from their fixed, ad-hoc responses, since the mid 1980s.⁴¹⁷ The computerized systems could calculate data from various sensors and respond as a generalized system rather than as an aggregate of sensors.

Contemporary systems do not retain much resemblance to manual ventilating and heating systems. The self-proclaimed leader of the poultry and pig equipment industry,

⁴¹⁵ A thermostat that regulates the opening/closure of natural ventilation opening in the roof was presented in a 1926-7 patent: Giese, Ventilator. A thermostat-regulated system of heating a poultry house with a burner and an air duct was patented about a decade later: Millet and Markey, Recirculating Heating Device.

⁴¹⁶ A 1950-4 patent specifies the use of humidistat (probably the earliest humidistat in a US poultry patent) as well as a thermostat, and in addition to warming the air with a burner, the electric system supplies fresh air, raising/lowering the hot air delivery tube, and venting the air outside. The control of noxious gasses is still intuitive – venting out "undesirable odors". See: Schwanger and Schwanger, Poultry House Heating System.

⁴¹⁷ In 1986, in one of the earliest attempt to use a computer for climate control in poultry houses (Timmons, Environmental Control System, 3-4), the inventor explains: "More recently, attempts have been made to provide computerized control of the poultry house environment [...] However, in reality such computerized systems essentially replicate the manual control of a poultry house environment, and for this reason have not been satisfactory. A common feature of all such prior control systems is that they operate on the basis of preselected criteria, such as charts which provide specified values of air temperature and relative humidity, and operate to those preselected values only. Such systems cannot take into account the dynamic changes that occur within a poultry house from day to day and are even less able to take into account changes from hour to hour. These dynamic changes include changes in litter type, variations in litter conditions from the time of bird placement, changes in the birds themselves both as to size and as to health, changes in feeding patterns in response to air temperature, and changes in factors such as outside air temperature and humidity." The inventor claims, however, that "The invention is a simplified, dynamic system which responds not only to fixed data such as the poultry house structural and mechanical configuration, but to variable data such as the prices of fuel, feed, and electricity, overhead and labor costs, and data from temperature sensors. Most importantly, the system also responds to dynamically changing data, which is supplied to the system by way of a single input to allow the operator to provide a continuing, qualitative control of the operation of the entire system." Notably, at this stage the assessment of air quality and litter condition are made subjectively by the house operator.

Big Dutchman, manufactures Viper – a "climate and production computer". Viper can coordinate the following sensors (a partial list): 8 inside temperature sensors, 2 humidity sensors, sensors for NH₃, CO₂, O₂, air speed, negative pressure and outside temperature, in addition to 2 bird scales, 2 silo scales (for feed) and a water metre. Completing the long line of inputs, Viper controls up to 40 outputs that control heating, cooling, soaking, wetting, removing exhaust air, delivering feed and water, turning the light on/off, and more.⁴¹⁸ Evidently, Viper-like systems do not replace manual workers; they rather replace equipment-operating workers – workers who turn switches of automatic devices on and off, type data manually, etc. An old fashioned poultryman could feel that the poultry house is too hot, or humid, or fouled – and he could open windows and close curtains intuitively; he could also look whether the chickens seem to eat enough or too much, or weigh some of them manually, and add feed or reduce it intuitively or by scale. The contemporary system, however, senses the air non-humanly, in terms of both sensory quality and accuracy; it operates more specific climate-control elements, its operation of feed and water equals very intensive manual weighing, it calculates data beyond human plausible capacity, and it responds faster than any farm crew. Furthermore, as the system produces constant feedback, it could be compared to a farm crew that practically live with the animals – very unlike preceding commercial practices.

The apparent remaining advantage of the human farmer is the capability to observe and interpret animal behaviour, but this advantage is being challenged as well. Assuming that poor welfare impedes fish "productivity", a European research project has produced experimental systems for monitoring the welfare of aquacultured Atlantic salmon and European sea bass. In addition to an automatic monitoring of water quality parameters, an

⁴¹⁸ Viper: The flexible Climate and Production Computer.

echo sounder enables the system to monitor some patterns of behaviour associated with fish stress/welfare, such as fish dissemination throughout the cage, swimming speed, and location around feeding time. A computer program presents the meaning of these data in relation to a fish welfare index, and the results could prompt action (as yet not automatic).⁴¹⁹ The capability of a terrestrial farmer to observe the relevant variables is obviously limited, and even manual data recording has been acknowledged as problematic: "long term trials at commercial fish farms revealed that it still was difficult to get day to day compliance from the farmers." Hence, the researchers recommend, "If possible all uploading of data should be done automatically, independent of man."⁴²⁰

The accuracy of Viper and similar systems is alien to old commercial husbandry. Not only had the slightest economic differences become crucial for the economic survival of animal facilities, but the animals themselves had also become unlike their predecessors. A chief geneticist of a "broiler breeding company" explains: "In the past routine there were pre-calculated recommended temperature requirements for brooding day old chicks, with quite broad margins. They were adjusted during the day-calculated chick's stages of growth. At present the modern broiler chicks have become more sensitive to even small deviations from the recommended temperatures. Consequently the optimal growing temperatures are confined to narrower safety margins."⁴²¹ The writer specifies severe health problems caused by excess body heat, and adds that these problems are augmented by excessive eating, characteristic to the contemporary

⁴¹⁹ Welfaremeter: Fish Welfare in Aquaculture; FASTFISH: On Farm Assessment of Stress Level in Fish.

⁴²⁰ *Ibid.*, 24, 39.

⁴²¹ Eitan, "Information and Communication Technologies." See also: Deeb and Cahaner, "Effects of Naked Neck Genotypes," 1341-1342.

"broilers". The existence of these birds – the result of artificial selection for rapid growth – is supported by artificial means.

Viper is not a mere labour-saving apparatus anymore, nor is it a direct aid of human domination over nonhumans. In a sense, it is a rather autonomous system, within the limits set by its constructors and programmers: it performs tasks that no person ever did (at least not without similar devices), inside an environment that would not exist otherwise, and theoretically it can dominate the animals throughout most of their lives quite independently of human intervention. Future systems will probably be more and more autonomous. It is a process of human-nonhuman alienation through the replacement of the human caretaker's body *and* mind with an artificial system. No person needs to know about the specific birds in the facility because the artificial system "knows" everything there is to know, from an economic perspective.

Artificial systems would not reach that kind of autonomy through sensing and manipulating the mere environment – they should collect data from the animals themselves and manipulate the animals directly. As I mentioned briefly, Viper does so by weighing arbitrary birds and adjusting the amount of feed according to this information vs. some predetermined optimum. In that respect the poultry industry is lagging behind industries that exploit larger mammals who are allowed to live much longer. The dairy industry has invested more than any other animal industry in individual automatic management. A patent for electronic identification of individual cows was filed as early as 1969, and it was defined by the inventor as "an identification system for identifying individual cows to be incorporated in an arrangement for controlling the milking and the

individual dietary requirements of cows."⁴²² Improved systems identify electronically tagged cows by several appliances in the barn, and collect information about the cows' weight, milk production, lactation cycle, insemination, expected calving date, etc. Through automatic calculation, this information determines the feed quantity and composition of the individual cow, and as the feeding device identifies the specific tagged cow, it mixes the feed specifically for her, according to "the animal's individual characteristics".⁴²³ The poultry industry produced similar systems, though less individual, for breeding flocks. A sample of the females and males is tagged and identified when the birds step on the scales that lie freely on the floor; an automatic calculation of the average female/male weight vs. their economically optimal weight determines the amount of feed that the system will release into the separate female/male feeding lines.⁴²⁴

Feeding is not the only individual animal behaviour that is controlled by responsive automatic systems. A 1970s system detects and records the onset of cows' sexual receptive/fertility period (heat) – instead of relying on intensive observations by skilled herdsmen. When the cow walks through a narrow alleyway to the milking parlour or the food and water troughs, the system operates doors that isolate this cow for artificial insemination.⁴²⁵

⁴²² Lack, Animal Identification and Feed Control Means.

⁴²³ Palmer, Animal Feeding System. For a clear 2001 review of later automatic feeding systems, see: Vaags, Automatic Animal Feeder.

⁴²⁴ Roosenboom, Detection Device. The separate feeding lines function mechanically – the males are normally taller and their heads are larger than the females' heads, and the access to the feed in each line is restricted accordingly by a structure of bars; see: Brake, Khamidullin and Samnilova, Male Only Grill for Poultry Feeding.

⁴²⁵ Polson, Method and Apparatus for Animal Heat Detection. The "heat" detection in this invention relies on the sexual behaviour of cows – as heated cows remain standing when other cows mount them, the device relies on a pressure activated switch above the tail. Some other methods have been developed since, but the above patent is still more sophisticated than most contemporary methods. For an industry review, see: Williamson et al., "Electronic Heat Detection."

To date, the most comprehensive, responsive, automatic, individual-oriented device is the milking robot. The history of milking machines started much earlier, by the mid 19th century, and the first vacuum machines that operated a separate, pulsating, pumping tube for each teat were available by 1898.⁴²⁶ The ordinary milking machines of the 20th century, which still dominate the Western dairy industry by 2011, rely on the same principles, including the daily routine: caretakers walk the herd to the milking parlour about 3 times a day and attach the tubes to each teat manually. Evidently, the contemporary milking parlour is much more sophisticated than before, and it may include an individual identification system, automatic measurements, and a management program that calculates and coordinates information about the individual cows.

The milking robots, first marketed in 1992 by the Dutch company Lely,⁴²⁷ take industrialization a step further. The Astronaut A3 Next – one of the latest models – is designed as a fenced cell that the cow may enter. Once inside, she is identified through her tag (which also constantly records her ruminating activity) and she receives an individually-mixed ration from a trough inside the robot. Meanwhile, her position is measured by a weighing floor with four load-cells, as long as she stays in the robot. This information allows the computer to determine where the udder is, even when the cow moves. A robotic arm reaches underneath the udder, and two rolling brushes clean each teat in a manner that stimulates lactation. Then a laser detection device scans the udder, determines the exact location of each teat, and attaches the vacuum tubes. The system

⁴²⁶ Over 100 milking devices were patented in the United States in the 19th century since 1849. The earliest devices were tubes that were inserted in the teat, and by 1859 the first vacuum milking device was patented. According to: Vleck, *Illustrated Guide to American Milking Machines*; Vleck, "19th C. American Cow Milkers."

⁴²⁷ By January 2008, over 8,000 robots were used in over 2400 farms, mainly in Western Europe, according to an industry review: Reinemann, "Robotic Milking: Current Situation," 75.

collects information at quarter-level, i.e. on each teat separately – location, milk flow and milk "quality". Therefore each teat is milked independently from start to end, including a specific vacuum pulsation adjustment. During milking, the system checks instantly the milk's colour ("better than the human eye, with a higher accuracy and reliability"), conductivity, volume, flow parameters, and somatic cell count. This information is used for some automatic adjustments, as well as for as yet not very effective detection of mastitis (inflammation) and other health problems.⁴²⁸

Beyond the variety of sensors, the computation and the responding mechanisms, the Astronaut is innovative in its reliance on the cows' choice to enter it. After some learning, which may involve chasing cows into the robot, almost all of them learn to enter it.⁴²⁹ The producer explains:

"Admittedly, when we started robotic milking 2 decades ago, we also thought that efficient milk production could only be achieved by continuously forcing cows. However, in practice after a couple of years, it was clear that dairy farmers who let their cows totally free achieve the best results. Just like human beings, cows do not like to be pushed around. [...] Due to Lely's free cow traffic, your cows can eat, drink, rest and be milked whenever they want. Since all cows choose the most suitable times themselves, the hierarchy within the herd is hardly affected, ensuring minimum stress. Your cows feel happier, they produce more milk and good health is maintained."⁴³⁰

The producer claims that the robotic milking system causes less stress than contemporary milking parlours because there are no crowded journeys to the parlour with potentially aggressive cows, no long waits at the parlour, no impatient workers, and the equipment is more individually-adjusted. The cow's "free choice" became a central

⁴²⁸ Lely Astronaut (Astronaut A3 Next brochure); Lely Astronaut (Astronaut A3 Next video). In November 3, 2010, Lely released a new milking robot model, Astronaut A4. A 2011 review reveals that automatic detection of mastitis and cleaning the teats before milking are still lacking, and as a result udder health deteriorates during the first year or more after the introduction of automatic milking on dairy farms: Hovinen and Pyörälä, "Udder Health of Dairy Cows."

⁴²⁹ For some personal user testimonies, see: "New Robotic Milkers", 5.

⁴³⁰ Lely Astronaut (Astronaut A3 Next brochure), 8-9.

element in the production of higher "yields" at lower labour costs. (I put "free choice" in brackets since the level of freedom is strikingly superficial. The language of the Lely brochure implies that being milked is a natural choice just like eating, drinking and resting, but the coercion of environmental and genetic conditions is all too thorough. The cow cannot choose to have a natural udder and to have her calf suckle.) After a long history of increasing coercion that made free choice and behaviour essentially irrelevant, a super-human machine – ever present, constantly attentive, uniformly patient, and in some respects more sensitive or perceptive than a farm worker – allowed a return of some choice and behaviour.

The super-human machine is an industrial necessity since human beings are not made to dominate a large number of confined animals. It is too difficult a task in terms of physical strain, danger, boredom, and health risks. Indeed, humans are largely incompetent for any kind of simple factory work; the use of human power for simple, repetitive, physical tasks has been a transitional phase in the production of artefacts – and apparently also in animal agriculture. Humans are not made for it, but robotic systems are. Humans have their own needs, inclinations and other limitations, which are often in conflict with the agricultural tasks. Contrarily, Astronaut A3 Next is made for cow manipulation and exploitation, and for nothing else. Unlike a human worker it is not in conflict with cows; it does not need to finish work and go home. It can adjust to the cows to the full extent that economic considerations allow; and consequentially it allows the cows some "free choice" that is deprived where human labour is more intensive. It is important, however, not to accept the story of progress uncritically. The technology is still imperfect – its relative failure in maintaining udder health led veterinary researchers

to stress that "'Automatic' does not mean that the role of a competent herdsman is in any way diminished."⁴³¹ More essentially, economic considerations may promote crowdedness, genetic distortions and other stressors that will override any robotic-induced "free choice". And the pressure towards an individual-oriented technology is considerable in the dairy industry but not in other industries – certainly not in the "broiler" and fish industries.

The robotic milking system points towards an ideal of agricultural domination: an artificial ecology that fits some elements in the physical and mental structure of the animals so accurately and flexibly that their psychology and behaviour could once again be used for their own exploitation – somewhat like tamed, working animals. This agricultural ideal of "free choice" would be fulfilled when the entire life and death cycle of farmed animals will be controlled by automatic, responsive systems that adjust to the animals' local choices and take advantage of their cooperative movements. For example, once the automatic system may recognize that the milk production of a cow had decreased below some level, it may direct her onto an automatic vehicle "at her own pace", and she may enter an automatic slaughter machine "voluntarily". Despite the extreme physical force that industrial agriculture used against farmed animals to date, animals that give their bodies "voluntarily" remain among the ultimate goals of the industry. This ideal derives from economic facts: a less stressful animal usually provides a better "product"; an "animal welfare friendly" product is more appealing to many consumers; and most importantly – "free choice" saves labour.

A full automatic control over an entire life cycle is still impractical, but the "voluntary" walk to slaughter is not farfetched. Contemporary, large mammal

⁴³¹ Hovinen and Pyörälä, "Udder Health of Dairy Cows," 547.

slaughterhouses and surrounding facilities utilize knowledge of animal psychology and behaviour in order to make the animals move smoothly along the chute and prevent struggling in the restraint device.⁴³² A similar attitude appeared in industrial slaughterhouses at least as early as the 1880s; for example, one device overcame the reluctance of pigs to enter the shackling point by the calming presence of an eating "decoy pig" ahead of them, right before their hind leg is chained to a mechanism that hangs them upside-down.⁴³³

A last point should be made about the advanced automatic systems and the issue of physical distance between the workers and the animals. Unlike the outdoors virtual fence, which provides information about the mere location of animals, on the farm the variety of sensors and other means of measurement and recording provides the farm operators with a lot of information that they never had before the emergence of the new systems, and much of it they could not collect through direct experience even if they wanted to. In that respect, a Viper or an Astronaut operator gets more intimate with the animals than any of her predecessors.

⁴³² The most well-known designer of such facilities is Temple Grandin. Her detailed website (www.grandin.com) is based on the manipulation of animals into an economically desirable movement through "animal welfare friendly" behavioural principles. For example: "Shadows will cause livestock to balk and refuse to move. [...] A drain or a metal plate running across an alley will cause balking because animals may refuse to step over it. [...] Flapping objects such as a coat hung over a fence will also make livestock balk. [...] Livestock tend to move from a darker area to a more brightly lighted area. Lamps can be used to attract animals into chutes. [...] A curved chute [...] works better than a straight chute because cattle think they are going back to where they came from. Solid sides in these areas help prevent cattle from becoming agitated when they see activity outside the fence – such as people." Source: Grandin, "Improving the Movement of Cattle, Pigs, and Sheep."

⁴³³ Giedion, *Mechanization Takes Command*, 231-233, 235. Giedion refers to a 1881-2 patent: Lowry, Apparatus for Catching and Suspending Hogs. The inventor explains: "A hog, M, is first put into the pen A, [...] and food may be placed before him. It is a peculiarity of hogs that they are only to be driven with exceeding difficulty over any new and untried path; but when one has with apparent safety reached a point beyond it, especially if he appears to have found food thereby, others can be made to follow with much less trouble. The hog M therefore acts as a decoy for the others, and much time and labor are thus saved."

Throughout this process the farm turns into virtual reality, that is, the computed representation of the facility and the animals in it becomes more informative and reliable than direct experience (for example, if a poultry farm manger wants to know what is the quality of the air the birds breathe, why should he enter the building and literally sniff around if he can consult the more perceptive and accurate Viper?). The animals also turn into virtual animals – charted and graphed entities. The virtualization of animals does not happen merely because the actual work of managing their lives is gradually relocating from their living space into an office – but also because the system provides so much extensive, well-ordered information that it adds up to a separate reality. Obviously, this novel operator/animals intimacy is restricted to the system's predetermined parameters. Any element in the animals' life that did not make its way into the system definitions (e.g., social behaviour) – remains nonexistent from the system's point of view. The actual parameters (climatic elements, feed supply, animal weight, etc.) have been determined according to economic considerations, and as long as other parameters are economically uninteresting, they will be left out even as more sophisticated means of surveillance will be available. Thus the virtual facility and the virtual animal remain distorted representations of the actual objects, not necessarily due to technical limitations but as a result of distorting interest.

When first-hand familiarity with farmed animals occurs, perceiving them as nothing but production units probably requires some active neutralization of the moral element. Throughout the process of animal industrialization (and probably earlier as well) the neutralization of moral concern was supported by conditions such as the treatment of many animals en mass, the filth, the monotonous work, and the mediation of machinery.

The question of morality towards virtual animals, however, is essentially irrelevant, since virtual animals *are* nothing but production units. Evidently these virtual entities represent actual ones, but as automatic systems will become more and more dominant as sources of empirical knowledge about farmed animals, so would virtual reality gain precedence over actual reality.

It should be noted that the new technologies carry another kind of promise for enhanced intimacy between the farm worker or manager and the animals. For example, Big Dutchman's management and control system for hen facilities, "amacs", collects all the economically essential information from the facilities, operates the automatic equipment and exports the information to the internet; in addition, it offers a more direct means of examining the hens: "By using a web cam, pictures can be transmitted directly from the house to your office PC, so that you can always see what is going on in the house in real time."⁴³⁴ This technology could be very useful for watching the hens' behaviour. Yet it is doubtful whether farm workers or managers will spend time watching the hens on the screen. The web cam is indeed the only amacs element that has no definite function, and it is the only one that the producer defines as "optional".

Concluding the survey of long-distance and mechanically mediated control as it occurs in the industrial exploitation of nonhuman animals, it seems that the Grand Narrative is about growing alienation ("alienation" not necessarily in the Marxist sense but in the everyday sense of the term). Less people dominate more animals over shorter periods and through the mediation of more machinery. Most of the knowledge concerning farmed animals as natural beings has long become obsolete in agriculture – due to the mediation of agricultural equipment as well as other managerial factors. If

⁴³⁴ "amacs: The Agro Management and Control System," 8.

exceptionally perceptive farmers appeared in the industrial setting, the nature of the agricultural environment and work would prevent them from restoring the lost knowledge. Empathic observation by outsiders who have a non-agricultural agenda (e.g., animal right activists with some background in animal welfare science) seems like an option for restoring and developing such knowledge. Nevertheless, since the expression of natural inclinations is effectively prevented by the agricultural equipment and management, knowing farmed animals as natural beings has turned largely irrelevant to the industrial condition. Therefore even hypothetical outsiders cannot acquire extensive morally-relevant knowledge about the animals, unless, perhaps, they get familiar with the animals outside the industrial setting. I will further elaborate on this difficulty in the Conclusions section.

The equipment and management of industrial farming do embody much morally-relevant empirical knowledge about the animals. This knowledge, however, is *essentially deficient*. That is so not only in comparison with the knowledge that hypothetical outsiders could have acquired, but also with knowledge that rare outsiders (undercover investigators, animal welfare scientists, etc.) have acquired in practice through watching industrially farmed animals as sensitive individuals, keeping in mind how similar animals respond to less artificial conditions. Furthermore, although the equipment and management of industrial farming does not embody fabricated or distorted data, the restriction of knowledge to a narrow field of interest adds up to a distorted picture of what the animals are (and therefore what the relationship with them is). Their status as objects within the industrial system is naturalised through what is known and unknown about

them. In that sense, the equipment and management of industrial farming embodies *biased* knowledge.

That shortcomings of the knowledge in question may be summarised into four points: a) this knowledge is highly generalized, aspiring to standardise the entire target population at the expense of individual variation; b) it is profit-oriented, and therefore it emphasises profit-related facts while omitting other facts; c) it is manipulation-oriented, and therefore it strongly emphasises facts about the interaction between the animals and unnatural, unprecedented, highly specific equipment (and other managerial factors); and d) in any case it is expert knowledge, pulverised among different experts. At on-farm level, much of this knowledge is not required.

The farm is theoretically the site of knowledge of the individual animals, but such familiarisation is prevented by the mediation of equipment. The more the automatic equipment becomes the direct tool of domination, the more important it is to know the equipment rather than the animals. And finally, as the direct contact with the animals is made more and more by equipment rather than by workers, familiarisation with the animals necessarily turns into familiarisation with mechanical representations of the animals rather than with the actual animals.

4.6. Genetic domination

A major, distinct aspect of industrial exploitation is facilitated through genetic domination. This category may be roughly divided into several phases: unintended selection; intuitive non-commercial selection; commercial non-scientific selection (the beginning of industrialization); scientific selection according to animal traits (i.e.

phenotype); selection at genomic level; and genetic engineering. These phases are not clear-cut, and not every contemporary society went through all of them.

It is worth mentioning that genetic domination has been applied to humans, but the human/nonhuman parallels are especially dull in this field, since the genetic domination of humans has never exceeded incomplete attempt in fragments of populations, i.e. eugenics.⁴³⁵ Eugenics has been an anomaly in the history of genetic domination not only because it appeared in the modern era without a preliminary history of genetic domination over the target populations, but because its objective has been essentially different. However distorted the idea may seem to us in the contemporary West, eugenics was about "improvement" in light of a conception of a healthy human community. Contrarily, throughout the entire history of genetic domination of nonhumans, "improvement" has been conceived in relation to an ideal of human utility that evidently interferes with the health and welfare of the animal community. This fundamental gap makes eugenics (and even more so the more recent attempts to eliminate hereditary weaknesses) virtually irrelevant to the discussion on industrial exploitation.

I will describe very briefly the pre-industrial phases of the genetic domination. Artificial selection at its least intensive form may be an unintended result of dominating the reproduction of some population. In fact, there is a fine line between dominating reproduction and merely influencing it by non-coercive interaction with this population. Favoured traits may be hereditarily enhanced in future generations, and unwanted traits may be degenerated – as a result of mere protection and support of individuals who carry these traits, as well as a result of controlling their breeding opportunities. Presumably, a

⁴³⁵ Lynn, *Eugenics: A Reassessment*, chap. 2; Adams, *The Wellborn Science*; Black, *War Against the Weak*.

mixture of non-coercive influences and coercive ones are the origin of domestication.⁴³⁶

The archaeozoologist Juliet Clutton-Brock demonstrates how the control of breeding is the very foundation of domestication, and stresses that it combines various types of domination: "Domestication begins with ownership. In order to be domesticated animals have to be incorporated into the social structure of a human community and become objects of ownership, inheritance, purchase and exchange."⁴³⁷

Intentional selection for specific traits is the next phase of hereditary domination, beyond mere domestication. It involves as a matter of fact the control of the sexual behaviour of the animals. The control is usually achieved through the animal's cooperation – the mere isolation of a male with one or several females is often a sufficient condition for them to initiate mating (the practice of restraining non-cooperative females, and since the 20th century also artificial insemination, eliminate this element of cooperation). Under these conditions "breeding" is regarded as an active human endeavour, and the person who controls the identity of the couples that will be allowed to mate is regarded in terms of creative agency: "a breeder". Clutton-Brock maintains that "Selective breeding was probably practiced by the earliest Neolithic farmers for animals that were distinctive and submissive, as well as hardy, and easy to feed," and "both the Babylonian and the ancient Egyptian civilizations had developed definitive breeds of dogs, cattle, and sheep by the beginning of the second millennium BC."⁴³⁸ Nevertheless, she claims that before the modern, science-based selection,

⁴³⁶ Clutton-Brock, *Natural History of Domesticated Mammals*, 29-33; Price, *Animal Domestication and Behavior*, chaps. 2, 7 (especially 43-44). About unconscious selection, see also: Darwin, *Origin of Species*, 25-29.

⁴³⁷ Clutton-Brock, Clutton-Brock, *Natural History of Domesticated Mammals*, 31. See also: Ingold, "From Trust to Domination."

⁴³⁸ Clutton-Brock, *Natural History of Domesticated Mammals*, 40.

artificial selection was a slow process, entwined with the hereditary response to the local environment, and therefore it could be called evolution as much as selection, and the resulting breed is akin to subspecies.⁴³⁹ According to Clutton-Brock,

"[...] it is necessary to remember when tracing the history of domestication how ignorant people were in the past of the laws that govern the inheritance of variable characters. Nowadays every literate person who is concerned with the breeding of animals for economic profit, or with their history from an academic point of view, has some knowledge of the concept of evolution, and natural and artificial selection, but in the past there was very little understanding of how these processes worked. Inevitably, therefore, the production and retention of favoured characters through several generations was very much a hit-and-miss affair and remained so from the time of the ancient Egyptians until after the publication of *The Origin of Species*, by Darwin, in 1859. [...]

With a few exceptions such as the pure line of Pekingese dogs bred in the Imperial Palace at Peking (Beijing) over hundreds of years, and the Arabian horses from central Arabia, the production of well-defined breeds of domestic animals was not in the past controlled in the rigid way that we are used to."⁴⁴⁰

The agricultural historian Robert Trow-Smith refers to artificial selection as "livestock improvement" and claims that "It has throughout most of history proceeded so slowly that its progress has been barely perceptible from one generation to another;" yet some eras saw fast changes: "The heydays of Grecian and Roman farming, monastic sheep husbandry in the Middle Ages, the great days of the Mesta in Spain, the period of high industrialism in the Low countries in the late mediaeval times."⁴⁴¹ The modern methods, however, started not following Darwin but during the 18th century. The pioneer breeders of sheep and cattle (and less prominently, working horses) of the time probably borrowed ideas and methods from race horse breeders.

⁴³⁹ *Ibid.*, 47-48.

⁴⁴⁰ *Ibid.*, 47.

⁴⁴¹ Trow-Smith, *British Livestock Husbandry 1700-1900*, 45.

The prominent early star breeder was Robert Bakewell (1725-1795) of Leicestershire, England, who started his systematic "improvements" of Leicester sheep and longhorn cattle by the middle of the century, and became famous around 1770. Bakewell's work already contained many elements of modern, systematic artificial selection, yet without a scientific theory behind it. These elements involve insights about specific facts and a steady accumulation of further knowledge concerning these facts; this knowledge serves as a means of domination of hereditary traits. I will analyze Bakewell's method into 8 principles. It is not clear which of these principles – if any of them – was invented by Bakewell, but he was certainly original in bringing them together systematically and popularising them.

a. *Breeding with an "ideal type" of animal in mind.* This approach goes beyond mere intentional selection, which reacts to the given variation in the animal population rather than attempts to initiate the direction of change within the range of anticipated variation. Almost a century after this principle has become prevalent among breeders in Britain, Darwin summarized it clearly:

"Few persons, except breeders, are aware of the systematic care taken in selecting animals, and of the necessity of having a clear and almost prophetic vision into futurity. Lord Spencer's skill and judgement were well known; and he writes, 'It is therefore very desirable, before any man commences to breed either cattle or sheep, that he should make up his mind to the shape and qualities he wishes to obtain, and steadily pursue this object.' Lord Somerville, in speaking of the marvellous improvement of the New Leicester sheep, effected by Bakewell and his successors, says, 'It would seem as if they had first drawn a perfect form, and then given it life.' Youatt urges the necessity of annually drafting each flock, as many animals will certainly degenerate 'from the standard of excellence, which the breeder has established in his own mind.'"⁴⁴²

⁴⁴² Darwin, *Variation of Animals and Plants under Domestication*, vol. 2, chap. 20, p. 179. See also: Darwin, *Origin of Species*, 23; Trow-Smith, *British Livestock Husbandry 1700-1900*, 51; H. C. Wallace, "Live-Stock Breeder," 23; Kennedy, "Animal Breeding in Europe," 137.

This approach assumes much control over the traits of future generations; as Darwin wrote: "Breeders habitually speak of an animal's organisation as something quite plastic, which they can model almost as they please."⁴⁴³ In this aspect of breeding, the breeder is appreciated not merely as a keen observer and selector but as a man of ideas and creator. Correspondingly, the animals – or more accurately, the breed – are perceived as a human-made entity.

- b. *Defining the "ideal type" purely by traits of high economic value.* Surely, animal farming since domestication has been about the economic value of the farmed animals, and farmers recognised which traits are valuable. Bakewell, however, represented a more analytic mode concerning economically valuable traits. Arthur Young, the agricultural reporter who made Bakewell famous, describes two aspects of Bakewell's analysis.

First, "The shape which should be the criterion of a cow, a bull, or an ox, and also of a sheep, is that of an hogshead, or a firkin; truly circular with small and as short legs as possible: upon the plain principle, that the value lies in the barrel, not in the legs."⁴⁴⁴ Young's words demonstrate that once an agriculturalist becomes the directing force behind the structure of future animals, the characteristics of the "ideal type" enter into conflict with the animals' nature and needs. The economic ideal does not correspond to the animal as such; although the "barrel" concept still relates vaguely to an animal, in fact the economic foundations of the "ideal type" relate to living animals largely in terms of saleable products. Young explains: "This principle is to gain the beast, whether sheep or cow, that will weigh most in the most valuable

⁴⁴³ Darwin, *Origin of Species*, 22-23.

⁴⁴⁴ Young, *Farmer's Tour through the East of England*, 112.

joints: — there is a great difference between an ox of 50 stone, carrying 30 in roasting pieces, and 20 in coarse boiling ones — and another carrying 30 in the latter, and 20 in the former."⁴⁴⁵ Such a clear focus can be achieved when other functions are neglected, and indeed – Bakewell initiated the transformation of "dual-purpose" animals into "single-purpose" ones.⁴⁴⁶ Apparently, the breeder could not (and still cannot) maximise the profitability of all profitable traits in a single breed or strain, and therefore he had to narrow down the goals of hereditary manipulation, neglecting some profitable traits – as well as natural functions – in the process.

The product-oriented aspect of the "ideal type" is no more fundamental than other goals of selection. Systematic selection has always targeted a complex array of traits that became increasingly more specific and accurate, and at the same time also more numerous – despite the growing tendency to breed "single-purpose" animals.⁴⁴⁷ Even in Bakewell's time, the heritability of "productive" traits was a significant goal of the breeding project, beyond the expression of these traits in existing animals.⁴⁴⁸ In addition, gradually it became clear that fecundity and health, i.e. typical animal traits

⁴⁴⁵ *Ibid.*, 110. Marshall, another agricultural journalist who described the methods of Bakewell and his colleagues in the English Midland counties, also presented "a proportion of parts" or "utility of form" as a major objective of artificial selection; additionally, he is clearer than Young about another major objective: "the texture of muscular parts – or what is termed flesh;" and he adds "a natural propensity to acquire a state of fatness, at an early age" (in addition to "beauty"). Marshall, *Rural Economy of the Midland Counties*, 247-249.

⁴⁴⁶ Trow-Smith, *British Livestock Husbandry 1700-1900*, 52.

⁴⁴⁷ Young himself provided 6 measurements of the body of some of Bakewell's sheep. A single "purpose" of a "single-purpose" animal is made of many traits; contemporary breeding of cattle for dairy, for example, targets about 40 traits, according to: A. John Clark, *Animal Breeding*, 4.

⁴⁴⁸ Trow-Smith, *British Livestock Husbandry 1700-1900*, 51. Trow-Smith, 52, provides a list of breeding objectives after Bakewell: "[...] the wholly successful breeder will be he who achieves his primary aims – be they meaty carcass, milkiness, or power of reproducing similar animals – without sacrificing the secondary desirable characteristics of his breeding stock: prolificacy; adaptation to environment [...]; thriftiness [...]; quality of hide or, more especially, of fleece; tractability; horned or polled characteristics as the market may dictate; longevity; a high food conversion factor; maternal qualities, such as easy parturition and a lactation curve of a shape suitable to the milk requirements of the offspring; inherited resistance to, or freedom from, disease and pests; and many other factors."

rather than product characteristics – cannot be overlooked in the breeding program, especially since they deteriorate severely if overlooked.

Young describes another analytic aspect of Bakewell's work: in cattle breeding, "the old notion was, that where you had much and large bones, there was plenty of room to lay flesh on; and accordingly the graziers were eager to buy the largest boned cattle;" yet economically it was "an utter mistake." Bakewell asserted that smaller boned animals fat faster and they "will have a larger proportion of valuable meat: flesh, not bone, is the butcher's object."⁴⁴⁹ This is a technical innovation, and behind it lies a novel conception of agricultural control: not simply manipulating animals in order to make them more profitable, but rather incorporating these manipulations within the wider formula of optimising the investment/profit relation: "The only object of real importance, is the proportion of grass to value. I have 20 acres; which will pay me for those acres best, large or small boned cattle? The latter fat so much quicker, and more profitably in the joints of value; that the query is answered in their favour from long and attentive experience."⁴⁵⁰

This kind of analytic, no-nonsense attitude may seem as the spirit of the age, but in fact it was not. It competed with other attitudes – coercive just as well but not bound to strict economic reason. Marshall, for example, presented "beauty of form" as the first of the four objects of artificial selection, adding that it is commonly believed – rather falsely, in his opinion – that "beauty of form and utility are inseparable."⁴⁵¹ Decades later, Darwin's wrote that "there is hardly any peculiarity in our most useful animals which, from fashion, superstition, or some other motive, has

⁴⁴⁹ Young, *Farmer's Tour through the East of England*, 111.

⁴⁵⁰ *Ibid.*, 111-112.

⁴⁵¹ Marshall, *Rural Economy of the Midland Counties*, 247.

not been valued, and consequently preserved."⁴⁵² A common complaint in literature on breeding, as late as the early 20th century, stressed that most breeders insist on "fads" rather than follow sound science in the service of pure economic reason.⁴⁵³ These "fads" included colour and shape characteristics that have not been proven as economically viable. They were regarded as constituting the "ideal type" of the breed in question – sometimes due to the belief that the chosen characteristic is related to "productivity", and sometimes due to aesthetic or symbolic reasons. This multiplicity of motivations and goals has since been more or less eradicated from industrial breeding systems.

- c. *Establishing procedures of controlled hereditary manipulation*: mating prominent animals, outbreeding, inbreeding, and culling. Selecting and mating females and males who seem to have economically desirable traits more than the rest of the flock is an elementary method of hereditary manipulation. Trow-Smith claims that "This 'like-to-like' system, along with controlled out-crossing to bring in other characteristics, was the system which has been used by all judicious stockbreeding from the earliest days of livestock domestication."⁴⁵⁴

The breeding of close relatives (or in-and-in-breeding, or inbreeding) is a likely result of like-to-like breeding under limited resources, and it has been an inevitable result of isolating small populations – probably since the dawn of domestication. Yet as the animal breeding expert and geneticist Jay L. Lush asserts, "Most breeders, even

⁴⁵² Darwin, *Animals and Plants Under Domestication*, vol. 2, chap. 20, 193.

⁴⁵³ Glover, "Form vs. Performance in Breeding," 153-154, 157; Erf, "Cooperative Breeding," 161-165; Kennedy, "Animal Breeding in Europe," 139; Forbes, "Conventionalism in the Teaching of Livestock Judging," 178-179; Walton, "Pedigree and Productivity," 448-450, 456.

⁴⁵⁴ Trow-Smith, *British Livestock Husbandry 1700-1900*, 53; for example, Varro (*Rerum Rusticarum*, bk. 3, chap. 10, p. 316) writes: "[...] he requires the slave who buys his geese to select them of good size and of white plumage, because they reproduce their own qualities in their goslings."

among primitive peoples, intentionally avoided the very closest inbreeding."⁴⁵⁵ Concerning Bakewell, however, "His greatest contribution to breeding methods lay in his appreciation of the fact that inbreeding was the most effective tool for producing refinement and fixing type." Bakewell did not publicize his methods, and Lush suggests that he may have been reluctant to expose his extensive use of inbreeding: "At that time there was even more prejudice against inbreeding than there is today, and many people thought it almost sacrilegious."⁴⁵⁶ Yet inbreeding became economically indispensable since it allows hereditary control beyond mere like-to-like breeding: it results in genetic uniformity, which promotes heritability of economically desirable traits. At the same time, genetic uniformity also intensifies undesirable and sometimes lethal traits; Bakewell's own animals have notoriously lost some of their fecundity.⁴⁵⁷ In other words, it is not the "ideal type" in the breeder's mind that defines the horizons of actual genetic domination; it is rather the balance between the "ideal type" and other, genetically linked, traits.

Genetic domination is of course not only about which individuals would be allowed to mate, but also about preventing sexual encounters among the rest of the population – by preventing their free movement, mutilating their sexual organs, or killing them (culling). In Trow-Smith's words, "The rate of wastage must have been very high indeed in his [Bakewell's] longhorn herd, for when Arthur Young walked the Dishley Grange farm in about 1770, he found that Bakewell had about 150 head

⁴⁵⁵ Lush, *Animal Breeding Plans*, 18.

⁴⁵⁶ *Ibid.*, 24-25. Marshall, *Rural Economy of the Midland Counties*, 250-251, stresses that in-and-in breeding became prevalent throughout the Midland counties.

⁴⁵⁷ Trow-Smith, *British Livestock Husbandry 1700-1900*, 52, 55, 65.

of cattle which only Twopenny is mentioned by name, some other bulls which were being let out for a season, and several breeding cows of merit."⁴⁵⁸

- d. *Selecting the breeding animals according to their pedigree and progeny.* The fact that decedents of animals that had economically valuable traits are likely to carry these traits has been among the foundations of animal farming since antiquity.⁴⁵⁹ Promoting specific animals as star breeding stock – as Bakewell did – promotes also the significance attributed to pedigree. Recording cattle genealogy, like horse breeders already did for the racing business, gradually became institutionalized throughout the 19th century, and it provided basic information that is necessary for genetic control.⁴⁶⁰

Highly profitable offspring were considered as a part of an animal economic value since antiquity,⁴⁶¹ yet Bakewell turned the presumably unplanned standard into a better controlled progeny test. His commercial use of exceptional bulls and rams as studs for hire increased the number of offspring of each of these sires, and dispersed them under various standards of management. This practice enabled Bakewell and his predecessors to tell which of the offspring traits were accidental or environmentally-induced, and which traits were hereditary and therefore could establish the sire's economic value.⁴⁶²

When establishing the economic value of an animal that is used for breeding, "progeny test" is generally more reliable than "pedigree test" and "performance test", but naturally it may be completed only later in the animal's life. This is one of the

⁴⁵⁸ Trow-Smith *British Livestock Husbandry 1700-1900*, 53.

⁴⁵⁹ Lush, *Animal Breeding Plans*, 23-24.

⁴⁶⁰ Lush, *Ibid.*, 27, presents a chronology of regular pedigree recordings; the "Stud Book" of Thoroughbred horses appeared in 1791, and the Shorthorn herdbook (the first cattle herdbook) appeared in 1822.

⁴⁶¹ Varro, *Rerum Rusticarum*, bk. 2, chap. 2, p. 199.

⁴⁶² Trow-Smith, *British Livestock Husbandry 1700-1900*, 54.

reasons why shorter intervals between generations are preferable for effective selection. In the 19th century, shorter intervals between generations could only be achieved through the use of early maturing species or breeds, and selection for early maturation. Since the early 20th century, artificial insemination has further expanded the range of "progeny tests" for sires. Since the last quarter of the 20th century, embryo manipulations (multiple ovulation, embryo transfer and in vitro fertilization) have also allowed some limited expansion of "progeny tests" for dams. Since the 1990s, the combination of embryo manipulation and selection according to genetic analysis rather than "performance" has enabled a dramatic reduction of the intervals between generations. Theoretically, the generation interval now depends on the time needed to perform the required lab techniques (see more details on these technologies in sub-section k).⁴⁶³

- e. *Breeding as an expertise by a professional expert.* Until Bakewell, intentional selection was a part of general husbandry. A contemporary agricultural reporter, William Marshall, wrote: "it generally happens, that a breeder of male stock [...] is likewise a dairyman, and frequently a Grazier; Mr. Bakewell being the only man, in this district, who confines his practice, solely, to breeding and letting."⁴⁶⁴ For many decades, professional breeding remained a personal skill of exceptional individuals. Darwin wrote: "Not one man in a thousand has accuracy of eye and judgement sufficient to become an eminent breeder. If gifted with these qualities, and he studies his subject for years, and devotes his lifetime to it with indomitable perseverance, he will succeed, and may make great improvements; if he wants any of these qualities,

⁴⁶³ Visschera et al., "Impact of Biotechnology on (Cross)Breeding," 60-62; Meuwissen, "Future of Marker Assisted Selection and Animal Breeding," 56-57; Meuwissen, "Future of Animal Breeding?" 90-91.

⁴⁶⁴ Marshall, *Rural Economy of the Midland Counties*, 253.

he will assuredly fail."⁴⁶⁵ In 1906, H. C. Wallace, an editor of an agricultural journal in Iowa, distinguished between "the true breeder" and other kinds of breeders, and described the "the true breeder" as "a man who is absorbed in the work of improving stock [...] The breeding of live stock is his life work." Wallace claimed that "No permanent improvement has ever been made in any breed of live stock except by the true breeder."⁴⁶⁶

This kind of individual expertise limited the range of genetic domination, yet in the late 19th century breeding already started to turn from art into a science-based technology. The expertise prevailed and deepened, but it was no longer dependent on unique "accuracy of eye and judgement" but rather on institutionalized, technical procedures. The work of agricultural research stations and agricultural colleges was a clear departure from the individualist framework described above.⁴⁶⁷ By the mid 20th century, a few American poultry breeding companies, such as Vantress and Arbor Acres, expanded dramatically and took over the emerging market of chickens that are bred specifically for meat ("broilers").⁴⁶⁸ By the end of the century, "improvement" throughout the poultry sector has become almost exclusively the work of competing companies that occupy professional poultry geneticists; pigs and dairy cattle are selected by both competitive breeding companies and farmer-cooperatives agencies; and the breeding of sheep and beef cattle is still done mainly by farmer-breeders that use communal recording schemes. The level of genetic control over the animals (i.e. the effectiveness of "improvement") corresponds to the type of breeding institution: it

⁴⁶⁵ Darwin, *Origin of Species*, 23.

⁴⁶⁶ H. C. Wallace, "Live-Stock Breeder," 23.

⁴⁶⁷ For example, a pioneering experiment in breeding hens for higher egg production started in Maine agricultural station in 1898, see: Woods, "Breeding for Increasing Egg Production."

⁴⁶⁸ Sawyer, *Agribusiness Poultry Industry*, 111-123; Bugos, "Intellectual Property Protection."

is highest in the poultry industries, and lowest in the sheep and beef cattle industries.⁴⁶⁹

f. *Commodifying the breeding value of animals that have exceptional economic traits.*

Around Bakewell's time, the economic value of mammals of all major farmed species started to split between normal individuals, and individuals – mostly males – that have a potential to pass on exceptional traits to their offspring. The trade was not uniform. By 1790, Marshall explained that in the English Midland counties, "breeders mostly hire them [male farmed animals] by the season, – of a few leading men, in the line of breeding males for this purpose; returning them, at the end of the season, to their respective owners."⁴⁷⁰ Bakewell not only hired animals by the season; as Young writes, "Mr. Bakewell has now a bull of his own breed which he calls Twopenny, which leaps cows at 5l. 5s. a cow."⁴⁷¹ Marshall stresses that "letting male stock" is rather new and unique to this region; and it probably started by "the letting of stallions, for the spring season." He adds that "Mr. Bakewell, though he cannot be deemed the projector, has certainly been the principal promoter, of this branch of rural benefits."⁴⁷² Bakewell rarely sold exceptional individuals, but when sales took place, the revenue was much higher than ordinary sale revenues. In 1791, the entire herd of Robert Fowler, which according to Marshall was the most highly valued in the country in his time, was sold. Trow-Smith stresses that it was "the first pedigree stock sale recorded in livestock history," and "the prices realized were on average

⁴⁶⁹ Smith, "Current Animal Breeding," 6, 8.

⁴⁷⁰ Marshall, *Rural Economy of the Midland Counties*, 252.

⁴⁷¹ Young, *Farmer's Tour through the East of England*, 113. Hiring males is usually discussed concerning large mammals, but according to Bogus, it was practiced in chickens as well, at least as early as the 1850s, in Rhode Island: Bogus, "Intellectual Property Protection," 127-168.

⁴⁷² Marshall, *Rural Economy of the Midland Counties*, 252-255.

four times those at which animals of comparable merit in other breeds could have been bought, and ten times those of ordinary commercial stock."⁴⁷³

From that stage on, the business of animal agriculture moved steadily from the use of native breeds and arbitrarily imported breeds into the use of "pedigree" (or "purebred" or "thoroughbred") animals. Nevertheless, even in industrialized countries the breeding of "common stock" (or "scrub" animals) persisted well into the 20th century; "upgrading" future generations by mating the female population with "purebred" sires was at times a mission of national effort.⁴⁷⁴ During the process, the levels of exceptional economic value multiplied within the "purebred" stock into about 5 generations, whereas the most highly valuable "nucleus" or "elite stock" may be predetermined as great-great-grandparents of the commercially exploited mass.⁴⁷⁵

The successful trade in exceptional individuals was a necessary condition for the establishment of a genetic regime in agriculture and the economic grounds for further investment in artificial selection. As early as the late 18th century, the new level of hereditary domination was already apparent. As Marshall wrote: "The effect of letting male stock has, probably, been greater than was foreseen. The great improvement which has been made in the stock of this district (particularly sheep) is striking [...] even one superior male may change, considerably, the breed of a country."⁴⁷⁶

- g. *Distributing the manipulated animals away from their geographic origin.* The high economic value of exceptional individuals that have been bred and kept by few professionals turned animal farming into a growingly centralist enterprise. According

⁴⁷³ *Ibid.*, 270; Trow-Smith, *British Livestock Husbandry 1700-1900*, 58.

⁴⁷⁴ Lush, *Animal Breeding Plans*, 34-35, 457-458; Burch, "Purebred Sires."

⁴⁷⁵ Visschera et al., "Impact of Biotechnology," 60-62; *Canadian Notifiable Avian Influenza*, "Part 1 - Description of the Commercial Poultry Industry in Canada."

⁴⁷⁶ Marshall. *Rural Economy of the Midland Counties*, 255.

to Trow-Smith, "The new longhorn fever was largely localized in the Midland counties. The epidemic of fashion for Bakewell's New Leicester sheep was nationwide, and more than nationwide. [...] Bakewell put the New Leicester on the road which led it triumphantly into every continent."⁴⁷⁷

"Fashion" gradually gave way to a competitive necessity, especially in some of the animal industries. The "broiler" industry started to "produce" its own special strains (separated from the egg industry strains) in the 1950s. Since around 1999, two breeding companies, Aviagen and Cobb, control 65-85% of the global market, through the dissemination of "grandparent generation" chicks.⁴⁷⁸ The globalization of the dairy industry is more direct due to the use of artificial insemination and the distribution of frozen semen over the globe; the semen of a single bull may impregnate up to 50,000 cows a year. Currently, five artificial insemination companies control this practice in North America, and they export semen extensively.⁴⁷⁹

- h. *Protecting breeding animals as "intellectual property"*. Although the term "intellectual property" is anachronistic, Young's description implies that Bakewell perceived his genetically manipulated animals as an original creation that should not be copied without payment: "When particular parcels of his best bred sheep are past service, he fats them for the butcher; and to be sure that they shall be killed and not go into other hands, he rots them before he sells."⁴⁸⁰ "Rot" in this context refers to a fatal liver disease, caused by liver flukes. This method is extreme by any standard,

⁴⁷⁷ Trow-Smith, *British Livestock Husbandry 1700-1900*, 59.

⁴⁷⁸ Fanatico and Polson, "Poultry Genetics for Pastured Production;" Reece, "AB Foods Ponders Bid for Aviagen."

⁴⁷⁹ Funk, "Globalization and Consolidation of the Artificial Insemination," 1362-1363.

⁴⁸⁰ Young, *Farmer's Tour through the East of England*, 118.

but a more conventional method came into use within decades: establishing breed societies that monopolize the ownership of the unique animals; "In fact, the added cost of such endeavours and the added cost of buying genetically improved breeding stock can be thought of as a licensing fee for their hard work and developments."⁴⁸¹ Patenting specific strains of animals emerged rather lately. Following a precedent set for simpler organisms and legal battles, on 12 April 1988 the U.S. Patent Office issued a patent on a strain of mouse that has been genetically engineered to be supersusceptible to cancer. Since then, patenting transgenic animals became routine in the USA.⁴⁸²

A well-established legal doctrine of refusal to patent "products of nature" blocked the full legal recognition of animal strains that developed through artificial selection as intellectual property and as patents. Without a patent-induced period of legal protection, breeders and breeding companies found other ways to defend their economic investment. Initially, they used their superior knowledge and means for further hereditary manipulations, so that their animals will constantly remain "ahead" of the rest of the market. In a review of "intellectual property protection in the American chicken-breeding industry", Glenn Bugos concluded that the technological advantage of the large breeding companies was effectively combined with the effect of their reputation, their ability to keep secrets from the rest of the industry, and blocking new firms through market concentration. On top of these methods, another one was added in the 1950s, following its successful application to corn farming:

⁴⁸¹ Rothschild and Newman, *Intellectual Property Rights*, xvi.

⁴⁸² Lesser, "Patents, Trade Secrets," 9. For reviews of the development of transgenic animals and the legal status of these strains in the USA and elsewhere, see in the same volume: Kevles, "The Advent of Animal Patents;" and Kevles, "Of Mice & Money."

breeding separate male and female lines, and selling the hybrid birds to the "poultry producers" without disclosing the parent lines. For the breeding companies, hybridization "served as a biological lock on their breeding efforts:" "The offspring of hybrid chicks [...] would reflect an almost random expression of all traits [of the parents], with none of the advantages of hybrid vigor. From the farmers' perspective, the pedigrees would genetically self-destruct."⁴⁸³

The issue of breeds and strains as intellectual property has long been an object of concern in the animal industries. For example, in 1905 the founder of the American Genetic Association wrote against allowing research and development to fall into private hands: "The cost of investigation must be paid by the whole people participating in the expense as in developments of agriculture and experiment stations, the whole people enjoying the results."⁴⁸⁴ About a century later, a *Journal of Animal Breeding and Genetics* editorial argued against patenting tools that are used in breeding schemes:

"Governments grant patents to promote research in new areas, but patents on mathematical and statistical ideas may have the reverse effect [...] Researchers in dairy cattle breeding now enjoy the very open exchange of ideas and methods necessary for international cooperation in genetic evaluation. Patent disputes can waste much time and money. Without intellectual property, we can continue to share ideas, to invest in data collection, and to make even faster progress."⁴⁸⁵

"Faster progress" here means strengthening the genetic domination over animals. In practice, such "progress" has been sometimes achieved through Government-funded

⁴⁸³ Bugos, "Intellectual Property Protection," 143-144. See also: Lush *Animal Breeding Plans*, 37; Lush, "Impact of Genetics on Animal Breeding," 319.

⁴⁸⁴ Hays, "Breeding Problems," 197-198.

⁴⁸⁵ VanRaden, "Why We Don't Patent."

or community-funded enterprise, like the two examples above, or through private initiatives, like Bakewell's and the work of the major poultry breeding companies.

All of the Bakewellian principles are still among the foundations of industrial agriculture today. Since the 18th century, four further major tools of genetic domination have been added up: establishing a tight breeding regime; using statistics to guide selection; selecting at genomic level; and manipulating DNA directly.

i. *Establishing a tight breeding regime.* Late 18th century prosperous animal farmers and later farmers could theoretically adopt Bakewell's principles, but most of them did not. Throughout most of the West, the genetic domination over animals remained much more intuitive and loose well into the 19th century, and in some aspects well into the 20th century. There was, however, a steady trend towards bringing all animal farmers under a breeding regime that endorses these principles. Three social forces promoted this regime: a) breeders who wanted to publicize their "products" – animals with exceptional traits – and protect their "intellectual property" through breed associations and breed standards, as noted above (principle 8); b) farmer communities that had an interest in spreading and sharing the economic benefits of exceptional animals; and c) governments that promoted the "upgrading" of farmed animals as a part of a national economic plan.

These three social elements had numerous variations, combinations and offshoots, with an exhausting variety of national, regional, breed-dependent and technology-dependent manifestations. Their history is virtually the entire social history of animal breeding throughout about 150 years.⁴⁸⁶ The local details, however,

⁴⁸⁶ Lush, *Animal Breeding Plans*, chaps. 3-5; Trow-Smith, *British Livestock Husbandry 1700-1900*, chaps. 8-9; Erf, "Cooperative Breeding;" Kennedy, "Animal Breeding in Europe;" Burch, "Purebred Sires;"

are not significant to the general characterization of genetic domination and the kind of knowledge that emerges from it. A common characteristic of all the relevant social developments is the tendency to measure and record more details concerning each animal, and to cover more animals. If the pioneer attitude and practices of Bakewell's time allowed the handling of limited information concerning a small number of animals within a limited geographic range, turning the pioneer practices into a widespread regime allowed a slow revolution in heredity-related information. Since the establishment of the first herdbook in 1794 (see note 457), the recording of progenies expanded to more and more individuals, breeds and species, over entire countries and beyond. This was achieved thanks to deliberate efforts of official authorities and experts, which sometimes promoted their initiatives with a moralistic tone against "inferior" animals and breeding practices.⁴⁸⁷

The recording of exceptional animals by mere name has been useless in terms of genetic manipulation, but "production" data was gradually added, and it included continuous records rather than a one-time measurement (which is typical of fairs, shows, etc.), and details beyond size and weight of the animals or their "products" (e.g.: the Babcock test for fat content in milk, since 1892).⁴⁸⁸ To these data, information about fecundity and health was added as well. However, a uniform level of heredity-related information was hard to achieve. Public research institutions that were established since the second half of the 19th century were obviously ahead of small farmer-breeders, and so were 20th century large breeding companies. In fact, the

Landauer, "Breeding in Germany and Austria;" Warren, "Breeding Projects in Russia;" Morley, "Dairy Cattle Breed Associations."

⁴⁸⁷ E.g.: Erf, "Cooperative Breeding," 161.

⁴⁸⁸ Herreid, "The Babcock Test;" Erb, Ashworth and Manus, "Field Testing for Solids-Not-Fat." See also a concise list for pigs: Jonsson, "Methods of Pig Improvement," 6-8.

breeding regime completed its rise to power only when small-scale breeding could no longer be economical, starting in the 1950s American poultry industry.

- j. *Using statistics to guide selection.* The rediscovery of Gregor Mendel's work by the turn of the 20th century changed the terminology used by professional breeders and agricultural researchers, yet its actual influence on genetic manipulations developed slowly. The statistical aspect of Mendel's theory worked well enough on some plant traits, but the economically-relevant animal traits proved too complex. In 1924, an agricultural expert from the University of Wisconsin described the rediscovery of Mendelism as "a light so dazzling that for a time little was seen but the clearly outstanding unit characters and their recombination in absurdly simple mathematical ratios. [...] Animal breeding was to be revolutionized. All traditions were to be upset and a new era was to be ushered in in which breeding should be conducted according to a simple set of mathematical formulas." Yet concerning the contemporary methods of practical breeding, he maintains: "We may as well face the facts and acknowledge frankly that they certainly have not undergone any radical modification. Considerable progress has been made in the greater use of purebred sires and there has been some advance in methods of registry of special merit and the like, particularly on the basis of performance and progeny tests. But it is doubtful if any great part of this can be attributed directly to the influence of the new genetic knowledge."⁴⁸⁹

About two decades later, the influential geneticist Jay L. Lush stressed that the knowledge of how the mechanism of inheritance operates "is fairly complete," but this knowledge does not facilitate any control over the composition of genes, their

⁴⁸⁹ Cole, "Possibilities of Genetic Contributions," 42-43. See similar claims in: Curtiss, "Our Present Knowledge of Genetics."

linkage relations, and their mutual physiological interactions. The control is restricted to finding and increasing the frequency of genes "which modify in the desired way the physiological effects" of existing genes. Lush concluded that

"This leaves as the breeder's only practical means of controlling the heredity of his animals his partial freedom to decide how many offspring each animal shall have and his freedom to choose, within the group selected for breeding, which shall be mated with which. These opportunities the breeder possessed and used before Mendel's work was known. But he used them with many mistakes, and he neglected many opportunities to use mating systems which could have forwarded his work. Full use of the genetic knowledge available today should make the mistakes in selection fewer, although it cannot prevent them all, and should enable freer use of inbreeding, outbreeding, and the crossing of types than breeders would have dared before the principles underlying those practices were understood."⁴⁹⁰

Lushe's book is heavy with statistical analysis of various breeding plans. Breeding methods are all explained mathematically, based on methods that were developed in the 1930s in population genetics and quantitative genetics. These sub-disciplines evolved following the rediscovery of Mendel, and were indebted to the earlier ideas of Francis Galton.⁴⁹¹ The intuitive principles of artificial selection have been converted into formulas, and the exact range of variance of alleles within any given breeding program has been defined numerically and graphically. The mathematical analysis determines the range of possible results (i.e. the traits of future offspring) and significantly narrows down the need for real-life experiments. Now, as the dissemination of alleles through the generations under specific breeding patterns has been modelled, animal geneticists could feed data into the model and run a simulation. The greater mathematical challenge was to consider the simultaneous changes of several traits under given conditions. This approach was promoted since

⁴⁹⁰ Lush *Animal Breeding Plans*, 111-112. See also: Lush, "Impact of Genetics on Animal Breeding."

⁴⁹¹ Jonsson, "Methods of Pig Improvement, 1-2; Ewens, *Mathematical Population Genetics*, 1-6; Armitage, "Biometry and Medical Statistics," 824-825.

the 1950s, and the introduction of computers into animal breeding programs (which started by the early 1950s) allowed the construction and use of more complex models. In the last generation, these may include 30-40 traits in a single breed, the allele distribution in an animal population rather than in individuals, various environmental conditions, and economic circumstances. Despite the use of sophisticated models, calculating even a fraction of these elements remains a challenge.⁴⁹²

The next step involves modelling and calculations of information about the genome – a rapidly expanding data on the genetic material and its relation to economically-important traits. As one pioneer in this field defines genomic selection, it is "the simultaneous selection for many (tens or hundreds of thousands of) markers, which cover the entire genome in a dense manner so that all genes are expected to be in linkage disequilibrium with at least some of the markers."⁴⁹³

- k. *Selecting at genomic level.* A major challenge to artificial selection is the fact that "performance" is not a reliable indication of heritability, i.e. the phenotype is not a reliable indication of the genotype – and of the phenotypes of the offspring. Although the genetic terminology did not appear before the early 20th century,⁴⁹⁴ the problem is as old as intentional artificial selection. The traditional answer to the challenge had to rely on phenotypic traits that seem to indicate predictable heritability. This method left much to chance, although systematic tests and simulations reached a high level of accuracy.

⁴⁹² Cartwright, "Systems Analysis in Animal Science;" Gjedrem, *Selection and Breeding Programs*, 5-6; Smith, "Current Animal Breeding," 1-7; Fernández and Toro, "Mathematical Programming to Control Inbreeding," 447-449; Misztal, "Reliable Computing."

⁴⁹³ Meuwissen, "Marker Assisted Selection," 321.

⁴⁹⁴ Churchill, "Johannsen and the Genotype Concept."

The study of heredity at molecular level allowed an even higher level of accuracy, through the direct identification of genetic material, including molecular markers of genetic traits. Molecular markers are identifiable DNA sequences that usually do not have their own biological effect, but they rather indicate the presence of further DNA sequences that have a recognizable effect. The success of this practice depends on the construction of a detailed marker map of the species in question, and on revealing a statistical correlation between markers and traits of interest. These traits may be genetically simple, or – more commonly in the context of animal agriculture – they may involve many genes (recognized as quantitative trait loci, or QTLs), as well as environmental effects.⁴⁹⁵

Thanks to the new genetic knowledge, selection can be made at genomic level (marker-assisted selection, or MAS). This secures the heredity of phenotypic, commercially important traits – without the uncertainty of relying on mere phenotype. A 2003 FAO background document on molecular marker-assisted selection presented the state of the art in this field: "With the advent of DNA-based genetic markers in the late 1970's [...] researchers could, for the first time, begin to identify large numbers of markers dispersed throughout the genetic material of any species of interest and use the markers to detect associations with traits of interest." Furthermore, "The first reported map in livestock was for the chicken in 1992 which was quickly followed by publication of maps for cattle, pigs and sheep [as well as some aquacultured species]. Since then, the search for useful markers has continued and further species have been targeted, including the goat, horse, rabbit and

⁴⁹⁵ FAO Electronic Forum, "Molecular Marker Assisted Selection."

turkey."⁴⁹⁶ Such lists are outdated fast. For example, beyond mapping markers, full genome sequencing (determining the complete DNA sequence of an animal's genome) has been accomplished in a few farmed species, such as chickens and cows.⁴⁹⁷

The FAO document stresses that the use of marker-assisted selection is still immature: "despite the considerable resources that have been invested in this field and despite the enormous potential it still represents, MAS, with few exceptions, has not yet delivered its expected benefits in commercial breeding programmes for crops, animals, forest trees or farmed fish in the developed world." Furthermore, although several gene or marker tests in different species and for different traits are available on a commercial basis, their efficiency as a basis for marker-assisted selection is unclear.⁴⁹⁸ Nevertheless, in the future, as one geneticist claims, "phenotypic recording may become redundant as genomic information becomes widely and cheaply available. This may not happen in the near future, but we will certainly have to deal with less or selective phenotypic recording for some traits, and would be well advised to plan for it."⁴⁹⁹

The high reliability and accuracy of the more traditional selection techniques make marker-assisted selection attractive to animal breeders especially where the traditional techniques are inaccurate, slow or expensive. This is the case in the selection for traits of low heritability, traits with few recordings (e.g., due to expensive recording), traits which are measured late in life – including ones that are

⁴⁹⁶ *Ibid.*

⁴⁹⁷ Moore, "Bovine Genome Sequence," 257-258.

⁴⁹⁸ FAO Electronic Forum, "Molecular Marker Assisted Selection."

⁴⁹⁹ Meyer, "Estimation of Genetic Parameters," 362. See also: Goddard and Hayes, "Implementation of Genomic Selection," 323-330.

revealed at slaughter, and disease resistance that require expensive and risky testing.⁵⁰⁰ Marker-assisted selection has been incorporated into the traditional progeny testing as a means to urge it by shortening the generation interval (the time between an animal is tested for a trait and her/his offspring could be tested). Velogenetics and whizzo genetics are techniques that were invented during the 1990s in order to challenge the dependency of progeny tests on the natural pregnancy cycle. Velogenetics is based on collecting oocytes (immature ova, or egg cells) from embryo calves. The geneticist Theo Meuwissen explains that

"The harvested oocytes are matured and fertilized in vitro before being transferred to a recipient female. This process is repeated by harvesting oocytes from this second generation animals with generation interval being reduced to 3-6 months. A few cells from the embryos can be used to determine their marker genotypes, and these marker genotypes are used for selecting the animals."⁵⁰¹

Whizzo genetics reduces the generation interval even further, omitting the entire dependence on pregnancy and relying instead on mere manipulation of fertilized oocytes. The fertilized oocytes are selected by markers, and then meiosis is induced; "The resulting cultures could again be selected on marker information, and the cycle could be repeated. The complete breeding scheme could be performed in the lab, and the generation interval depends on the time needed to perform the required lab techniques."⁵⁰²

1. *Manipulating DNA directly.* Traditional selection relies necessarily on the given genetic diversity within the population of selected animals. This limitation has been effectively challenged in vertebrates since the 1980s. The discovery of the structure

⁵⁰⁰ Theo H. E. Meuwissen, "Future of Marker Assisted Selection and Animal Breeding," 54.

⁵⁰¹ *Ibid.*, 56-57.

⁵⁰² *Ibid.*, 57.

and function of the DNA in the mid-20th century paved the way to the alteration of organisms by altering their genome. This is done by combining genetic material – introducing DNA from one organism into another organism, which will hereafter develop and reproduce with the foreign genes as a part of its own genes. Many methods of adding genes to host eggs, replacing genes or removing them have been attempted.⁵⁰³ The methods vary substantially in the amount of genetic material taken in order to be introduced as transgenes (foreign genes), the ways this material and the genome of the host are manipulated, and the developmental stage of the host embryo/cells when the transgenes are introduced.

The discovery of restriction and ligation enzymes in the mid-1970s enhanced the control over the genetic process, as these enzymes can break and isolate DNA molecules into fragments that could be reassembled in any desired sequence and form recombinant DNA. Following successful applications in bacteria and plants, genes were transferred from bacteria to animals.⁵⁰⁴ The oldest reliable method of genetic engineering relies on microinjection. In female mammals, superovulation is induced by hormonal treatment, and the fertilized eggs are removed before the maternal and paternal nuclei have fused (the removal is done after killing the female or by flushing the eggs out of a living female). Under a microscope, the transgene is injected into the male pronucleus. The egg is then implanted in a foster female (mostly surgically, especially in small animals). In this method, the injected DNA enters the sequence of

⁵⁰³ A recent overview of the methods used in farmed animals mentions 8 methods: pronuclear DNA microinjection, viral gene transfer, sperm-mediated gene transfer, embryonic stem cells, embryonic germ cells, nuclear transfer, spermatogonial stem cells, adult stem cells. See: Rehbinder et al., *Pharming*, 29-48.

⁵⁰⁴ Parekh and Gregg, "Introduction," 5-6; Houdebine, *Transgenic Animals*, 1.

the host DNA at a random location, and its expression in the offspring is not guaranteed. In farmed mammals, only 1-5% are born transgenic.⁵⁰⁵

Another prominent method uses the natural ability of some viruses to incorporate their genes into the DNA of host cells. A virus that contains the chosen gene can therefore serve as an efficient vector, through viral infection. Retroviruses, which infect the host with RNA that is subsequently duplicated as DNA – are used for this purpose and reach transgenic rates of up to 75%. As they can transfer only small segments, they are rarely used commercially in mammals, but are the method of choice in birds.⁵⁰⁶

Another method relies on culturing embryonic stem cells – undifferentiated cells that have a developmental potential to form all the tissues of the fetus. They are derived from an early embryo that developed from an egg that has been fertilized in vitro. The embryonic stem cells are initially transferred to a culture dish where they divide and multiply, and maintained in an undifferentiated state. While the cells are in culture, it is possible to set transgenes and make other, highly accurate modifications at specific locations in the genome. Afterwards, when introduced into an early embryo, the cultured cells are capable of differentiating and contribute to the tissues of the fetus.⁵⁰⁷ Some of the first chimaeric mice were created by injecting cultured

⁵⁰⁵ Aldridge, *Thread of Life*, 114-115; Kind and Schnieke, "Animal Pharming," 1026; "Transgenic Animal Science," 5-7. For detailed information about the history and the technology of microinjection, see: Lecal, Perona and Feramisco, *Microinjection*, chaps. 1-2.

⁵⁰⁶ "Transgenic Animal Science," 4; Kind and Schnieke, "Animal Pharming," 1026. For more detailed description of adenoviral and retroviral transgenesis, see: Clarke, *Transgenesis Techniques*, chaps. 4-5.

⁵⁰⁷ "Transgenic Animal Science", 7-8; Clarke, *Transgenesis Techniques*, chaps. 6-7 (especially 93-94, 127-128).

stem cells from one mouse strain into the early embryo of another, and the method has since become routine in laboratories.⁵⁰⁸

Another method – somatic cell nuclear transfer – involves the transfer of the entire nucleus from a somatic cell directly into the enucleated egg cell. Consequently, a clone embryo, genetically identical to the "donor" of the somatic cell, is created (e.g., the sheep Dolly).⁵⁰⁹

The result of these (and other) technologies is the creation of animals that are different from other members of their species beyond any natural variant. The most common applications of transgenesis rely on humanizing the transgenic animal – producing a human trait by inserting a human gene to the animal's genome, or removing biological identification signs of the animal origin of some tissue by removing specific genes. The use of transgenic animals – mostly mice – as "models" for human diseases has become widespread since the 1980s, and it commonly involves genetically engineered animals that are susceptible to a specific human disease. For this purpose and others, thousands of mice "lines" or "strains" have been created, and thanks to techniques that keep the genetic material operational (e.g. frozen embryos) many of them are commercially available for exploitation in laboratories.⁵¹⁰ Another application, which is not yet widely commercial, is animal pharming – the use of farmed animals' bodies as "production lines" of valuable human proteins. Following a specific genetic modification, the protein is extracted from the animal's (mouse, cow, goat, etc.) bodily fluids – most commonly

⁵⁰⁸ Nagy et al., *Manipulating the Mouse Embryo*, 359, 455; Bradley et al., "Formation of Germ-Line Chimaeras;" "Transgenic Animal Science," 3-4.

⁵⁰⁹ Niemann, Kues and Carnwath, "Transgenic Farm Animals," 2-4; "Transgenic Animal Science," 4.

⁵¹⁰ *Ibid.*, 2; Deltagen and Lexicon Knockout Mice; Order Mice.

mammalian milk, but also blood, urine, seminal fluids, and bird eggs.⁵¹¹ Another prominent yet experimental use of transgenesis is exploiting animals (mostly pigs) as a living reservoir of cells, tissues and organs for transplantation in humans (xenotransplantation). The rejection of the transplant through several types of immune response is the major obstacle to xenotransplantation, and the insertion and removal of key genes is among the major strategies developed to overcome the rejection.⁵¹²

Genetic engineering could potentially be used in ordinary animal agriculture to enhance the "productivity" of animals beyond the results of artificial selection. The complexity of the traits involved and the high cost of new technologies (as well as public disapproval) make most of this domain impractical at the present. It is especially developed in aquaculture, although commercial applications are yet insignificant. Experiments in introducing a foreign growth hormone gene into the genome of a few fish species (among other commercially-oriented experiments in fish) caused faster growth and more efficient food conversion. The phenotypic modifications, however, are comparable to modifications achieved through artificial selection.⁵¹³ The commercial exploitation of transgenic mammals is also becoming closer. Targeting specific genes for improved "production" traits is still experimental, but cloning exceptional animals is available commercially, on a trivial scale. Since

⁵¹¹ Kind and Schnieke, "Animal Pharming," 1026-1032; Reh binder et al., *Pharming*, 48-58; Parekh and Gregg, "Introduction," 9.

⁵¹² Klymiuk et al., "Genetic Modification of Pigs;" Taylor, "Xenotransplantation."

⁵¹³ Gjedrem and Baranski, *Selective Breeding in Aquaculture*, 165-167.

1997, animals of thirteen species have been cloned through somatic cell nuclear transfer. In cattle, the birth rate under this technique reaches 15-20%.⁵¹⁴

Concluding this survey of genetic domination, it is clear that the level of hereditary control over animals who are exploited on farms and in laboratories is very high. Speaking of "designer animals" is no exaggeration,⁵¹⁵ and the definitions of design are precise. One animal scientist concludes that "Conventional selection on phenotypes is effective with rates of response of 0.5-3% of the mean per year, depending on the species and trait. Although modest, the responses are cumulative and become appreciable over time. In practice, they are not often realised because of misdirected selection, poor definition of breeding goals and changing requirements."⁵¹⁶ Despite such delays, the long-term cumulative results are striking. A series of experiments in "broiler" chickens by Havenstein et al. demonstrates the extreme modification. Feeding birds of a 1957 commercial strain and a 2001 commercial strain on a typical 2001 diet, the average carcass weights of the 2001 birds at 42 days of age was 4.62 times heavier than those from the 1957 birds – among other extreme differences. In every "productive" trait, the hereditary changes over the years were overwhelming.⁵¹⁷

The list of hereditary anatomical and physiological modifications that have been forced upon farmed animals is too exhaustive for this dissertation – even without

⁵¹⁴ Niemann, Kues and Carnwath, "Transgenic Farm Animals," 2-4. Companies such as Viagen, Bovance and Cyagra offer cloning services of cattle, and also pigs and some other species. Notably, the current agricultural uses of genetic engineering are beyond cloning. For example, recombinant DNA technologies have also been widely utilized in the process of gene mapping and sequencing, which are used for artificial selection, see: Parekh and Gregg, "Introduction," 7.

⁵¹⁵ Boyd and Watts, "Agro-Industrial Just-in-Time," 198; Hohenboken, "Bovine Nirvana," 1889.

⁵¹⁶ Smith, "Current Animal Breeding", 8.

⁵¹⁷ Havenstein, Ferket and Qureshi, "Growth, Livability, and Feed Conversion of 1957 versus 2001 Broilers." See also: Havenstein et al., "Carcass Composition and Yield of 1991 vs 1957;" Havenstein et al., "Growth, Livability, and Feed Conversion of 1957 vs 1991;" Havenstein, Ferket and Qureshi, "Carcass Composition and Yield of 1957 versus 2001;" Cheema, Qureshi and Havenstein, "A Comparison of the Immune Response."

referring to animals in laboratories, to pets and to working animals. The common ground among all these modifications is the fact that the major goal – and regularly the only goal – of the genetic manipulation has been economic, i.e. making the animals' body more profitable to the agricultural industry. (The goals of laboratory breeders, pet breeders and working animals' breeders are more versatile, yet they are also alien to the animals' own interests). This turned out to be devastating to the animals, both physically and mentally. Enhanced susceptibility to diseases and metabolic disorders in most farmed species, painful skeletal problems in most farmed birds and mammals, parturition problems in mammals, obesity (or preventive, forced hunger) in meat industry species, excessive nervousness in some mammal and bird breeds or strains – this is the general picture, and again, a list of the particular breed- or strain-dependent damages would take too much space.⁵¹⁸ Nevertheless, it is necessary to point at some general characteristics of these damages.

Artificial selection for "productivity" is largely based on inbreeding. Since inbreeding increases the prevalence of recessive homozygotes throughout the population, the selection for high "productivity" leads to an increasing prevalence of genetic defects that have been very rare otherwise because they remained unexpressed in heterozygotes. Some of these defects have to do with poor fitness in the long run (e.g. deterioration in fecundity and hatchability), and others cause direct susceptibility to diseases. All these defects – known collectively as "inbreeding depression" – are detrimental to the

⁵¹⁸ Hereditary damages are mentioned in virtually any general review on animal welfare, and in texts that focus on suggested welfare-friendly artificial selection. For some more comprehensive reviews of hereditary damages, see: Rauw, *Resource Allocation Theory*, pt. 3 (chaps. 12-15); Rauw et al., "Undesirable Side Effects;" Oltenacu and Broom, "Selection for Increased Milk;" SCAHAW, *Welfare of Animals Kept for Fur*, 38-46; SCAHAW, *Welfare of Cattle Kept for Beef*, 81-85; SCAHAW, *Welfare of Chickens Kept for Meat*, 20-28; Grandin and Deesing, "Genetics and Animal Welfare," 319-341.

profitability of the agricultural enterprise. To some extent they were familiar already before industrialization, and they certainly disturbed agricultural scientists throughout the 20th century.⁵¹⁹ Beyond the general phenomenon of inbreeding depression, some specific commercial traits demonstrate a direct genetic linkage with detrimental traits.⁵²⁰ Another aspect of the growing susceptibility to disease is the fact that the rigorous selection for a narrow cluster of traits allocates the physical resources of the animals to these traits, and as a result other traits, such as immunocompetence, lack enough resources and they decline.⁵²¹

Whatever physiological and genetic theoretical framework explains the deterioration, the deterioration is evident, and so is the role that artificial selection plays in it. In response, agricultural scientists recommend incorporating breeding against hereditary defects into the commercial breeding plans, and breeding companies as well as authorities (in Europe) invest some effort in improving animal welfare indicators.⁵²²

It would be mistaken, however, to regard immune weakness and reproduction problems, as well as prevalent metabolic disorders and skeletal problems that result from artificial selection (such as leg weakness, ascites and sudden death syndrome in the chicken meat industry) as technological accidents that the animal industries attempts to fix and would eventually fix thanks to improved genetic knowledge. Although breeding

⁵¹⁹ Abplanalp, "Inbreeding," 964-972.

⁵²⁰ Rauw et al., "Undesirable Side Effects," 16. Another example (from Grandin and Deesing, "Genetics and Animal Welfare): "Some pork producers deliberately use boars that are positive for the PSS (Porcine Stress Syndrome) gene. The crossbred offspring from these boars have a higher percentage of lean meat and larger loin eyes."

⁵²¹ Rauw et al., "Undesirable Side Effects," 27-28.

⁵²² Some scientific papers that recommend healing through genetic manipulation: Abplanalp, "Inbreeding," 972-980; Jones and Hocking, "Genetic Selection for Poultry Behaviour;" Reiner, "Genetic Term Disease Resistance;" Jensen et al., "Genetics and Genomics of Animal Behaviour;" Rodenburg, "Response to van Rooijen." Some parallel papers and plans by industry and European authorities: "Keynote Symposium: Tomorrow's Poultry (PSA);" Breeding Is (EFFAB); Genetic Solutions to Health and Welfare (*European Commission*); Mastitis Working Group (EADGENE).

goals have expanded since the 1990s so they currently tend to include animal welfare indicators, the industries have not changed their general course. The overall *raison d'être* of the animal industries was, and still is, profitability (while some limited change has happened only on specialized "animal welfare friendly" farms). Under the pressure for profitability, selection for improved welfare indicators is necessarily balanced with "productivity" indicators. "Balancing" means that hereditarily healthier body and mind will be promoted only to the point where profitability is compromised due to the loss of "productive" traits, or due to high costs of the breeding plan.

Furthermore, although many hereditary physical and mental problems could be straightforwardly regarded as undesirable side-effects of selection for other traits, still many other problems are not easily separable from "productivity". Here, the issue is not genetic linkage, but rather the harmful trait being the very goal of genetic manipulation. Since Bakewell's conception of "barrel on four legs", physical deformations, as well as metabolic abnormalities, are among the goals of breeding. Indeed, the selection for a relatively large breast and for fast growth in chickens and turkeys is not selection for lameness as such; but it is certainly selection for deformation and metabolic abnormality, and this goal is not overridden by attempts to dissociate the oversized breast and premature growth from lameness. (Notably, in animals that have been genetically manipulated to be exploited as models for human diseases, attempts to dissociate the goal trait from explicitly harmful traits are irrelevant by definition).

The survey of genetic domination throughout the present section drew heavily on technical literature. The technical, non-social and amoral appearance of the factual descriptions is not only a result of the scarcity of moral interest in agricultural practices,

but also a result of the lack of even slightly similar relations among human groups. As I mentioned briefly in the beginning of this section, forced eugenics has been the closest intra-human historical phenomenon, yet it has been based on ideas of alleged improvement of human society – in contrast with the agricultural conception of "improvement".⁵²³ If anything, eugenics could be compared to "culling" wildlife or feral animals as a means to keep the population healthy – but not to agricultural activity. Accordingly, the moral revulsion and horror that has been associated with eugenics since World War II has to do with the practice of "culling", i.e. with the mass murder or forced sterilization of the "undesirable" people – whereas the issue of adverse genetic modifications in the surviving population remains irrelevant. The fact that agricultural genetic domination is so extremely more intense than eugenics has ever been makes the two domains virtually incomparable. Consequently, the heavy social and moral meaning that is associated with any description of eugenics does not leach into agricultural descriptions – it just seems irrelevant to agriculture.

Nevertheless, the discourse on agricultural genetic domination relates to *influencing future entities*, and specifically to harming them by altering their nature. Accordingly, some types of intra-human relations may be relevant to the understanding of agricultural genetic domination: a) the relation between the present generation and future generations through the use of environmental and social resources; and b) the treatment of foetuses that have been diagnosed for impairment. Evidently, these social

⁵²³ Admittedly, economically successful agriculture guarantees that the animal population will thrive in terms of numbers and geographic range. Nevertheless, the price that the animal community pays for such a "success" is the loss of community itself (the animals become annexed to a human community – at various levels of coercion), the loss of species-specific behaviours, and reduced physical fitness. Therefore artificial selection of nonhuman animals lacks the aspect of "improvement" in the sense that eugenicists believed in "improvement".

domains are very unlike agricultural artificial selection, where the system aspires for total control – environmental as well as genetic – over the farmed animals, and the animals are perceived and treated as nothing but means to human ends. In contrast, future human generations and human foetuses are regarded as objects of a limited degree of influence by present people, and the attitude towards them is largely respectful and caring. Yet these intra-human social domains offer some developed conceptions of future harms and genetically-originated harms, and therefore I will outline them briefly, in hope to uncover the uniqueness of the social and moral status of genetic domination in industrial agriculture.

The relation between the present generation and future generations has attracted the attention of analytic philosophers since the 1970s. The philosophers have been preoccupied mainly with the conceptual paradoxes that emerge when relating to subjects that do not (yet) exist ("the non-identity problem"). If moral obligations are about persons (or about moral patients in general), then, since non-existing persons are no persons at all, there could be no obligations to them. And if concern about harming presupposes a harmed subject, then, since a non-existing subject cannot be harmed, an obligation not to harm her is meaningless. Furthermore, in cases where the very conception of a future subject depends on our present action, our action should not be regarded as harmful since it cannot make things worse for her: if we did not perform this action, she would not have been better off as she would not have existed at all. Philosophers are anxious to resolve the contradiction between these logical conclusions and the common moral intuition, namely that we at the present do have an obligation concerning the well-being of future

persons (or future moral patients in general) that we may affect.⁵²⁴ In daily life, however, and especially when considering depletion vs. conservation of natural resources, the common intuition prevails. Noticeably, the obligation is expressed in progressive environmental policy; for example, the landmark 1987 document by the United Nations, "Our Common Future", is based on this intuition, which is clearly expressed: "We borrow environmental capital from future generations with no intention or prospect of repaying. They may damn us for our spendthrift ways, but they can never collect on our debt to them. We act as we do because we can get away with it: future generations do not vote; they have no political or financial power; they cannot challenge our decisions."⁵²⁵

In light of these observations and conceptions, agricultural genetic domination has an awkward position in regard to future harms. Indeed, one prominent fact about artificial selection is the harm inflicted upon future animals through present acts of selection.⁵²⁶ If, for sake of the argument, farmed animals would be released to the natural habitat of their ancestors, artificial selection has made most commercial strains incapable of feral life, and some strains are incapable of healthy and happy life even if cared for with the best of intentions in an artificial environment. Certainly, in the course of the selection process that designed present-day and future animals, these animals did not exist and in that sense speaking about harming them in terms of determined identities was meaningless. Yet

⁵²⁴ Parfit, *Reasons and Persons*, pt. 4, and especially chap. 16; Roberts and Wasserman, *Harming Future Persons*: xiii-xxxviii; Roberts, "Nonidentity Problem."

⁵²⁵ *Report of the World Commission*: "From One Earth to One World," sec. 25.

⁵²⁶ I admit that analysing genetic domination apart from environmental domination in agriculture is bluntly artificial in this context. In practice, breeding animals for agricultural purposes under industrial management determines that these animals in the future, as well as their offspring, will endure highly stressful life conditions and premature death, no matter what hereditary traits they carry. The determination is socio-economic, and also ecological: significantly better living conditions for tens of billions of produced farmed animals is impractical in both senses. Artificial selection, however, adds the element of *biological* determination. This kind of determination is so profound that it even applies to each single farmed animal, while socio-economical and ecological determinations could be breached locally.

since the launch of scientific selection, a confident prediction of the exact deformations in future animals has been one of the major factors that determine whether they will ever exist (I stress deformations rather than harms since the predictability of deformations is what agricultural breeding is all about, while the predictability of harms is marginal to this discipline). The predictability of farmed animals' deformations is therefore inherent to their future existence. This does not mean that their future identities are predetermined, yet it does mean that the deformations induced on *any* future farmed animal are predetermined in accordance with her strain. This kind of predetermination is absent when we consider environmental and social harms to future humans.

The concept of generation is another point of awkwardness under intensive agriculture, and especially in yet experimental frameworks. When people consider "future generations" of people, their conception of "generation" is consistent and "future generation" marks future reality. Small farmed species, however, have naturally shorter generation intervals, which have been shortened even further by artificial selection; and experimental technologies turn "generation" into a rather brief lab procedure. Under these circumstances, although "future generations" are still undetermined, nonexistent future entities, hereditary harm has become no different than harming farmed animals through environmental actions, such as building a new "broiler" facility or ordering a new shipment of chicks. The harmful effects of the daily work of the breeder are not a matter of some vague future, but they may rather be encountered for the first time quite fast, in a predictable time, and they may be witnessed constantly throughout a full career in breeding. Hence working in a breeding enterprise casts moral responsibility on the worker very much like any harmful work of direct violence does.

The second social issue that I mentioned is the treatment of foetuses that have been diagnosed with impairment. The direct social response to such a diagnosis is either keeping the foetus or having an abortion due to the detected impairment. The social and moral concern also includes preliminary actions such as having prenatal tests for probable impairments, developing and offering screening technologies, avoiding pregnancy altogether due to a high risk of impairment, etc. The issue is tainted by the same paradoxes that characterise the general subject of not (yet) existing persons. The discourse on selective abortions, however, involves a specific substantial element: choosing against impaired foetuses has profound implications on the social status of existing disabled people. Genetic knowledge and technologies of the last generation (and to a lesser degree – almost any genetic knowledge and technology) may push towards an eugenical bias against disabilities. Such bias includes redefining abnormal conditions as diseases that should be eradicated, reducing all reflection on the foetus to one predicted trait, and undermining the value of life of the disabled.⁵²⁷

The critical discourse on human disability and selective abortions is characterised by an effort not to lose respect for genetically different human individuals, and by dread of turning the recognition of their suffering into a tool of discrimination and oppression. Much of this discourse is therefore irrelevant to the project of reflecting on agriculture in social and moral terms, since in the reality of industrial agriculture any disabled animal would be left to suffer without attempting to provide her with special care that would compensate for her impairment. Consequently, if in an ideal human society (although

⁵²⁷ Parens and Asch, *Prenatal Testing and Disability Rights*, especially 12-16, 108-123, 135-140, 158-161; Shakespeare, "Choices and Rights."

probably less so in actual societies) most disabilities would not prevent good life,⁵²⁸ in industrial agriculture any hereditary problem that has not been addressed by the environmental management of the entire population is likely to cause serious suffering. The result is "life unworthy of life" for large animal populations – not due to their hereditary impairment alone, but rather due to the life conditions imposed on the disabled animals.

The focus of the critical discourse on human disability is the uniqueness of the individual and the legitimacy of difference. In industrial agriculture, however, the hereditary unit is the strain – a well-defined genetic lineage. Strain is obviously not an individual subject, yet it is also a less vague, loose-ended group in comparison with class, gender, ethnic group, species or breed. A deformation in a strain (e.g., the oversized breast of "broiler" chickens) exists throughout the strain, with a very limited and well-predicted range of variability. In a sense, artificial selection is the practice of choosing abnormal – and often impaired – individual animals and turning their individual abnormality into a uniform population abnormality. It is the opposite of selective abortions in humans (and of eugenics), and in the long run artificial selection is parallel to selective abortions *against* the healthy. The abnormality of the deformed members of the commercial strain should thus be considered in relation to the natural population of the original species (or, possibly, in relation to the original local breed that has developed slowly through semi-natural selection). The normal population could be endangered or extinct by now, while the deformed strain, although unfit for unassisted survival and susceptible to much suffering due to deformations, could be billions-strong.

⁵²⁸ Compensating treatment is also not rare for pets, see the Channel 4 film: Turnbull, *Special Needs Pets*.

Hereditary disability in humans is considered either as a condition or a disease that should be cured through genetic therapy and other means – if possible, or as a manifestation of human variation that should be accepted. It is odd, however, to speak of cure in the context of disabled animals of commercial strains. A commercial strain is a group of subjects whose disability has been forced upon them deliberately – by technicians who execute a scheme that has been induced by economic forces. The social circumstances of imposed, constant harm inflicted on a definite group as a group, plausibly call for freedom/liberation/emancipation – not cure. But hereditary disability is the *nature* of these animals, and one cannot be freed from her nature. In this sense, "freedom" is an odd concept, or even a meaningless concept in regard to these animals. "Cure", however, is just as odd, since the object of cure here is not an individual sick animal, but an entire strain. If the strain is to be "cured" by therapeutic artificial selection, or by natural selection (in strains that can still go feral), the cured animals are not the present ones, but future generations. Yet considering socio-economic pressures, cure is merely theoretical. In agricultural practice, the possible answer to severe deformations is "going back" to older and healthier strains, i.e. extinction of the deformed strain.

Conclusions

In this dissertation, I applied familiar critical ideas about the limitations of morality in power relations to relationships between human beings and nonhuman beings. I claimed that socio-historical and biological factors, which tend to impair moral competence in general, tend to be especially influential when people consider their relation to animals of other species. There are many types of interspecific relations, and I focused on one highly prevalent type – the industrial exploitation of nonhuman animals in agriculture – in an attempted to show that industrial exploitation generates the most extreme challenge to moral competence of all types of relationships. In the present section I will refine and expound my argument, as well as address a possible opposition in light of sincere attempts that have been made to refer to industrialised animals empathically and justly.

At the background of my argument is the general assertion that some degree of correlation between moral competence and socio-historical conditions is highly probable. This assertion is essential to my specific claims about moral competence regarding interspecific moral problems, and therefore I will summarise the discussion about it before getting to my arguments about interspecific issues.

A sceptical argument against my background assertion may be that moral competence is a trait or a condition of individuals, which responds to local moral problems, and as such it cannot be strictly predetermined by socio-historical conditions. This is somewhat true, but at the same time the level of moral competence is roughly predictable under specific circumstances. Prevalent moral attitudes, values and principles, moral perception and sensitivity, moral interest and motivation, awareness to one's own tendency to be biased, and morally-relevant empirical knowledge – are all influenced by

material conditions, habits, social organization, education, legislation, conspicuous advocates, media interest, etc. This list is somewhat eclectic, and accordingly, limitations on moral competence may appear at any level of the process of forming a moral opinion. The limitations may be related to specific moral problems – in which case they would be relatively noticeable – yet fundamental limitations are likely to be expressed in many roughly similar moral problems. In fact, under some conditions bias and ignorance are systematic enough to be incorporated in the entire moral systems of large social groups. Arguably, the persistent domination of nonhuman animals by humans, in addition to biological factors, makes speciesism in general among the most deeply incorporated distortions of morality.

More than other limiting factors on moral competence, being a member of an exploitative party limits the moral competence concerning the exploitative relationship. Furthermore, once the exploitation takes place in relative isolation, against a strikingly different group and through long-institutionalised conditions – avoiding the damage to moral competence is hardly possible. These problems are central to interspecific issues. Yet the problem of social position vs. morality is more complex. In any exploitative party – especially if it is a large and versatile group, or even an entire culture – different agents occupy different social positions regarding the exploitative relationship, and these positions are likely to influence their moral competence differently. Furthermore, they may adopt different attitudes towards the exploitative relationship regardless of their specific position. In virtually every large exploitative social system there is some criticism and opposition from within the exploitative party – from male feminism to

moral vegetarianism. The opposition may overcome bias and ignorance with some degree of success, and it may eventually change the hegemonic morality.

Following the involvement in exploitative relations, much of the damage to moral competence may be termed ideological: it is expressed in ideas of one's party's superiority, the other party's inferiority, the naturalness of both these alleged characteristics, and the justification of the exploitative relationship as it is. Imbalanced morally-relevant empirical knowledge, or the lack of such knowledge, is an aspect of cognitive content, and in that sense it is also ideological. Apparently, the connections between such knowledge, the values and beliefs concerning the relationship in question and the actual relationship are complex and largely circular.

Morally-relevant empirical knowledge depends on fields of interest, on perception, on efforts to get the information and understand it, and on the technical possibility to get that information. These variables may sometimes be predominantly individual, and therefore a random individual could allegedly get all the information she needs as a result of personal initiative. Many moral questions, however, require empirical knowledge that depends on an entire community. The information would not be collected and understood without community interests, communal efforts to get the information, finance, support of relevant experts and technology, and communication among the social elements that deal with the information. Correspondingly, individual efforts are not likely to succeed against communal systems of denial, censorship, and sanctions against those who seek for information.

The ideal of impartial moral consideration implies some tension between emotional aspects of moral competence and cognitive aspects of it, i.e. having extensive morally-

relevant empirical knowledge. The tension lies in the fact that we tend to know more about those we are close to – and especially about ourselves. Such closeness tends to yield bias (usually positive), yet it also tends to yield knowledge. Regarding impartiality, this tension is commonly unresolved. Contrarily, care, sympathy, love, and other emotional attachments that are the fundamentals of moral motivation, conform to optimal conditions for acquiring knowledge.

At first glance, morally-relevant empirical knowledge does not seem to be a problem when we consider a relationship between two parties that we are familiar with equally, care for equally, and obliged to equally. This assertion may be true, however, only if we do know them well. If both parties are rather unfamiliar, impartiality is not a sufficient condition for balanced moral consideration, because the lack of familiarity may mean missing some information which is crucial for balanced consideration. The difficulty is evident when one of the parties is more familiar than the other. Now, the biological gap between humans and nonhumans keeps the latter somewhat unfamiliar or incomprehensible even if we are close to them socially (e.g., as pets). In that sense, what we may know about any human party – even the most socially remote one – competes with anything we know about the socially closest nonhumans.

The overall difficulty increases if one of the parties is involved in the relationship in question: as an active participant, through a social relationship with one of the parties involved, or merely through a sense of affinity with that party. Beyond the tendency for emotional and moral bias in case of personal involvement, anyone knows more about her side of the relationship than about the other side. Regarding human conflicts with

nonhumans, people tend to be close to the human side, at least through a strong sense of affinity with the human party.

What we know and do not know in light of our specific social connections tends to yield a special kind of bias or distortion of moral consideration. Overcoming this distortion may require much work. If the biased preference for human interests over the interests of nonhuman interests could be overcome by moral contemplation through notions of justice, fairness, sincerity, virtue, etc., then overcoming the *gap of knowledge* concerning the two parties requires work of inquiry. Surely, contemplation is also an effort, and obtaining information also involves some thought, but the missions are yet distinct.

Overcoming bias through contemplation and work could be effective under four conditions: a) the bias is apparent; b) it is easily overcome; c) the lack of relevant empirical knowledge is apparent; d) the information is easily obtainable. The first three conditions may be fulfilled when the moral problem in question involves more or less free and equal parties, who are continuously well-represented in the public sphere. When circumstances are different, however, bias and ignorance tend to become transparent, as is the case in most interspecific conflicts. The prevalent, continuous inequality tends to yield a distorted perception of the nature of both humans and nonhumans and of the relationship between them. This tendency is enhanced by exploitation – especially when it is institutionalized. It is also enhanced by distance and invisibility of the animals, long duration of the exploitation, its occurrence across cultures, the lack of (or at least the ineffectiveness of) self-representation by the animals, etc. In light of these factors we may sketch a "scale" of relationships, assuming that the more prevalent such factors are,

the scarcer is moral competence. Most relationships between human groups and nonhuman groups turn out to be at the negative side of the scale.

The status of the fourth condition is slightly different. The attainability of information does not correspond directly to bias-related factors. Some technical difficulties in the process of obtaining information do not necessarily interfere with the first three conditions, while they do make the necessary information hard to get: physical barriers or obstacles that hinder the inquiry, long duration of the inquiry, high cost, and various dangers. A different kind of difficulty is obtaining information about mental content, which is highly important in moral contexts. The problem of other minds prevails, no matter who the others are, and the solutions to the problem are merely pragmatic. Even so, the solutions certainly seem effective; we do believe that we can get valid information about the emotions of others. That kind of knowledge conforms to socio-historico-biological limitations: the more different a being is from you, the more difficult it is to learn her emotional needs and emotional states, especially when the being is non-lingual. This difficulty is conceptually distinct from bias; it may contribute to bias, it may be enhanced by bias, but none of these mutual influences is necessary.

Industrial agricultural exploitation (and sometimes also large-scale animal research facilities) is in many respects at the end of the "scale" of relationships, though not in every aspect – industrial agricultural facilities are by no means the most difficult or dangerous facilities to infiltrate. Nevertheless, these facilities are usually well-fenced, and getting caught inside may be risky. Furthermore, the people who work in the industry spend as little time as they can behind the fences and walls: they do their work and leave immediately, while most of the actual, direct relationship is managed through the

mediation of manipulative architecture and automatic devices. The most intensive direct contact by industry workers is aimed at the dead body or the bodily products of the animals (much like the direct contact by consumers, yet without the mediation of processing and packages). The heavy reliance on long-distance control guarantees that industry workers cannot know considerable morally-relevant facts about the exploited animals. When direct contact with the living animals does occur in the industry it is extremely short, functional and superficial – especially in fish and birds. Establishing a longer contact with individual animals inside the industrial facility is largely impractical, even for highly motivated outsiders.

Obtaining information about the emotions and thoughts of industrially exploited animals is at least as difficult as obtaining similar information about non-exploited nonhuman mammals, birds or fish. All these animals are difficult to understand even under optimal conditions. Without verbal communication, most morally-relevant facts could be learned only through direct contact with the animals. This requirement stands in contradiction to the minimisation of direct contact in actual industrial facilities, as well as to the difficulties outsiders may encounter in case they wish to get to know industrially farmed animals directly. It should be noted that the alienness of other species makes it necessary to acquire basic knowledge about their general morally-relevant traits. This mission may be accomplished outside the animal industries – as it is done in practice – mostly through coercive relations that have some irregular and unclear resemblance to the animal industries. Notably, that general knowledge cannot replace any information about the industrial reality, which is left largely unexplored.

Beyond the technical difficulties in obtaining morally-relevant information about the industrial exploitation of animals, the problem of bias in that context is crucial. In terms of the four conditions that I outlined above, bias is transparent rather than apparent, it is most difficult to overcome, and the lack of relevant empirical knowledge is also transparent rather than apparent. It is not the purpose of the present dissertation to explore the wide subject of bias against nonhuman animals, which includes a long and rich history of speciesism and anthropocentrism. The common conception of speciesism, as a parallel concept to racism and sexism, assumes an outspoken, conscious set of beliefs. Some of these beliefs are predominantly of moral content: that exploiting nonhuman animals for food and cloths is right (or more vaguely that the agricultural relationship is right), and that making the effort to rethink it as well as learn factual details about it is morally unimportant. Other beliefs are predominantly of factual content: that the agricultural reality is not very harmful to the animals, that nonhuman animals do not need much in general and are rather insensitive, and that the benefits that people gain from the relationship are essential to them. These beliefs profoundly hinder the process of obtaining morally-relevant empirical knowledge. They imply that when some information about exploited nonhuman animals is missing, the cause does not justify the effort of obtaining it, and in any case there is not much information to look for. In that sense, animal industrial agriculture, like other institutionalised exploitative relations between humans and nonhumans, is bound with a system of extremely effective obstructions along the process of learning morally-relevant facts – in comparison to intra-human long-institutionalised oppressive relationships. The deeper speciesist bias is a result of both the

strikingly evident differences between humans and any nonhuman group, and of the lack of speech in all nonhuman animals.

Industrial exploitation is responsible for further, more unique obstructions to the process of gaining morally-relevant empirical knowledge. Traditional farming methods maintained a rich variety of direct contacts and attachments between farmers and farmed animals. The farmer has taken the role of caretaker, which however coercive it may be, tends to yield attachments and a sense of responsibility, i.e. moral feelings. Such feelings stand in contradiction to the exploitative *raison d'être* of agricultural relations, and of course to occasional very violent practices. Speciesist beliefs have therefore been crucial to the persistence of that kind of exploitation, as counterbalance to moral feelings. An anthropocentric worldview, and especially beliefs in the animals' inherent inferiority and their purpose as means to human ends, added up into a kind of speciesist, agricultural morality – an ideological expression of the traditional agricultural relationship.⁵²⁹ With the industrialisation of animal agriculture, the culture that yielded speciesist ideology has been overthrown. The relationship of farm workers with farmed animals became deeply alienated. Intense, direct contact has been replaced by mediated, brief, impersonal alienated contact, and caretaking or husbandry has been replaced by a combination of engineering, scientific management, technical operation of machinery and technical operation of the animals themselves. By now, agricultural workers hardly needed to justify their violent actions, since these actions did not contradict any attachment or sense of responsibility for the animals. Not only the violent actions are highly mediated and aimed against an anonymous mass, but also the division of labour dissolves any

⁵²⁹ See, for example: Ingold, "From Trust to Domination;" Serpell, *In the Company of Animals*, chaps. 10-11.

remaining sense of moral responsibility. Moreover, in rich countries the heavy reliance on immigrant labour reduces much of the direct contact with the animals into mere hard, dirty work, the result of alleged necessity rather than choice and occupational identity.

Furthermore, the entire culture of humans who live near farmed animals became socially esoteric. In the eve of the so-called "agricultural revolution" most of the human population in most countries was involved to some degree in agricultural practices that included some animals, and virtually the entire population was exposed directly to some farmed animals.⁵³⁰ In many countries, the later technological developments have reduced the percentage of the population working in all the agricultural branches together to several percents. Correspondingly, the majority of the population have become totally detached from living farmed animals, leaving no connection with them except for the consumption of animal products and the reception of mediated information about the living animals. The result is that much of the speciesist ideology – considered as a set of articulated beliefs and stated attitudes – lost its function. Overall, if traditional animal farming used to be a culture in the full sense of the word – a well-developed morality included – industrial animal agriculture is not much of a culture anymore. To some extent, the industrial exploitation of nonhuman animals simply occurs, as a function of splintered socio-economic systems that work without reflection beyond a strictly economic analysis.

If the culture and morality of agricultural exploitation have waned dramatically in the process of industrialisation, it has not waned in a similar manner throughout the general human population, as in fact the consumption of animal products has increased considerably. One significant aspect of the old consumer culture, however, has been

⁵³⁰ See above, n362.

transformed: animal products have become processed, packaged, and ready-to-eat. In this condition, they carry fewer traces of the living animals in comparison to animal products before the emergence of refrigeration, microwave ovens, self-service supermarkets, etc. These changes, in addition to the disappearance of farmed animals from the public eye, have left this cultural domain without actual experience of the animals as animals. People have therefore become ready to accept any story or image of the agricultural reality, however anachronistic or imaginary. The result is indeed much anachronism and fantasy, which are most intense in cultural products for children and in animal product advertisements.⁵³¹ In a sense, industrial agriculture has never been incorporated into the general culture. The ordinary consumers of animal products experience animal agriculture predominantly as an idealised version of anachronistic, traditional animal farming. The consumer culture has retained the traditional speciesist ideology without fundamental changes, except for the overall marginalisation of farmed animals.

Oddly enough, these developments opened a door for some criticism of animal industrialisation. In the absence of novel, explicit legitimacy to the unprecedented harms industrial animal agriculture caused to animals, any public exposure of industrial facts tends to provoke shock and resentment. This has been apparent since Ruth Harrison's 1964 *Animal Machines*, which marks the beginnings of consumerist, governmental and scientific trends against some prominent aspects of factory farming in the West. Indeed, the overwhelming majority of the Western public does approve some vague version of animal agriculture, but at the same time many basic elements of industrial animal agriculture are a breach of this morality: crowding animals so tightly together they can

⁵³¹ Singer, *Animal Liberation*, rev. ed., 213-216; Paul, "Animals on Children's Television;" Lerner and Kalof, "Animal Text: Message and Meaning;" Church, "How the Media Portray Animals;" 24-28; Tsovel, "Alienated Contact," 378-386.

hardly move, neglecting them to live in their own excrement, leaving wounded and sick animals untreated, imposing permanent darkness or artificial light on them, etc. When presented explicitly, such facts cause moral unease in the modern West. The roots of unease, however, lie beyond agriculture. Throughout the era of industrial agriculture (and somewhat earlier) the West has seen some mitigation of anthropocentrism and increase of moral sensitivity toward at least some nonhumans. Many factors contributed to this change. In brief, these are the most important among them: an increasing distribution of pets as family-like protégés in an urban world of dwindling community relations and shrinking families; a growing concern for pain and other suffering; a growing revulsion at violence and signs of violence in everyday life; the decline of anthropocentrism in the sciences, and especially the acknowledgment of close biological affinity between humans and other species; growing doubts as to human dominion over nature; and the rise of the consumer movement.⁵³² The industrialisation of animal agriculture has not interfered with these encompassing, versatile changes, since it occurred in increasing isolation from the growing majority of human population. The two "cultures" – agriculture and the rest – departed steadily. Correspondingly, knowledge of animal industries has become more and more offensive to public sensibilities – a fact contributing to further suppression of such knowledge. Nevertheless, industrial animal agriculture has never become fully isolated from the rest of the world, and hence some clashes are inevitable. Information from farms, transport vehicles and slaughterhouses leaks occasionally, and consumer boycott (e.g., vegetarianism) is a plausible reaction. Organised protest has prompted governmental action, which in turn encouraged scientific research (animal welfare

⁵³² Harwood, *Love for Animals*; Elias, *Civilizing Process*, vol. 1, pt. 2, chap. 4; Turner, *All Heaven in a Rage*; Thomas, *Man and the Natural World*; Turner, *Reckoning with the Beast*; Ritvo, *Animal Estate*; Tester, *Animals and Society*.

science), turning some new information accessible. Furthermore, organisations themselves have adopted tactics of investigating agricultural (and other) facilities and exposing resulted information. In other words, the dominant cultural implications of industrial animal agriculture have appeared along with a counter-movement capable of casting moral light on neglected facts, producing new information, and eventually mitigating industrial methods and slowing down industrial expansion. Nevertheless, up to date the counter-movement has not succeeded to change the general course of animal industrialisation. So, despite the increase in veganism, vegetarianism and animal welfare reforms, my claims about the animal industries are valid – as long as we keep in mind that morality and knowledge are far from uniform throughout the entire Western population.

Back to the major historical trends described above, one of them is the "technicalization" of morally-relevant empirical knowledge concerning industrial exploitation. The uniqueness of this situation is best explained by comparison with knowledge of relations among people. Whether or not one accepts the fact/value distinction as conceptually valid, no doubt that real factual descriptions of intra-human relations and of the parties involved in these relations are normally very dense with moral meaning. Providing an account of an intra-human social reality with no moral connotation whatsoever is virtually impossible. Evidently, moral connotations are not incorporated in descriptions in a uniform manner: descriptions by victims tend to be more heavily morally-laden than descriptions by oppressors, and any moral meaning tends to be more evident to victims than to oppressors. In addition, some significant moral meaning steadily prevails in third-party accounts and in third-party perception. Terms

such as "war", "exploitation" or "divorce" carry negative connotations in a very wide range of contexts. More historically-specific terms, whether they relate to remote past practices (e.g., "human sacrifice") or to topical problems (e.g., "unwarranted arrest") could hardly be perceived as mere descriptive terms. Other terms are perceived as appropriate to a large variety of circumstances, and therefore the moral connotation they may arouse depends on the context, e.g.: "gun", "age of consent" or "drinking [alcohol]".

What is true for isolated terms is all the more true for detailed reports: factual descriptions of human issues are laden with moral meaning. Surely, the meaning changes with the context, but some kind of moral meaning can hardly be absent – at least not in descriptions of the relationship rather than of mere isolated details. The implications of this tendency on the use of morally-relevant factual accounts are profound. Acquiring morally-relevant knowledge of intra-human social relations is not a cognitive process that is distinct from moral consideration, but rather an integral part of establishing a moral worldview. Surely, one can identify some of the moral connotations and monitor them – both when providing a description and when receiving it – yet this flexibility does not free the factual account from moral connotations. These claims may seem like an attack on the objectivity of factual descriptions, yet the issue, in my view, is the moral advantages of thick descriptions. Confronting a social reality where many factual details do not provoke moral connotations, one needs to make great efforts to understand what the situation is all about – in moral terms: who needs what? Where and when do harms occur? Who benefits from what? What other options are there? And what is wrong or right about it all?

Confronting most social, intra-human situations, we normally do not need to go through such great efforts. Factual accounts of interspecific relations, however, tend to be much thinner in moral meaning when used in most social contexts. This tendency is easily demonstrated in the use of isolated terms. Some common "thick" terms, such as "exploitation", "enslavement", "murder", or "attack" (by a human against a nonhuman) are hardly used in interspecific contexts, and when they are used subversively in such a context – they retain the negative connotation imported from the intra-human realm. Many other terms are commonly used for both intra-human and interspecific relations, yet among most Western contemporary users these terms lose most of their moral weight or even gain an opposite connotation when applied to nonhumans (e.g., "trade", "chained", "sterilize", "obedient", and "euthanasia"). The dwindled or inverted moral meanings are evident in descriptions of human-pet relationships (see the above list of terms) although such relationships are regarded as the most social and morally-laden of all human-nonhuman relationships. The amoral tendency is expectedly more intense in other, more instrumental kinds of interspecific relationships. It culminates when practices of domination and exploitation of nonhuman animals by humans are more or less endemic to the specific relationship, and the relevant special terms have hardly any moral connotations in almost any discourse. Such terms are abundant in traditional agriculture (e.g., "harness", "milking", and "shearing").

At this point, some of the problematic status of empirical knowledge in interspecific ethics should be apparent. We may detect three relevant weaknesses: sheer ignorance of the nonhuman side of an human-nonhuman relationship; the dwindling of moral connotations in factual accounts of the relationships; and the speciesist bias that

charges terms like "obedient" with positive moral connotations when applied to a nonhumans such as dogs while concealing the environmental, behavioural and genetic coercion that produces the obedience. These weaknesses mark the problematic status of interspecific ethics in general. Our human perception and our human sources of knowledge are very much tainted with biased moral preconceptions at the very stage of what we regard as "the plain facts". Indeed, these obstacles may be overcome with some effort. Yet the gap between the efforts needed for obtaining the necessary knowledge of both the human and the nonhuman sides is always present, threatening to be expressed as moral bias.

A Naïve understanding of a dog's obedience as a merely good trait within a good relationship – like other cases of inverted moral meaning – is a sure expression of a lack of moral competence. Bias of a similar kind is probably the major object of critical concern regarding intra-human relationships. In interspecific contexts, however, such bias is relatively less significant since ignorance and the lack of moral connotations are very widespread. This means that morally-relevant facts are not perceived as such, and therefore they are overlooked; not misperceived, but simply overlooked. When that occurs on a small scale, it seems less significant than tendentious distortion of facts. But when ignorance and the lack of moral connotations are more systematic, entire social situations are neglected, and left out of the moral domain. Most interspecific relations are more prone to this kind of neglect than most intraspecific relations. But it is industrial exploitation that turns that kind of neglect into a crucial moral failure.

It is virtually impossible to provide an effective description of industrial exploitation as a relationship, since too many relevant industrial practices have hardly

been accounted for outside the technical discourse of the exploiters, and too many endemic terms have hardly been used outside that discourse. The major sources available to anyone who wishes to learn about industrial exploitation – the most determined critics included – are technical and scientific texts produced by participants in the industry for the use of other participants. Any account based on such sources would inevitably be quite like an account of a non-social reality: a technical description of facts devoid of apparent values. In other words, the account would almost lack meaning as a report on a relationship; it would rather be a description of technical procedures performed on some – possibly inanimate – objects, and of the objects' passive reaction. Any attempt to provide an extensive description of industrial exploitation would unavoidably lack moral connotations on the most part. In order to gain the moral meaning required for balanced moral consideration, the description would have to be densely annotated with comments about coercion, harms, deprivations, suffering, submission, etc. – so densely annotated that it would not be readable.

My own account of industrial exploitation in sections 4.3-4.6 is no exception. At first glance, these sections may seem like a historical account of industrial exploitation, yet in a sense I could not provide but a historical account of the animal industries. We normally refer to "history" as the account of what some individuals did or what happened to them. If no individuals are at the focus of "history", then specific groups are. My account, however, says nothing about individuals or about specific groups of farmed animals. Hence, in that sense it is not "a history" but rather "a history of technology": the object of the story is not the parties involved and the relationship between them, but rather the technology that lies between them. Such a focus is presented in hope that some

"history" would emerge from the technological account, despite the severely restricted information. Obviously, I could not provide an ordinary historical account of industrial exploitation because hardly anyone has ever documented the reality of industrial agricultural facilities in ordinary historical terms (the negligible exceptions are extremely fragmentary comments by agricultural or scientific writers, and very rare undercover investigations). The remaining option is to provide a history of technology with some interpretative insights that have been drawn from the understanding of unrelated, more familiar social reality, and from general knowledge about "animal welfare". Under these limitations, I do attempt to characterise the industrial relationship, and accordingly, I focus on factual aspects of power and coercion. Yet even when I do manage to pinpoint elements of coercion and harm, their meaning remains vague since they have not been recorded as such, and since they are too unlike familiar social conceptions that could be compared to them in an attempt to illuminate them with social and moral meaning.

For example, in a world where probably not a single human being endures any harm that has been forced upon her through deliberately mating deformed parents, and where only a small minority of the public is aware of some of the harms caused by artificial selection, the differences among different genetic manipulations can hardly be perceived in terms of power and harm. Neither can these differences be perceived in moral terms. Without a detailed account of the implications of each and every aspect of the practice in question (which in any case are largely unknown) they all seem more or less the same, often neutral and without distinct implications.

A practice such as whizzo-genetics may carry social and moral meaning only when perceived in relation to similar practices – similar in technology, in social function and in

welfare implications, etc. These practices are an effective reference point only when they, too, are perceived in social and moral terms. Yet all the relevant practices are endemic to agriculture and to animal experimentation, and they are just as alien as whizzo-genetics is to what is normally perceived as social and morally-relevant – intra-human relationships. The closest forms of intra-human genetic manipulations – eugenics and gene therapy – are very unlike whizzo-genetics. The dissimilarities are far too great to provide whizzo-genetics with a meaningful social reference point. Furthermore, whizzo-genetics and closely related genetic manipulation technologies are socially and morally meaningless without referring to the "housing" conditions of the resulting animals, as well as to the economic circumstances that enable the use of these technologies and promote them. The great majority of these connotations have hardly ever been described as relationships. Therefore describing whizzo-genetics as a new practice of harmful domination and exploitation requires a lot of effort – certainly far beyond my own concise description, and in fact beyond anything that have ever been published on the subject. Under current social circumstances, "whizzo-genetics" is rather described and understood spontaneously as a mere technical term that denotes a new technology. As such, it seems irrelevant to morality; a more careful examination, however, reveals a triumphant, morally-laden tone of approval that accompanies accounts of scientific and technological progress.

Not only experimental technologies, but also technically simple terms used in the animal industries have no meaningful reference point in familiar reality. "Stocking density" is one example. Indeed, people often gather very crowdedly in some facilities, and sometimes people are imprisoned very crowdedly. Accordingly, the level of dangerous over-crowdedness is often calculated with such occasions in mind (e.g., the

maximum number of people or total weight allowed in an elevator). Such references, however, miss anything meaningful about "stocking density", just as comparisons to the level of crowdedness on traditional farms would miss the point. In practice, "stocking density" is about the level of crowdedness that allows enough victims to survive and not become evidently sick throughout their lifetime, on the verge of economic loss. Any correct use of the term contains a history of increasingly meticulous calculations of the exact economic investment in space allowance over a given period, vs. the economic losses due to animal mortality and reduced "performance" of the survivors. That history is an unwritten history, which has probably never interested anyone as a history. "Stocking density" – like other terms endemic to the animal industries – epitomises extreme instrumentalism and thorough objectification of the victims, who are perceived as nothing but reacting bodies that exit as a mere phase in the process of production of some bodily product. Furthermore, "stocking density" epitomises a history of a relaxed mode of exploitation, fully legitimate, socially and legally, conceived as an enduring practice rather than a provisional one, with no trace of urgency, danger or troubling necessity, and without any fear of retaliation of any kind. It should also be noted that a technical definition of "stocking density" would be meaningless if based on reference to mere familiar terms, since the entire ecology that relates to "stocking density" is artificial and an integral part of the exploitative mechanism. Within that mechanism, seemingly plain descriptive terms that refer to universal physical objects have a different, local meaning in the industrial context. "Air", "ground", and "space", etc., as well as corresponding behavioural terms such as "breathing", "lying" and "moving", denote a distinctive ecology that exists nowhere outside industrial agriculture.

In short, "stocking density" is unlike any notion of human crowdedness, as well as notions of crowdedness in traditional farms, zoos, cat/dog "shelters", etc. My concise assertions here do certainly not provide the missing information about "stocking density" – they merely point at some of the topics that should be elaborated upon. Now, any casual use of the term outside its technical-economic context, with no serious reference to the missing information, is likely to be presented in a manner that suggests much identity between "stocking density" and the everyday uses of "crowdedness". Such a use of the term "stocking density" excludes almost all the relevant aspects of coercion and harm from its range of connotations. Furthermore, without explicitly rejecting the connotations that derive from familiar incidents of crowdedness, "stocking density" is likely to be perceived through the familiar conception of crowdedness. Therefore the casual use of this term – despite being the correct term in the industrial discourse – actively conceals the true meaning of this very term.

Needless to say, I chose "whizzo-genetics" and "stocking density" at random, and a similar analysis could be provided for numerous industrial practices and descriptive terms used in industrial exploitation. Indeed, any social reality may yield new practices that cannot be expressed and perceived – at first, at least – without imposing irrelevant connotations. The point, however, is how difficult it is to overcome such connotations. Unfamiliar intra-human relations tend to be similar to familiar relations, and therefore the process of learning about the unfamiliar relations may occur without complications. Interspecific relations are often less familiar as social relations, although many unfamiliar relations between humans and nonhumans are much like other, familiar ones. Therefore the major complexity is understanding the social aspect in the newly encountered

relations (e.g., backyard farming of an "exotic" animal is much like the more familiar backyard farming of domesticated species, yet the economic conception of any backyard farming often overrides the understanding of that practice in social terms of power, exploitation, harm, transaction, injustice, cooperation, etc.). Unlike these social realms, industrial exploitation is an entire, separate culture, largely unrelated to any familiar culture. When considering a specific industrial practice, the relevant connotations would very probably be other industrial practices. The relevant connotations assemble into a network that is largely restricted to the animal industries. That network is represented predominantly in non-social terms, and almost entirely as irrelevant to morality (some rare islands of social thinking may have been inherited from traditional farming, and some new islands emerged thanks to efforts of the animal welfare movement).

In conclusion, the isolation of industrial exploitation as a technical, asocial domain makes it function as a "moral black hole": we do know that things that happen there must matter morally, but any attempt to apply our moral conceptions to that reality ends up with technical descriptions. As it is inevitably observed through industrial sources, which empty the information of its moral meaning, industrial exploitation cannot be observed in moral terms, except for superficial, local, and out-of-context points.

A final point should be made about animal welfare science and information from animal protection groups. Some readers may reject the thesis that morally-relevant empirical knowledge is limited by the nature of social relations since good will and effort enhance the knowledge that emerges spontaneously from mere participation in the relationship. In the context of interspecific relations, such good will and effort are expressed in animal welfare science, in investigations by animal protection advocates,

and in personal accounts of various circumstances. I certainly agree that morally-relevant empirical knowledge is produced and distributed unevenly throughout society; I also agree that individual or group initiatives may greatly expand knowledge. These assertions are obvious. In fact, local initiatives can sometimes prompt the distribution of information throughout the entire society, revolutionize prevailing moral attitudes, and eventually change the social reality. Nevertheless, these possible developments do not eliminate or go round the socio-historical dynamics described in the present dissertation. Establishing a science of the relationship in question or a science of the exploited party depends on broad social conditions, and so is the existence and success of a movement for social change. Accordingly, the morally-relevant empirical knowledge that these specific disciplines can produce corresponds to the broader cultural conditions.

There is no doubt that animal welfare science and the animal protection movement have produced great bodies of morally-relevant empirical knowledge, which deserve a detailed analysis in the context of their contributions to moral competence. Admittedly, a full analysis of the status of empirical knowledge in interspecific ethics should include a detailed account of these two domains, as well as an assessment of the possibilities for further knowledge that have not yet been realised. Such a detailed account, however, would have doubled the length of this dissertation. Due to space limitations, I shall only present summarised arguments concerning these domains.

Animal welfare science is in constant danger of being absorbed into the animal industries and becoming an integral part of them. On the other hand, animal welfare science is in a constant danger of fabricating its own "experimental" reality, separately from the industries. The former danger is the greater one. There is a considerable overlap

between animal welfare science and applied ethology (the distinction may be regarded by some as merely semantic) yet the International Society for Applied Ethology (ISAE) does not mention animal welfare among its aims. It aspires "to encourage and support basic and applied research into the behaviour of animals as related to the use of animals by humans" and "to provide a pool of expertise to national governments, international bodies, industry and to those animal welfare organizations which deal with problems involving animal behaviour."⁵³³ The style of this declaration implies "value-free science", and as such it willingly serves the animal industries. This fact is expressed explicitly in the Ethical Guidelines of ISAE, which have been "written with an acceptance that animals can be 'used' for the betterment of human or non-human animal species."⁵³⁴

The industries – i.e., commercial companies and associations, their research subsidiaries and their supporting governmental agencies – have by far the strongest mixture of motivation and resources to use behavioural knowledge. Therefore they are the major consumers and supporters of applied ethology. Moreover, most of the relevant research is conducted in animal science or agriculture departments, or other research units of exploitative institutions; and most researchers have been educated in related institutions. It would not be an exaggeration to define applied ethology as the science that exposes patterns of nonhuman animal behaviour under exploitation in order to allow more efficient exploitation.

Given the institutional background of applied ethology, it is not surprising that applied ethologists often prefer to use terminology that avoids dealing with animal emotions and prefers instead non-mental terminology of behaviour, fitness, health, etc.

⁵³³ ISAE, Constitution of the ISAE.

⁵³⁴ ISAE, Ethical Treatment of Animals.

This tendency draws from the general speciesist tendency to ascribe significant mental life to no one but humans. It also draws from the broader context of the scientific reluctance to acknowledge emotions and refer to them.⁵³⁵ Apparently, scientific information displays a combination of non-emotive scientific language, scarce reference to emotions as such, and abundance of information that does not refer to emotions. This combination may prove too challenging for anyone who wishes to use scientific accounts for moral consideration, since such a use requires exhaustive work of "translating" them into morally-laden language.

As I mentioned above, animal welfare science and applied ethology are partly the same discipline, or perhaps one and the same discipline. This means that much of the faults mentioned above also apply to animal welfare science. Discussing animal welfare science, however, it is apparent that this discipline has also some aspects that cannot be said to be a part of the industries or their habitual supportive resource. Within animal welfare science (i.e., in applied ethology as well) there is a steady trend that promotes the idea that "welfare is to do with what animals feel."⁵³⁶ The interesting scientific questions, according to that trend, attempt to address issues that lie at the heart of the public controversy over the treatment of nonhuman animals – without avoiding the use of mentalistic terms (despite an ongoing discomfort about it, even among the proponents of such use). Furthermore, animal welfare departments and institutions, although rare, do exist, and so does a scientific discourse on nonhuman animal welfare. These efforts have

⁵³⁵ See: Stafleu, Grommers and Vorstenbosch, "Animal Welfare;" Fraser et al., "Scientific Conception of Animal Welfare;" Rushen, "Changing Concepts of Farm Animal Welfare;" Fraser, "Animal Behaviour, Animal Welfare."

⁵³⁶ Duncan, "Welfare is to Do with What Animals Feel." See also: Dawkins, *Animal Suffering*; Duncan and Poole, "Promoting the Welfare of Farm and Captive Animals." Wemelsfelder, "Scientific Validity of Subjective Concepts;" Wemelsfelder, "How Animals Communicate Quality of Life;" Fraser, "Animal Behaviour, Animal Welfare;" Balcombe, "Animal Pleasure;" Rushen, "Changing Concepts of Farm Animal Welfare;" Duncan, "Concept of Welfare Based on Feeling."

given rise to a considerable body of knowledge concerning when and how animals are harmed under exploitative conditions. Thanks to meticulous research techniques that take into consideration the animals' emotions and preferences (as they are expressed through behaviour, physiology, health, etc.) the new knowledge may refute many intuitive beliefs about animals' well-being under given conditions. This advantage is apparent when the variables under examination are very similar to one another, e.g., when comparing the reaction of hens to different cage floors – one of the early and celebrated examples of that kind of inquiry.⁵³⁷

The information contributed by animal welfare science is available to anyone who wishes to make the effort of studying it. Evidently, that knowledge is morally-relevant. Yet what kind of moral consideration may it serve? Considering the range of alternatives examined by animal welfare scientists, the answer is that animal welfare science provides an assessment of the morally-relevant results of similar exploitative practices. The range of alternative practices is limited by the presumption that agricultural exploitation, at least of some kind, is acceptable. In that sense, the scientific project of addressing issues that lie at the heart of the public controversy about the treatment of nonhuman animals functions as a scientific reassurance of the widespread, public morality concerning nonhuman animals. For example, when different cage floors are examined (or for that matter, wire floor vs. littered floor) the agricultural exploitation is almost entirely taken for granted. Critical thinking is allowed only in regard to floor types, and within the range of economically acceptable floors.

⁵³⁷ Hughes and Black, "Preference of Domestic Hens." See also: Dawkins, "Cage Size and Flooring Preferences;" Dawkins, "Welfare and the Structure of a Battery Cage;" Dawkins, "Do Hens Suffer in Battery Cages?" Dawkins, "Priorities in the Cage Size;" Hughes, "Preference Decisions of Domestic Hens."

The isolation of such specific elements is what makes good science. "Good science" should be defined here by its application: a useful tool for evaluating the merits of clearly defined exploitative practices. Almost every study isolates its own very narrow set of welfare-related variables – while attempting to keep all other morally-relevant condition intact, that is, within industrial standards. Indeed, studying the species in question under natural conditions is sometimes declared as a part of the methodology of animal welfare science,⁵³⁸ yet in practice such studies are marginal to the discipline (and in any case, the meaning of naturalness is questionable in domesticated breeds that have been changed so thoroughly that they cannot thrive or even survive in their ancestors' original environment). A full range of morally-relevant empirical inquiry should plausibly take free, well-fulfilled, good life as its default object of reference, and recognise any minor deviation from these optimal conditions. Animal welfare science works the other way around: the default reality here is industrial exploitation (or other forms of exploitation, in non-farmed species). A critical reconstruction of existing scientific knowledge through an effort to identify and reject exploitative practices as a matter-of-fact background may help to reassess specific practices. That is, however, a difficult task that seems to me logically possible rather than an actual project. Furthermore, even the most successful critical reconstruction cannot fill in all the missing gaps. For one thing, animal welfare science does not offer much information about good life and relatively minor deviations from good life, while it is rich in information about extreme exploitation and extreme harms. No critical reconstruction of existing knowledge can overcome such a substantial disproportion of attention.

⁵³⁸ Fraser, *Understanding Animal Welfare*, chap. 9.

The limitations of animal welfare science are not a mere result of the dynamics of the specific discipline. They also derive from using science – no matter what science – as a major source of morally-relevant information. Social, legal and moral inquiries into harmed nonhuman animals in general, and into industrially exploited animals in particular, rely heavily on scientific opinions. Such a heavy reliance on science is probably unmatched in any other domain of social relations. The common argument for giving such priority to scientists is the great difference between humans and any other species, which makes intuitive understanding unreliable, and therefore a systematic, objective inquiry is necessary. This argument points at a real problem, but provides neither a justification nor an explanation to the great weight given to science in interspecific contexts. The major reason for the special status of science is that the opinions provided by animal welfare scientists are relatively acceptable to supporters of nonhuman animal exploitation. That is a result of the close relations between animal welfare science and the exploitative institutions, and the frequent contribution of research in that field to the animal industries and to other exploitative institutions. Furthermore, although the public call for scientific evidence presupposes moral judgement that regards "animal welfare" as morally significant, the significance is trivialised by scientific scepticism. The burden of proof lies with those who claim that the harm to the animals is unacceptable, and the scientific assessment guarantees that any reform or personal behaviour change will be limited to the exact minimum without making the exploitative system compromise on any "unnecessary" detail. It should be stressed, however, that non-scientific sources of information incorporate many advantages that science cannot

offer, without necessarily compromising factual validity. The choice to exclude such sources cannot be supported by the common, pro-scientific argument.

The most prominent characteristic of any typical testimony on exploitative intra-human relations is its specificity. The testimony relates to specific people and to a specific encounter between them. Although large-scale harms call for general descriptions, testimonies of exploitative relationships, at their best, draw attention to specific harms to individual people, as well as to individual responsibility. They also provide a story of the development of the relationship. Science, including animal welfare science, aspires to provide an opposite kind of picture: the most general characterisation of the relations, of the harmful influences, of the harms endured, etc. The scientific account has no specific victims and no specific offenders (except for some limited details that may be extracted from the research paper through critical reading). The harms are not specific as well: animal welfare science aspires to present "optimal" exploitative conditions, without alleged anomalies or background noise of accidental conditions such as sadism, neglect, bad weather, malfunctioning equipment, etc. The fact that the overwhelming majority of research is done in experimental facilities rather than in ordinary industrial facilities indicates a bias against local reality; simulation is preferred over the real thing. At the same time, the fact that some studies address ordinary facilities implies that such research is possible.

Undercover investigations of exploitative practices provide a promising alternative to animal welfare science. Emerged as a distinct type of informative resource in parallel to the development of animal welfare science or somewhat later, almost all undercover investigations are carried out by animal protection organizations. They include three

techniques: one-time infiltration into a facility of animal exploitation when no workers are present; planting an undercover agent as a low-ranking employee for some weeks or months; and collecting testimonies by veteran employees. All these investigations are carried out in ordinary facilities of exploitation, with no interest in mere simulations of exploitative conditions.

The major shortcoming of undercover investigations is their rarity, which enables them to provide but a small amount of pulverized and arbitrary information. The rarity is an expression of the social status of nonhuman animals under human exploitation. Those who are motivated to carry out such investigations are few and poor in resources, whereas the exploitative facilities and practices are well-protected against infiltration (and partly against whistleblowing) physically, legally and economically. If animal protection organizations were attempting to significantly intensify their undercover investigations in some country, the target institutions would most likely be taking immediate security measures and promoting legal measures, and so the rarity of undercover investigations will prevail. In other words, undercover investigations are doomed to remain a marginal source of information due to rarity.

The information obtained through undercover investigations since they became a routine (yet rare) tactics by animal protection organizations, around the 1990s, never gained a high social status. Its credibility and quality have been aggressively challenged by exploitative institutions, relevant governmental agencies, courts, legislators, scientists and often even the media. In this social framework, the organizations release only a fraction of the information they collected – the minimum information required for immediate influence on consumers, state institutions or the exploiting institutions.

Apparently, the organizations do not regard the unique information they collected as a source of lasting and complex empirical knowledge. There is no inter-organizational archive of that kind of information, and even organizational archives of undercover investigations do not store their entire published information, if they do have an archive at all.⁵³⁹

The attack on the credibility of undercover investigations is probably the main reason for the emphasis of investigators on video documentation and stills photography, which are considered more reliable than mere textual or verbal testimonies. Although the picture quality is often very low due to the circumstances and equipment, the video footage and stills photos contain substantial information that no other source of information offers. They preserve much morally-relevant information that is lost in verbal descriptions: filth, darkness, limited space, background noise, untreated injuries, decomposing dead bodies, etc. – as well as violent treatment. Correspondingly, the audio-visual recording captures some of the animals' behavioral expressions in reaction to their life conditions, in addition to some symptoms of illness and disability. Such details are ignored in scientific accounts if mentioning them is not directly relevant to the research question. All these details are offered for critical examination, and in that sense they provide a richer source of information than the investigators' textual descriptions, which are typically dull.

⁵³⁹ In Defense of Animals' Undercover TV is the closest project to an inter-organizational archive. Started in 2005, the show has 53 half-an-hour episodes, contributed by 17 organizations worldwide. See: Undercover TV, (IDA); Thomas, "Undercover TV: Giving Viewers;" Thomas, "Undercover TV: Animal Rights." The largest single-organizational archive is managed by PETA (see Investigations). By August 2010, it contains information (short videos with or without textual further details) from 60 investigations in all branches of institutionalized animal exploitation.

Despite their fundamental limitations, agricultural sources (or other technical sources), animal welfare science and undercover investigations are almost the only existing sources of information about exploitative interspecific relations. When exploitative relations among humans are considered, however, the major sources of information are essentially different, while parallel sources by exploiters, "welfare science" and undercover investigations are almost trivial in most circumstances. Detailed, first-hand testimonies by victims may be the central source of morally-relevant information. Evidently, such testimonies are irrelevant to non-lingual beings. Yet other sources of information are hypothetically possible: detailed testimonies by repenting offenders who report about their past actions, biographical reports on specific animals or groups of animals, fictional literary or cinematic stories about exploitative relations, and witnesses who report extensively about what they have witnessed – including an account of their own feelings and thoughts as witnesses.

All these sources may contain the entire arsenal of literary and cinematic means to express morally-relevant content. These means may enable to describe relations and express experiences by far more effectively than the sources that I described (except for video and stills undercover documentation). When people – scientist included – wish to communicate their own relationships and experiences, they seldom, if ever, use scientific style and terminology, since these means are simply inadequate to express most of the relevant content. Expressions such as "my children were under heat stress" or "my cousin demonstrated a preference for 100-500 lux," despite their relative accuracy, are too poor in experiential meaning, or altogether bizarre. The challenge is not how to avoid

unproven or improvable claims or be altogether silent about obscure content;⁵⁴⁰ it is rather how to deliver as comprehensively as possible complex, largely subjective content, and how to make it as comprehensible as possible. This mission requires the use of mentalistic terminology, analogies and metaphors, as well as narratives.

The use of mentalistic terminology is essential both for expressing experiences and for understanding them as such, while any attempt to represent the mental world through circumstantial evidence (behaviour, physiological reactions, etc.) misses the point. Such accounts, however cherished by scientists, remain poor in content. When the information is reflected upon with moral consideration in mind, the reflecting agent either "translates" the non-mentalistic terminology into a mentalistic description, or she erroneously concludes that no mental experience has been involved. The result is likely to be more arbitrary and unreliable than a deliberate attempt to use the full linguistic range in the first place. Analogies and metaphors, though inaccurate, are important means for expressing what is inadequately expressed and incorrectly understood otherwise. Narratives are also essential. In contrast with the scientific inclination to present a-temporal and impersonal accounts, literature and cinema (as well as spontaneous personal testimonies) usually follow specific subjects over time. That is essential for expressing and understanding individual reactions: as narrative is the natural account of a long sequence of events connected by a casual chain, the life story of an individual provides a basis for understanding her psychology. The narrative allows the reader/spectator to follow a psychological logic: how events in the subject's life generate experiences and attitudes, shape a character or affect considerations and reactions. These accounts of

⁵⁴⁰ Wittgenstein, *Tractatus*, sec. 7, p. 189.

personal history are vital to elucidate both the later behaviour of the individual and relevant experiences.

Such rich means of expression are almost entirely absent from animal welfare science, and they are underdeveloped in undercover investigations, which are all too rare in any case. Literature and cinema do offer some accounts of relations between humans and nonhumans, yet they typically refer to non-institutionalised relationships. Human-pet stories are particularly common. Stories and movies about strictly exploitative interspecific relations are rare, and they refer to personal encounters. The existing examples, however, demonstrate that the exploitation of nonhuman animals on a small scale may be expressed as a dramatic narrative very successfully. Characters such as the working horse *Black Beauty*, or the pig who was raised for slaughter, *Wilbur*, are great literary and cinematic protagonists.⁵⁴¹ Nothing in the real life story of nonhuman animals under such relationships defies a dramatic narrative; indeed, the lack of speech is a limitation, but writers and cinematographers overcome it without difficulty – mostly by fabricating speech or through the voice of a narrator. Nevertheless, such representations of exploited nonhuman animals are rare – by far too rare to reflect the actual prevalence and variety of exploitative personal interspecific relations. Evidently, the rarity reflects a lack of cultural interest rather than substantial, technical limitations.

Literary and cinematic representations of industrial exploitation are another matter. Such representational attempts are extremely rare, and they touch but the periphery of the industries. The animated movie *Chicken Run*, for example, is located in a British egg farm that turns into a meat factory, yet the details indicate an especially small and spacious "free-range" farm. Similarly, *Portrait of a Burger as a Young Calf*, a journalistic

⁵⁴¹ Sewell, *Black Beauty*; White, *Charlotte's Web*.

attempt to follow and document the entire life cycle of a calf raised and slaughtered for meat, is focused on a farm of but a few calves, which are in any case the largest and longest-lived mammals in the meat industries.⁵⁴² These choices are not accidental. Industrial exploitation leaves no room for a story. Under intensive confinement it is nearly impossible to initiate action. The victim becomes a passive object of the facility's equipment, the facility's workers and her own physiology. Therefore a story about such a victim cannot portray an active agent as its protagonist. As the story must follow the active elements in the facility, it would be drawn to become an account of industrial technology rather than a personal (or group) story. Similarly, isolating individuals (say, in a "broiler" shed) and following them as such throughout their lifetime becomes impractical due to the great numbers, the crowdedness and the visual similarity among most individuals. Documentation and cinematic representations would in fact be impossible without aggressively marking the animal's body. Without the possibility to recognize individual animals, many of the narrative advantages would be lost; again, the story would likely turn into an overall account of the industry.

Attempting to overcome these exceptional limitations could be an interesting literary or cinematic experiment. Yet since the foundations of storytelling would necessarily be compromised, such attempts, if ever made, would remain experimental and rare. In that sense, if non-industrial exploitation of nonhuman animals could technically be expressed through the richest means of representation despite the fact that it is largely beyond human interest in the contemporary West, then industrial exploitation is virtually inexpressible. It is a reality so unlike normal life that much of the existing means to

⁵⁴² Lord and Park, *Chicken Run*; Lovenheim, *Portrait of a Burger as a Young Calf*. See also: Tsovel, "What Can a Farm Animal Biography Accomplish?"

express and perceive morally-relevant information are inapplicable to it; it is therefore largely immune to moral interest. Furthermore, morally-relevant knowledge develops as a social enterprise with many participants of various social functions, and knowledge expressed through everyday language and literary/cinematic means is no exception. Given this fact, and keeping in mind that applying everyday language and literary/cinematic means to industrial exploitation requires exceptional social effort, industrial exploitation is guaranteed to remain largely unknown.

In fact, in order to become knowable, industrial exploitation must go through de-industrialisation. Following specific individuals within the industrial mass, for example, is one modest action – among many possible ones – that defies most of the industrial reality to date. (Admittedly, as the case of robotic milking implies, specific forms of high-tech industrialisation also make information on individual animals available. Yet such technologies are currently marginal, and they would probably never be developed for most industrialised animals, who are small, low-priced, and/or short-lived. Furthermore, the trend towards individual-oriented automation focuses on the animal as a production machine, and much of the data collected is limited in its relevance to moral consideration). Subverting industrialisation is the typical mission of rare undercover investigations. Animal welfare science is also a project of de-industrialisation, although a milder one. Since the conception of "animal welfare" is irrelevant to the animal industries – at least if "industrialisation" is understood as a process of constantly improving economic efficiency – once knowledge of "animal welfare" is taken into consideration, pure industrialisation is breached. Taking empirical knowledge of animal welfare into consideration must, by definition, push towards some de-industrialisation according to

the above definition (of course, de-industrialisation does not necessarily aspire to terminate exploitation, but it could rather mark a move towards exploitative systems that consider "animal welfare" as their integral part).

That situation is essentially different from traditional animal farming, as well as from almost any form of exploitation among human parties. Such domains endorse some level of acknowledgement of the exploited party as a social entity, a feeling entity, a moral patient, etc. In these contexts, aspiring to gain systematic knowledge of the parties and the relationship between them does not guarantee criticism – at least criticism is not conceptually necessary. Concerning industrial exploitation, however, any knowledge of the parties and the relationship in a social and moral context necessarily points at something that is missing in the relationship by definition. Thus, the very intention to get morally-relevant empirical knowledge means taking a stand against industrial exploitation.

Back from my attempt to outline the most good-willed and systematic efforts to acquire and distribute empirical knowledge about interspecific relations, it should be stressed that moral competence cannot be founded on hypothetical morally-relevant empirical knowledge under imaginary, optimal conditions. The question is rather what do people actually know under specific circumstances, or what could they know following a reasonable effort. From this down-to-earth point of view, animal welfare science and undercover investigations are more or less accessible information bases – and very incomplete ones. Whether the information will be retrieved and understood or not is a matter of motivation and technical opportunities. Eventually, it is most likely that considering any conflict between two parties, we would know more about the party that

is closer to us both spatially and socially, more visible to us, and more similar to us biologically and/or culturally. Furthermore, we would have better access to further information and better understanding of it if that information referred to a party that is relatively less dominated and exploited, and to a party that we identified with more readily.

Gaps in the levels of morally-relevant empirical knowledge about conflicting parties are insignificant when considering many intra-human conflicts, but concerning many other intra-human conflicts the gaps are enormous and they practically paralyse moral competence. Notably, in almost any conflict between humans and nonhumans the gap in the levels of knowledge functions decisively in favour of the human party – primarily due to cultural reasons, and secondarily due to biological reasons. That is true, although in different degrees, throughout the entire range of human-nonhuman relations – from companion animal keeping to industrial agriculture. Aspiring to gain systematic knowledge about nonhuman animals within an interspecific relationship guarantees the emergence of some criticism of present practices; "guarantees" not as a conceptual necessity, but rather as a matter of socio-historical probability.

From the point of view of impartial ethics, a gap between levels of morally-relevant empirical knowledge is markedly unacceptable. Taking impartiality seriously, the only plausible reaction to noticing such a gap would be an attempt to bring knowledge about the parties in question to as uniform level as possible. In a sense, doing so is a preliminary condition for "real" moral activity – moral judgement, or experiencing moral feelings.

Now, some knowledge gaps are no more than a random, technical difficulty that may surely be noticed and overcome. Moral philosophy may be right in treating such gaps as an unimportant disturbance. Most knowledge gaps, however, have a more systematic origin. Without special attention they will be overlooked; and even when noticed, filling the gap will require a considerable effort. Moreover, if the systematic gap is deeply rooted in socio-historical circumstances – and possibly in biological circumstances as well – then paying attention to the gap, and even more so making an effort to get the missing information, could not be accomplished by an uninvolved observer. As the project of getting the necessary information is often a complex, prolonged social process, it may have far-reaching effects on the relationship in question.

In that sense, under some social conditions, fulfilling the minimum requirements for impartial moral activity cannot be achieved without a preliminary activity that challenges these very social conditions and changes them. The same assertion could also be expressed negatively: under some social conditions, overlooking a gap between levels of morally-relevant empirical knowledge, or avoiding the effort to level the gap – have unavoidable immoral implications. Any moral activity based on such overlooking and avoidance is liable to function as a reflection of the status quo. Such affirmative function may occur despite the intentions and beliefs of the people who see themselves as practicing impartial ethics.

This state of affairs is most apparent in interspecific ethics. Indeed, extreme coercion, exploitation, and harm call for many ad-hoc moral decisions about interspecific conflicts, as most people would recognise at least some practices as abuse and would know that these practices are wrong. Such decisions may mitigate or even eliminate some

expressions of injustice, and their moral importance could not be overrated. Nevertheless, a decent ad-hoc choice should not be mistaken for a conclusive moral judgement. For example, as much as your decision to stop a man in the street from kicking his dog is morally welcome, the moral sensitivity, empirical knowledge and moral considerations that led to that welcomed decision may not lead you far in case you attempt to consider what should become of that dog and man beyond stopping the immediate, apparent abuse. Likewise, the seemingly more knowledgeable decision to introduce perches into hens' barren cages is welcome yet essentially incomplete. In short, under current social conditions virtually any attempt to pass conclusive moral judgement on interspecific conflicts is futile. In interspecific ethics, as in intra-human ethics, all aspects of moral competence should be addressed prior to announcing of conclusive moral judgement. This minimal moral requirement cannot be achieved without changing human relations with nonhuman animals in the first place. And indeed, even if we assume that overcoming bias is a sort of armchair mission that does not necessarily interfere with the actual relations (a wrong position in my opinion, but this topic is beyond the present dissertation) there is no doubt that getting information requires active involvement that affects the relationship in question.

Most of us tend to assume that we are morally competent in most cases, and that morally-relevant empirical knowledge is not even a matter of moral competence but rather an easily-met technical requirement. I hope that my analysis makes a convincing argument for both the acute significance of empirical knowledge to moral competence, and the severe shortcomings, in this respect, of interspecific ethics in particular. Releasing definite moral conclusions about interspecific conflicts is irresponsible and

dishonest or utterly naïve. Given the trans-historical nature of nonhuman animal exploitation and its supporting speciesist ideology, and given the immersion of modern society in the industrialisation of nonhuman animals, interspecific ethics cannot be practiced similarly to intra-human ethics. If you wish to inquire about the relations between humans and members of other species with the intention of arriving at moral insights, you must act very unlike the ordinary ethicist who considers the intra-human relationship between equally powerful agents or family members. Neither your good values nor your intuitive knowledge of the world and accessible expert opinion should be trusted in the interspecific context. Here you should invest most of your efforts in following the limitations of your own moral competence, and study the relations and the animals in question as beings who have some moral worth. Indeed, I do not claim that such efforts are the missing key to balanced moral views. It is doubted whether any inquiry, in itself, could lead to comprehensive, reliable moral insights, since the problem of moral competence is rooted in the very nature of coercive relations. We cannot think consistently and comprehensively outside our social position; eventually, our moral understanding is likely to reflect, at least to some degree, actual relations and our own involvement in them. But here is the heart of the matter: studying interspecific relations in social terms and studying nonhuman animals as subjects of moral worth is a project considerably more active than armchair moral reflection. I hope that I succeeded to convince the reader that such inquiries would inevitably push for a change of society towards a less exploitative reality. And the entire process would probably carry on without yielding conclusive results. For sure, this scheme does not seem like what we

normally call "ethics". But if so, it is not the scheme that is misguided, it is "ethics" that is misleading.

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מעמדו של ידע אמפירי באתיקה הבין-מינית

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תקציר

עבודה זו עוסקת במספר היבטים של כשירות מוסרית. היא בוחנת כיצד אנשים, במיוחד במערב בן-זמננו, מתפקדים בעולם הממשי כשהם שוקלים סוגיות מוסריות שעניינן ניגודי אינטרסים בין בני-אדם לבין חיות ממינים אחרים. הטיעון שלי מורכב משני חלקים. ראשית כל, בהנחה שהשיקול המוסרי מתייחס בהכרח להנחות עובדתיות מסוימות, אני טוען שידיעת העובדות הרלוונטיות היא היבט מכריע של הכשירות המוסרית ביחס לאותן סוגיות. שנית, אני טוען שידיעת העובדות הרלוונטיות לשיקול מוסרי בעניינים שבין בני-אדם לחיות ממינים אחרים נוטה ללקות בחסר, ושזוהי סיבה מרכזית לאי-כשירות מוסרית בעניינים כאלה.

לפני הדיון בטיעון שלי עצמו, אציג את הרקע התיאורטי שלו. בבסיס הטיעון עומדות תובנות ביקורתיות על מקור המוסריות ועל תפקודה החברתי. תובנות אלה אינן מקוריות, אלא הן שואבות מספרות מרקסיסטית ופמיניסטית. מאחר שהן לא מובנות מאליהן או מקובלות על הכל, אני מקדיש להן מקום ניכר בעבודה. עם זאת, מובן שהן נוצרו במקורן מתוך עניין ביחסים בין קבוצות שונות של בני-אדם, ובדרך-כלל תוך אדישות לעניינים בין-מיניים או אף מתוך ספשיסיזם בוטה. לכן אני מציג תובנות אלה בליווי התאמות הכרחיות לסוגיות בין-מיניות.

התובנה המרכזית שעומדת ברקע הטיעון שלי היא שכשירות מוסרית מובנית על-ידי נסיבות. היא איננה יכולת מבודדת של אינדיבידואלים והיא אינה נובעת רק מאופי אישי, מרצון טוב או מהבנת עקרונות מוסריים, וגם לא מנסיבות אישיות גרידא. מבלי להתכחש לחשיבותם של גורמים אלה, חשוב להכיר בכך שכשירותו המוסרית של אדם מושפעת עמוקות מגורמים היסטוריים-חברתיים, וכן מגורמים ביולוגיים. אמנם, גורמים אלה אינם קובעים מראש באופן מוחלט את כשירותו המוסרית של איש, אך השפעתם גדולה והיא אף ניתנת לחיזוי ברמת סבירות גבוהה. ההשפעה אינה מסתכמת בכך שאינטרסים הגלויים לעין מטים את השיפוט המוסרי. גורמים היסטוריים-חברתיים וביולוגיים פועלים בכל הרמות של רגש, מחשבה ופעולה. בהתאם לכך, גורמים אלה מותירים חותם בכל היבט של הכשירות המוסרית: היכולת לתפוס ישויות ומצבים כראויים לתשומת-לב מוסרית (תפיסה מוסרית), ידע של פרטים עובדתיים הרלוונטיים לשיקול

המוסרי, היכולת להבחין בין טוב לרע (ידע מוסרי) ולבצע שיפוט מוסרי, היכולות לגלות אמפתיה, אכפתיות וכבוד כלפי אחרים, והמוטיבציה לפעול בהתאם לרגשות מוסריים ולשיפוט מוסריים. כמעט כל אדם עשוי להכיר בהשפעות חברתיות-היסטוריות וביולוגיות מסוימות על כשירות מוסרית. בין אם תפיסת המוסר שלך קרובה לתועלתנות, לקונטרקטריאניזם, לתורת המידות הטובות (virtue ethics) או לתורת מוסר אחרת, ודאי תסכים/י שתחת תנאים מסוימים, הכשירות המוסרית של אנשים עלולה להיפגע. עם זאת, להשפעתם של תנאים חברתיים-היסטוריים וביולוגיים יש גם היבט שנוי יותר במחלוקת: השפעתם על עיצובן של תפיסות המוסר (או גישות, תורות וכו') עצמן, תוך מתן עדיפות לקבוצות חברתיות וביולוגיות מסוימות. בדומה לכך, אנשים נמשכים לתפיסת מוסר זו או אחרת תחת השפעת תנאים חברתיים-היסטוריים וביולוגיים, והעדפתם מקלה עליהם להקנות עדיפות לקבוצות חברתיות וביולוגיות מסוימות בשיקולי המוסר שהם עורכים. בעבודה אני מפתח רעיון זה במטרה לבדוק האם תורות מוסר מסוימות קשורות לכשירות מוסרית לקויה בנסיבות מסוימות ובהתייחס לבעיות מוסר מסוימות. את הגורמים הבולטים שפוגעים בכשירות מוסרית, אפשר לסכם ברשימה קצרה: אי-נראות של אחד או יותר מהצדדים שמעורבים בסוגיה המוסרית הנשקלת; עומק ההבדלים בינם לבינינו; מעמדם כנשלטים ומנוצלים על-ידי צד אחר; המעורבות שלנו בשליטה בהם ובניצולם; ומידת המיסוד של כל הגורמים הקודמים. כשירות מוסרית על כל אחד מהיבטיה עלולה להיפגע מכל גורם שהוזכר ברשימה זו. אמנם, אם מישהו מעוניין להשקיע מאמץ בהתגברות על גורמים המגבילים את כשירותו המוסרית, יתכן שיצליח בכך; אולם עוצמתו של כל גורם כזה, מעידה על גודל המאמץ שיידרש כדי להתגבר עליו – מאמץ שעלול להיות תובעני מדי.

תפיסת המוסריות כביטוי אידיאולוגי של יחסים מטריאליים נשענת על רעיון מרקסיסטי. יישום כללי של הגישה המרקסיסטית כלפי מוסריות, מביא להכרה בהיבט האידיאולוגי של אתיקה בין-מינית כשיח שמיוצר כולו על-ידי בני-אדם, ולכן חשוד בהטיה ספישיסיסטית פרו-אנושית. המשקל הרב שפילוסופים של המוסר נוטים לייחס לתכונות שמייחדות לכאורה את המין האנושי, איננו, במובן זה, תולדה של ניתוח מושגי חסר-פניות של בעיות מוסר, אלא של הבניה אידיאולוגית-ספישיסיסטית. בדומה לכך, התיאור העובדתי של פער ייחודי בין המין האנושי לבין כל שאר מיני החיות איננו תולדה של חיפוש טהור אחר ידע, אלא הוא הבניה אידיאולוגית. עצם ההכרה בנטיות אידיאולוגיות אלה אינה פוטרת את המבקר מאותם פגמים: אינך יכול/ה לבחון את היחסים שבין בני-אדם לבין חיות ממינים אחרים מנקודת-מבט נייטרלית, מחוץ לזהותך כאדם. אמנם, אנו מסוגלים לכאורה לגבש עמדות ביקורתיות ללא הגבלה, אולם למעשה אנו

כבולים לעמדות רווחות יחסית, משום שהן המושגים המוסריים והן הידע האמפירי הם תוצר של מאמץ חברתי עצום, שאיש אינו יכול להאפיל עליו בכוחות עצמו או במסגרת קהילת התנגדות קטנה.

כמה רעיונות פמיניסטיים ישימים בהקשר הבין-מיני ללא שינוי משמעותי, או בשינויים פשוטים למדי, שחלקם כבר הוצעו בדור האחרון על-ידי תיאורטיקניות פמיניסטיות. הביקורת הפמיניסטית על הפילוסופיה המסורתית של המוסר, מהווה בסיס לספקות גם לגבי מידת התקפות של תורות מוסר מסוימות (כגון קונטרקטריאניזם) בהקשרים בין-מיניים, ולגבי הדגש הרב שניתן למושגים מסוימים (כגון אוטונומיה ורציונליות) באתיקה הבין-מינית. בכל הנוגע לגופי הידע האמפירי שרלוונטיים לשיקולים מוסריים, חלק מהביקורת הפמיניסטית, כמו גם ביקורת סביבתית דומה, ניתן ליישום ישיר בסוגיות בין-מיניות. ביקורת המדע כפרויקט של שליטה בטבע, מקבלת משמעות מיוחדת על רקע סיווגן של חיות לא-אנושיות בתור "טבע" גרידא. בדומה לכך, העניין הפמיניסטי בהבניית התכונות הטבעיות-לכאורה של נשים וגברים, מהווה מקור מתודולוגי לחשיפת ההבניה "חיות" בתור נשלטות ומנוצלות מטבען – הבניה שפוטרת לכאורה את המנצלים מאחריות מוסרית ביחס לשליטה ולניצול. עניין זה ניתן להרחבה גם ביחס להבניית "החיותיות" ו"הטבע" של מינים ספציפיים ואוכלוסיות ספציפיות של חיות.

מבלי להמעיט בערך התובנות שניתן לשאוב מהביקורת המרקסיסטית והפמיניסטית, אני מאמין שענייני מוסר בין-מיניים מחייבים תשומת-לב ניכרת גם לנושאים חברתיים-ביולוגיים אחרים: היעדר יכולת לדבר והיעדר ייצוג עצמי שנובע מכך כסוג של חולשה חברתית כרונית; כיצד לחשוב על מוסר מבלי להניח מראש שכל חברי הקהילה המוסרית דומים ושווים במהותם, ושהבדלים הביולוגיים ביניהם חסרי חשיבות מוסרית; מהי המשמעות של יחס לזולת בתור גוף ומשאב ותו לא; התיעוש של יצורים בעלי יכולת חישה; וחשיבותו של ידע אמפירי על מי שמבצעים לגביו שיקול מוסרי. נושאים אלה מוכרים במידת-מה גם מהקשרים שבין אדם לאדם ולעתים הם נדונים בספרות הביקורתית, אולם ההקשר הבין-מיני מספק את המקרים המובהקים ביותר במסגרת כל אחד מהנושאים האלה.

כפי שמעידה כותרת העבודה, מבין כל ההיבטים של כשירות מוסרית, אני מתמקד בידיעת העובדות הרלוונטיות לשיקול המוסרי. ב"ידיעה" כוונתי, מעבר לידיעת העובדות ההכרחיות לעניין, גם לזיהויים של מחסור במידע ושל מידע מסולף או כוזב. כאשר העובדות הרלוונטיות אינן ידועות, מקומן מועד להתמלא באמונות מוטעות, או בבורות ובאדישות לתחום העובדתי – תוך פגיעה בתקפותו של השיפוט המוסרי וברלוונטיות של הרגשות המוסריים. עם זאת, בשיח על

כשירות מוסרית כפי שהוא מתקיים בפילוסופיה של המוסר, הבעיה של ידיעת העובדות ההכרחיות היא אולי ההיבט הזנוח ביותר.

רוב הפילוסופים שכתבו על אתיקה בין-מינית, התעניינו בהשלכות המעשיות הישירות של עבודתם. בהתאם לכך, עבודותיהם גדושות בטענות עובדתיות על טבעם של צדדים המעורבים בסוגיה המוסרית, על נסיבות החיים שלהם, על חוויותיהם ועל יחסיהם עם הצד האחר בסוגיה הנדונה. אלא שטענות אלה מסתמכות בדרך-כלל על מקורות אקראיים, תוך התעלמות מעובדות רבות וחשובות בכל הנוגע לצדן של החיות הלא-אנושיות בקונפליקט המוסרי. התייחסות למגבלות הידע הנדון מופיעה רק לעתים נדירות, והכותבים מתעלמים כמעט כליל מכך שהידע שעליו הם מסתמכים נוצר במסגרת יחסי שליטה וניצול קיצוניים. גישה כזו נפוצה הן בקרב פילוסופים המספקים אפולוגטיקה לטובת הסטטוס-קוו, והן בקרב אלה שמבקשים לקדם שינויים חברתיים רדיקליים. כמובן, הבעיות אינן מיוחדות לפילוסופים, אלא שהשיח הפילוסופי הוא שיטתי ומפורט יחסית, ולכן קל להתייחס אליו. הזנחת התחום העובדתי אופיינית למכלול הנסיבות שבו מתקיימת אתיקה בין-מינית – ובהתחשב בכך שכל אדם נורמלי מעורב בחשיבה ובדיבור ולעתים גם כתיבה על ענייני מוסר בין-מיניים, מדובר בתופעה תרבותית נרחבת ביותר.

הסבר אפשרי להזנחה הוא שלעתים קרובות נדמה, שאנו יודעים מספיק על הצדדים המעורבים בעניין המוסרי ועל המצבים הרלוונטיים שבהם הם נתונים, ובמידת הצורך יהיה קל ללמוד כל פרט מידע חסר. רושם זה אינו בלתי סביר, לאור הדגש החזק שניתן במהלך רוב ההיסטוריה של ההגות המוסרית לסוגיות מוסריות שבין אנשים מוכרים לנו ושווים לנו פחות או יותר. אולם משעה שאנו מתרחקים מהעולם שמוכר לנו מקרוב, המחסור בידע אמפירי הופך לבעיה מוסרית רצינית.

בתחום הפילוסופיה של המוסר, הסבר אפשרי אחר להזנחה הוא שפילוסופים רבים מאמינים, שהניסיון לבחון את מצב הידע שלהם מצוי מחוץ לתחומי הפילוסופיה. בין אם עמדה זו משכנעת או לא, ברור שפילוסופים של המוסר מציגים בעבודתם טענות עובדתיות רבות, ואם אלה אינן נכונות או חסרות פרטים רלוונטיים, הפילוסוף לא יוכל להגיע למסקנות מוסריות תקפות. פילוסופים של המוסר אינם יכולים אפוא לפטור את עצמם מהאחריות לבחון איזה מידע נחוץ לעבודתם ומתן מגבלות הידע שברשותם. לכל הפחות, עליהם להודות שדעותיהם בענייני מוסר הנוגעים לעניינים שאינם מוכרים להם מקרוב, לוקות בחסר בהכרח.

טענתי, שהיבטים שונים שלה זכו להכרה ופיתחו בפילוסופיה ובפסיכולוגיה, היא שידיעת העובדות הרלוונטיות אינה עניין נפרד מעניינים מוסריים אחרים ואינה חיצונית לתהליך של גיבוש עמדה מוסרית. למרות האפשרות להבחין בין התחומים מבחינה מושגית, הרי שבמציאות ידע

אמפירי משולב עמוקות בתחום המוסרי. כדי שתשומת-לב לבעיות מוסריות מסוימות תתפתח, כמו גם המוטיבציה לטרוח לשקול בעיות אלה ולשאת בתוצאות השיקול, צריך לדעת את העובדות הרלוונטיות. מצד אחר, אין לצפות שהידע הרלוונטי לשיקול המוסרי יירכש באופן אקראי; ללא תשומת-לב לעניינים מוסריים ומוטיבציה ללמוד את העובדות מלכתחילה, סביר להניח שלא נבחין במידע.

מעבר לכך, לא ניתן להפריד בין מידע לבין תוכן מוסרי, מכיוון שהשפה שבה אנו משתמשים לתיאור תופעות טעונה בתכנים מוסריים. למשל, תיאור התנהגות מסוימת בתור "בכיי" מרמז לרוב על הכרה במצוקה, בעוד שתיאור התנהגות זו בתור "ווקליזציה" מרמז על התעלמות מכוונת ממצוקה זו; מובן שלשני המושגים יש משמעות מוסרית. גם אמצעי ייצוג לא-מילוליים – כגון הבחירה בנושא ובזווית הצילום, או בחירות עריכה – מציגים מידע טעון בתכנים מוסריים. בהתאם לכך, אחת מהבעיות שאני מוצא בידיעת עובדות שרלוונטיות לשיקולים מוסריים טמונה בקונוטציות שנלוות לעובדות אלה בתנאים חברתיים-היסטוריים נתונים. לא רק אי-ידיעת העובדות הרלוונטיות מגבילה את הכשירות המוסרית, אלא גם ידיעה שמגבלת הפרטים טכניים הנושאים קונוטציות מוסריות דלות (כגון ידע על חיות במשקים תעשייתיים, להלן) או ידיעה שנלוות לה קונוטציות שמעניקות לשליטה ולניצול ערך חיובי (כגון ידע על "ביצועים מצטיינים" של חיות כאובייקט חקלאי).

נקודה נוספת שראויה לדעתי להדגשה, נוגעת לדינאמיקה הממשית של למידת עובדות הרלוונטיות לשיקולי מוסר. ידע רלוונטי לשיקולי מוסר ניתן לרכוש דרך התנסות אישית או צפייה ישירה, דרך לימוד עדותם של אחרים על התנסותם האישית או תצפית ישירה שערכו, וכן מתוך הכללות ואנלוגיות שמבוססות על המקורות הקודמים. שיקולים בעניין בעיות מוסריות בחייהם של בני הקבוצה החברתית שאתה נמנה עמה, שהם פחות או יותר דומים ושווים לך וחופשיים, מחייבים מאמצי למידה סבירים. אפשר, למשל, לשאול את שני הצדדים מהי הבעיה, לקבל תשובות מפורטות וברורות, ולגבש על-פיהן עמדה מוסרית מבוססת. צורת לימוד כזו מאבדת את יעילותה תחת השפעתם של גורמים חברתיים-היסטוריים וביוולוגיים מסוימים. כאשר הצדדים הנדונים (או אחד מהם) בלתי נראים, שונים ממך במידה רבה ונשלטים ומנוצלים באופן ממוסד – החקירה האישית והאגבית אינה יעילה. בתנאים אלה, רכישת ידע מספיק לשיקול מוסרי תקף הופכת למאמץ ניכר שדורש מוטיבציה חזקה, זמן לימוד ממושך, שיתוף-פעולה בין אנשים רבים שדעתם דומה, ותמיכה (כלכלית, למשל) על-ידי קבוצה חברתית גדולה בהרבה. בהשוואה למאמצים שנדרשים כדי לבסס היבטים אחרים של כשירות מוסרית, נראה שהשגת ידע אמפירי הכרחי נוטה לתבוע את ההשקעה הרבה ביותר.

מכאן ואילך אתמקד מפורשות באתיקה הבין-מינית. ישנם לפחות שני גורמים המגבילים בהכרח את הכשירות המוסרית ביחס לעניינים שבין בני-אדם לבין כלל החיות הלא-אנושיות. ראשית כל, כל החיות האלה שונות באופן ניכר מבני-אדם. אמנם, ההבדלים בין קטגוריות טקסונומיות שונות של חיות עשויים להיות גדולים יותר. אולם הבדלים אלה אינם רלוונטיים כאן; מה שחשוב לענייננו הוא, שאם היכרות מבעד להבדלים ניכרים מחייבת עבודת לימוד רבה, תוך מאמץ רב להבין את האחרים ולהזדהות אתם, הרי שאתגרים כאלה מתעוררים – אמנם ברמות שונות – לנוכח כל החיות הלא-אנושיות. שנית, כל החיות הלא-אנושיות (כמו גם קבוצות גדולות של בני-אדם) נעדרות יכולת לייצג את עצמן בשיח המוסרי, ולכן ייצוגן מתווך בהכרח. התיווך אינו נעשה על-ידי צד שלישי נייטרלי, אלא על-ידי בנות ובני מין שמהווה את הצד החזק בקונפליקטים הנדונים. השילוב בין גורמים אלה הופך את האתיקה הבין-מינית לפרויקט בעייתי ביותר.

הכרה בליקויים בכשירות המוסרית ביחס לחיות לא-אנושיות, כנה ככל שתהיה, אינה מבטיחה התגברות עליהם. מאחר שהמכשולים לכשירות המוסרית מוטמעים בחברה בכללה, לא די במאמצים אישיים חריגים. כוונות טובות שאין מאחוריהן כוח חברתי גדול, לא ישרשו תחושות המוטמעות עמוק בכל חברה חקלאית – שחיי חיות לא-אנושיות ורגשותיהן הם בעלי חשיבות שולית, ושניצול החיות לגיטימי. הכוונות הטובות לא הופכות חיות ממינים אחרים למובנות יותר, והן בהחלט לא מבטיחות ידע אמפירי מהסוג שדורש מומחיות מקצועית, משאבים ניכרים, גישה לחיות כלואות, קירבה אישית אליהן, יחסים נטולי כוחנות איתן וחופש בחירה רב מצדן. למרות הכוונות הטובות, בורות והטיה נוטים לשרוד ולהציב מכשולים בפני כל עבודה מוסרית סבירה, ולמנוע שיפוט מוסרי תקף ביחס לקונפליקטים בין-מיניים רבים. קביעה זו עשויה להיות נכונה גם בכל הנוגע ליחסים ממושכים המתאפיינים בחוסר שוויון ובניצול בין בני-אדם. ביחסים בין-מיניים, מגמה זו חזקה במיוחד עקב עומק הניצול והשליטה, במשולב עם ההבדלים הביולוגיים והייצוג המתווך של החיות.

מעבר לשיקולים כלליים אלה, אני מאמין שהדיון בכשירות מוסרית ביחס לחיות לא-אנושיות כקטגוריה ביולוגית גרידא הוא הכללה מטעה. כך גם ההתמקדות בקבוצות טקסונומיות מצומצמות יותר, כגון מחלקות או סדרות. תחת זאת, אני מציע להתמקד בקבוצות של חיות בהתאם למערכת היחסים שיש לכל קבוצה עם קבוצת בני-אדם. בהתחשב בהשפעה הבלתי נמנעת של תנאים חברתיים-היסטוריים על כשירות מוסרית, יחסים חברתיים מסוגים שונים מניבים הגבלות שונות על הכשירות המוסרית. אמנם, הרוב המוחלט של היחסים ההדוקים בין בני-אדם לבין חיות לא-אנושיות בחברה המודרנית – וכנראה בכל חברה חקלאית – מאופיינים בשליטה

בחיות, ולרוב גם בניצולן (וכשמדובר ביחסים שאינם הדוקים, הכוחנות צפויה להופיע עם הידוק הקשר). אולם קיימים סוגים רבים ושונים של יחסים בין בני-אדם לבין חיות ממינים שונים, עם מאפייני כוחנות שונים – ובהתאם לכך, תפיסות המוסר השונות שמאפיינות את היחס הרווח כלפי חיות לא-אנושיות, אינן תואמות בדרך-כלל טקסונומיה ביולוגית אלא דגמים ספציפיים של יחסי שליטה וניצול.

דגמים מסוימים של שליטה וניצול גלויים לעין יותר מאחרים. "חיות מחמד" למשל, ניכרות לעין היטב בעולם המודרני, וכך גם מעט "חיות העבודה" שעדיין קיימות. יחסים בין-מיניים מסוימים גם נראים מוכרים בהתאם למידת הדומות שלהם לסוגים מסוימים של יחסים בין-בני-אדם; כך, למשל, הסטטוס של "חיית עבודה", ובמידה רבה גם של "חיית מחמד". בהתאם לכך, הגורמים המגבילים כשירות מוסרית ביחס ל"חיות מחמד" ו"חיות עבודה" דומים במידת-מה לגורמים המגבילים את הכשירות המוסרית ביחס לקבוצות אנושיות כגון ילדים, משרתים, עבדים ועוד. עם זאת, יחסים בין-מיניים מתאפיינים גם בהגבלות ייחודיות על הכשירות המוסרית. קיימים סוגים רבים של יחסים בין-מיניים, ובהתאם לכך יש הגבלות ייחודיות רבות ושונות על הכשירות המוסרית בכל הנוגע לחיות לא-אנושיות. תובנה זו, למרות מקורותיה המרקסיסטיים והפמיניסטיים, בקושי זכתה להכרה בהקשרים בין-מיניים.

מבין כל סוגי היחסים הבין-מיניים, יש לדעתי חשיבות מיוחדת לניצול התעשייתי של חיות. ניצול זה הוא בעיקרו חקלאי, והוא הפך לתופעה מרכזית ברוב ארצות העולם במהלך המאה ה-20, עם שורשים בולטים במאה ה-18. מספר החיות הנתונות לניצול תעשייתי מגיע כיום לעשרות מיליארדים בשנה, וכמעט כל האוכלוסייה האנושית במדינות המתועשות צורכת את תוצרי הניצול ומממנת אותן. הניצול התעשייתי עמוק יותר ברוב היבטי השליטה והניצול מכל צורת יחסים אחרת. לפיכך הוא מציב את המגבלות החמורות ביותר על כשירותנו המוסרית – בעיה שלא זכתה להכרה בקרב התיאורטיקנים השונים.

ב"ניצול תעשייתי" אני מתכוון לצירוף של מספר מרכיבים, ואלה הבולטים שביניהם: כליאה מתמדת וצפופה של המוני חיות, ניהול חייהן בידי אנשים מעטים מאוד ומכשור רב, הפעלת מניפולציות סביבתיות ותורשתיות המחושבות בדייקנות על בסיס מחקר, וכל זאת בהתאם לשיקולים כלכליים טהורים. הניצול התעשייתי הוא חסר תקדים בשיטותיו, בממדיו וברמת השליטה והניצול שגלומים בו. אולם למרות היקפו העצום, רובו הגדול לא תואר כלל מחוץ לשיח הטכני ולכן הוא לא נתפס בתור מציאות חברתית – במידה רבה בניגוד ליחסים הבין-מיניים בחקלאות המסורתית. השיח הטכני מתייחס אל החיות בתור אובייקטים של ניהול רציונלי עבור מטרות כלכליות, במונחים של חומר גלם, מכוונת ייצור חיות, או מוצרים שעדיין לא עובדו.

ההתייחסות אליהן בשיח הטכני רחוקה עד כדי כך ממונחים חברתיים ורלוונטיים למוסר, שכדי לתאר את הניצול התעשייתי כמערכת יחסים נזקקתי לעזרתו של דין-וחשבון היסטורי על התהוות הפרקטיקות התעשייתיות, בדגש על תהליך ההתבחנות של צורות הניצול התעשייתיות והמנוכרות מתוך הניצול החקלאי המוקדם יותר. הסקירה ההיסטורית נועדה להקל עלינו לזהות את השינויים שעברו אותם היבטים של הניצול החקלאי המסורתי שאיננו מתקשים לזהותם כחברתיים וטעונים מוסרית – טיפול (husbandry), גילויי כוחנות לשמה, הדדיות לכאורה וכדומה.

אני מציע אפוא שלוש פרספקטיבות לבחינת התפתחותו של הניצול התעשייתי: (א) הידוק השליטה בחיות והקצנת המניפולציה בתפקודיהן הטבעיים, תוך הפיכת יותר ויותר התנהגויות חיות למיותרות בחלק מהתעשיות, עד שמפרספקטיבה חקלאית לא נותרה מהחיות אלא פיסולוגיה; (ב) הרחבת השליטה מרחוק בחיות באמצעות טכנולוגיות המחליפות תפקודים טבעיים, אקולוגיה טבעית וטיפול ישיר בידי אדם, עד שהציוד הוא שמקיים את המגע הישיר עם החיות ועם סביבתן המיידית, בעוד שניהול המשק מתמקד בתפעול הציוד; (ג) שליטה גנטית בתכונות ספציפיות יותר ויותר של החיות, עד שהחיות עצמן נתפסות כנשאות של יצירה מלאכותית יקרה – המטען הגנטי שלהן, לאחר שהן עוצבו תוך עיוות רב של תכונותיהן הטבעיות בהתאם לדרישות השוק החקלאי.

אף אחת מהפרספקטיבות שלעיל לא זכתה עד כה לפיתוח, ולמותר הוא לציין שגם הדיון שלי בנושא אינו מהווה תיאור עובדתי מפורט אלא רק שרטוט כללי של סוג המידע שנחוץ לשיקולים מוסריים. בפועל, כמעט כל המידע שקיים על הניצול התעשייתי, נוצר בידי גורמים מתוך תעשיות בעלי-החיים עבור שימושה הפנימי של התעשייה. ניסיונות להשיג מידע חלופי, שאינו מבוסס על חפצון של החיות, נעשו על-ידי ארגונים להגנה על בעלי-חיים באמצעות חקירות סמויות. חקירות אלה מחייבות מאמץ רב והסתכנות – ולכן הן נדירות ביותר ועתידות להישאר כאלה. החל משנות ה-70 של המאה ה-20, עוררה המחאה הציבורית נגד התיעוש גם את התפתחותו של ענף מחקר, שנועד לתרגם את המציאות התעשייתית למונחים שמישים מבחינה מוסרית – מדע רווחת בעלי-חיים או אתולוגיה יישומית (המושגים חופפים זה לזה במידה רבה). אולם התיאור המדעי, שלא כמו תיאורים המשמשים בדרך-כלל לדיוני מוסר בעניינים שבין בני-אדם, נוטה להגיש מידע שעוקר ככל האפשר מתוכן מוסרי – תוך רתיעה משימוש במושגים חברתיים ורגשיים ומהתמקדות באינדיבידואלים ובסיפורם האישי (נטייה זו מעמידה בספק את השימושיות של ידע מדעי באתיקה הבין-מינית בכלל). מעבר לכך, מדע רווחת בעלי-החיים נותר מצומצם ביחס

להיקפן של התעשיות, ורובו אף מתמקד בתנאי ניסוי ולא בתעשיות גופא. קיים שיתוף-פעולה נרחב בין ענף המחקר לבין התעשיות, עד כדי כך שהמחקר נבלע לעתים בתעשיות מבחינת השיוך המוסדי, ההשקפות והמטרות. אם כן, הניסיונות החתרניים והמדעיים לא משנים את התמונה הכללית: בעיקרו, הניצול התעשייתי לא תואר מעולם במונחים המתאימים לשיקול מוסרי.

בעיה קריטית אחרת שאני מצביע עליה בעבודה, קשורה בהבדלים הגדולים שבין הניצול התעשייתי לבין כל מערכת יחסים אחרת. אמנם, השלבים המוקדמים של התיעוש דומים לאותם היבטים בחקלאות המסורתית שאותם החליף התיעוש, אולם בהדרגה התפתחו פרקטיקות תעשייתיות הדומות רק לפרקטיקות תעשייתיות אחרות, מסחריות או ניסיוניות. עולם המושגים החקלאי-תעשייתי הפך למערכת אוטונומית, של מושגים המגדירים או מנהירים זה את זה ללא קונוטציות מוסריות וללא קשר למושגים שיש להם קונוטציות מוסריות בקרב קהילה כלשהי. בתנאים אלה, אנלוגיות בין ניצול תעשייתי לבין יחסים מוכרים עשויות להצטייר כמקור מוצלח להבנה מוסרית, אולם למעשה הן מטעות בדרך-כלל. זאת מאחר שהאנלוגיה מדביקה לתופעה התעשייתית מערכת של עובדות לא רלוונטיות בעיקרן, מבלי לגלות דבר על העובדות הרלוונטיות – ולכן גם על משמעותן המוסרית. כך, למשל, המושג "צפיפות" בהקשר של תעשיית ה"פטמים" מגלם בתוכו היסטוריה של מחקר וניסיון מסחרי, שענינם הוא חישוב היחס האופטימלי – מבחינה כלכלית טהורה – בין משקל הבשר המופק מתוך יחידת שטח בלול, לבין הנוק הכספי שנגרם בשטח זה כתוצאה מהוצאות תחזוקה וממחלות, מתוקפנות הדדית, מקושי להגיע למזון ולמים וכו'. זוהי מערכת עובדתית זרה לחלוטין ל"צפיפות" כפי שמושג זה משמש בתנאים מוכרים יותר. פער דומה קיים בין מושגים תעשייתיים אחרים לבין מושגים דומים-לכאורה המשמשים בהקשרים חברתיים מוכרים (בנוסף למושגים תעשייתיים רבים שממילא קשה למצוא מושגים שדומים להם לכאורה). יש לציין, שכמה מושגים תעשייתיים (כגון "כלוב סוללה" בתעשיית הביצים) הוטענו בדור האחרון בקונוטציות מוסריות משלהם בקרב ציבור רחב באירופה ואולי גם במקומות אחרים, אך מושגים אלה נותרו מבודדים מההקשר התעשייתי הרחב ולכן הם מובנים רק באופן חלקי.

ההבדלים העמוקים בין המציאות החקלאית-תעשייתית לבין כל סוג יחסים אחר, בשילוב עם העובדה שמציאות זו לא תוארה כמעט מחוץ לשיח הטכנולוגי-כלכלי, פוגמים מהותית באפשרות לתפוס את החיות מחוץ להקשר של מעמדן כמשאבים בפרויקט טכנולוגי-כלכלי. עובדה זו מעמידה אתגר קיצוני בפני הכשירות המוסרית על כל היבטיה ביחס לניצול התעשייתי. לא מדובר כאן בבעיה של הטיה ספייסיסטית מן הסוג שמאפיין חקלאות מסורתית וקשרים כוחניים אחרים בין בני-אדם לחיות לא-אנושיות. מאחר שתיעוש החקלאות הרחיק והסתיר את

הקשר עם החיות מרוב האוכלוסייה עד שנותר מגע רק עם מוצרים שהופקו מהן, ואפילו הקשר החקלאי עבר קיטוע באמצעות חלוקת עבודה והורחק דרך ציוד – הרי שהאידיאולוגיה הספישסיסטית איבדה את רוב תפקידה. הניצול התעשייתי אינו נתון בעיקרו תחת דעות קדומות ואידיאולוגיה כוחנית; הוא נמצא מלכתחילה מחוץ לתחומי התפיסה החברתית/מוסרית. בהתאם לכך, כאשר מישהו – החל בפעילים להגנת בעלי-חיים וכלה בחקלאים – מנסה לבחון תופעה חקלאית-תעשייתית במונחים חברתיים/מוסריים, מתעורר בעקבות זאת מטען אידיאולוגי. למרות ההבדלים הגדולים בין עמדות אידיאולוגיות שונות, עצם סיווגה של תופעה א-מוסרית לכאורה בתור תופעה הראויה לעניין מוסרי, כרוכה בחתירה מסוימת תחת יסודות התיעוש.

לסיכום, כשאנו באים לגבש עמדה מוסרית בעניין קונפליקט כלשהו, אנו זקוקים לידע האמפירי הרלוונטי לסוגיה שלפנינו. חוסר איזון ברמת הידע, נגד אחד מהצדדים, יוביל באופן כמעט בלתי נמנע לעמדה מוסרית מוטה נגדו. לכן חוסר האיזון ברמת הידע אינו קביל מבחינה מוסרית. בנסיבות שבהן צפוי חוסר איזון כזה, החיפוש אחר המידע החסר ותיקון המידע המסולף והמפוברק הם תנאי מקדים לכל עבודה מוסרית תקפה. לאור המגבלות הרווחות בידע שרלוונטי לשיקולים מוסריים בכל הנוגע לחיות לא-אנושיות, דרישה זו מערערת על תקפותם של שיפוטים מוסריים בעניינים שבינן לבין בני-אדם. הקושי גובר ככל שמדובר ביחסי שליטה וניצול קיצוניים יותר, ושיאו בניצול התעשייתי. אין בכך כדי לערער כליל על שיפוטים במקרים של פערי אינטרסים קיצוניים בין הצדדים, כגון צריכת מוצרים מן החי בחברה התעשייתית; אולם אפילו בעלי הכוונות הטובות ביותר אינם יכולים לטפל באופן מכריע בקונפליקטים מעודנים יותר. העניין באתיקה בין-מינית מחייב אפוא חריגה מהעיסוק הפילוסופי לעבר תהליך מתמיד של בירור עובדתי ומחשבה ביקורתית על מגבלות הכשירות המוסרית.