How should the welfare of fetal and neurologically immature postnatal animals be protected?

MLH Campbell*, DJ Mellor† and P Sandøe§

Abstract

Legal protection of the welfare of prenatal animals has not previously been addressed as a discrete subject within the academic literature on animal welfare, ethics and law. This paper aims to rectify this deficit by reviewing the protections (or absence of protections) provided for fetuses by existing legislation in various jurisdictions, and considering the extent to which legal protection of animal fetuses can be justified on animal welfare grounds. Questions related to the need to protect the welfare of neurologically immature postnatal animals are also considered. We argue that there are reasons to protect animal fetuses, both in order to protect fetuses themselves against possible suffering, and in order to protect the animals which fetuses will become against negative welfare impacts that originate prenatally. We review the science on whether fetuses can suffer, and argue that extant regulations do not fully reflect current scientific understanding. Following the precautionary principle, we further argue that regulators should consider the possibility that fetuses and neurologically immature postnatal animals may suffer due to sub-cortically based ‘raw basic affects’ (ie relatively undifferentiated experiences of discomfort suggested to be generated by neural processing at levels below the cerebral cortex). Furthermore, we show that there are reasons for affording fetuses protection in order to safeguard the long-term welfare of future animats. However, it may be possible to provide such protection via rules or laws relating to the use of certain techniques and the management of pregnant animals, rather than via direct legal protection of fetuses themselves. In order to provide such protection effectively we need to know more about the relationship between maternal nutrition, stress, exercise, management and fetal health, and about the impact of the timing of a fetal insult on long-term postnatal welfare.

Keywords: animal welfare, fetal protection, fetal suffering, neurological immaturity, postnatal harms, regulations

Introduction

Death of antenatal animals may occur across a wide range of animal uses. For example, animal models are used to test the embryotoxic and fetotoxice effects of new human medicines (see reviews by Brent [2004] and the Nuffield Council of Bioethics [2005]); livestock fetuses are co-inidentally killed when their pregnant dams are slaughtered (Mellor & Gregory 2003; Peisker et al 2010) and, at that time, some provide biological materials such as fetal calf serum (Jochems et al 2002; Mellor & Gregory 2003); and ovariohysterectomy of feral and companion cats which happen to be pregnant results in death of their fetuses (Scott et al 2002; Bosch et al 2012). Even in sporting situations or during transport, where pregnant animals are physiologically stressed, their fetuses may die or be aborted (National Animal Welfare Advisory Committee 2011).

Humans are inclined to feel protective towards prenatal and neonatal animals (Morreall 1991; Morris et al 1995; Mellor et al 2010a; Mellor 2013). For example, the idea of livestock fetuses dying in utero when their pregnant dams are slaughtered is a matter of concern to many (EFSA 2005a; Peisker et al 2010). In Denmark, in 2004, the strength of public feeling about this issue led to a law change that banned the slaughter of pregnant production animals and horses during the last tenth of their pregnancy (LOV nr 269 af 21/04/2004; https://www.returnsinformation.dk/Forms/R0710.aspx?id=1807). However, many countries provide no legal protection for prenatal animals, and those that do, usually limit the protection to fetuses after a certain stage of development.

Apart from limited consideration in one paper (Mellor et al 2010a), no detailed analysis of the protection afforded prenatal animals appears to exist in the academic literature on animal welfare, ethics and law. For example, a recent report on UK law relating to animal welfare made no mention of prenatal animals (FAWC 2012). This paper aims to rectify this deficit by evaluating the foundations of