Is the practice of boiling pre-hatched duck embryos in their shell humane?

The practice of boiling a fertilised duck embryo in the egg shell and then eating it from the shell has the potential to result in pain and suffering for the unhatched bird.

The following information on the capacity of an egg embryo to feel pain relates to research (Mellor & Diesch 2007) done in chickens rather than ducks. Chickens have an incubation period of 21 days, whereas ducks hatch at around 28 days. But if we cautiously extrapolate the data that is available for chicks, then adding a few more days to the times specified below could give an indication of the duck’s ability to suffer while still in the egg.

For suffering to occur, an animal needs to be both sentient and conscious. In the case of chickens, the question is whether a chick is conscious prior to hatching (at day 21 of incubation). There is well-documented evidence of neurological immaturity until day 13-14 and that the chick remains in unconscious sleep-like states until day 19. These sleep-like states have been determined using electroencephalography (EEG) – a technique that records brain electrical activity – which, in chicks, has been interpreted using our knowledge of brain activity in mammals. However, a bird’s brain is different from a mammal’s brain and what is yet to be understood is whether this difference influences the EEG reading and therefore our interpretation of the sleep-like states in chicks – i.e. whether the chick is really unconsciously asleep or in some other state. What there is also some doubt about is the period after a chick first pierces the air-space membrane of the egg at 19-20 days of incubation (an act called internal pipping) and after it pierces the egg shell itself at day 20 (called external pipping), as the chick starts to breathe once internal pipping has occurred.

This is an area that is yet to be further researched. Until that time, it would be prudent to give the pre-hatched chick the benefit of the doubt and definitely not subject it to boiling from day 18 onwards, as if the chick is conscious during that period, there is potential for it to feel pain and suffer. Also, pending further research on the interpretation of sleep-like states between days 14 and 19 pre-hatch, it may also be wise to refrain from boiling embryonated chicken eggs after day 13.