

Is Fetal Pain a Misnomer?

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Why Do We Care?

- Fetal Surgery
- Abortion
- Because it is interesting

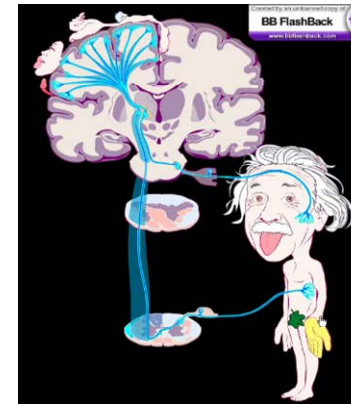
109TH CONGRESS
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To ensure that women seeking an abortion are fully informed regarding the pain experienced by their unborn child.

How To Address The Question

- Neurological Development
- Psychological Development
- Bringing the two together

An “Alarm System” For Pain



Key Moments In Fetal Development

- 7 weeks
 - Free nerve endings
 - Projections from the spinal cord to the thalamus
- 12 – 18 weeks
 - Projections into the cortical “subplate”
 - Hormonal stress response
- 23 – 26 weeks
 - Projections into the cortical plate
 - Maturation of the free nerve endings
 - Lamination of the thalamus and cortex
 - Functional cortical responses

‘[the hormonal stress response of the fetus raises] the possibility that the human fetus feels pain *in utero*’

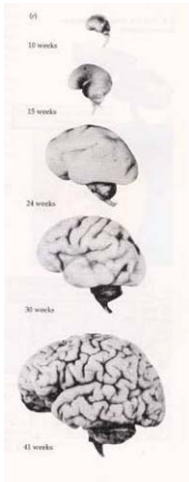
‘...a hormonal stress response cannot be equated with the perception of pain’

Cortical Pain Responses In Human Infants

“Our results show that noxious stimulation can evoke specific hemodynamic changes in the cortex of the youngest infants recorded at 25 weeks PMA”

Slater R, Cantarella A, Gallella S, Worley A, Boyd S, Meek J, Fitzgerald M. *J Neurosci* 2006; 26: 3662-3666

Summary Of Fetal Development



“[Prior to 26 weeks gestation] The cortex is not a functional unit... and therefore any discussion of ‘perception’ or ‘conscious’ reaction to stimuli is inappropriate”

“...true pain experience... [develops]... postnatally along with memory, anxiety and other cognitive brain functions”

Prof. Maria Fitzgerald. Fetal pain: an update of current scientific knowledge. A paper for the Department of Health. May 1995

An Anatomical Answer to Fetal Pain is Problematic

■ Bogus Science

- There is the expectation that the question of subjectivity can be solved via the indisputable facts of brain development without recourse to arguments about consciousness and qualia

■ Bogus Politics

- There is the expectation that the question of abortion can be solved via the indisputable facts of science without recourse to arguments about bodily sovereignty and individual rights

How Does Pain Become Possible?

- Continued brain development
 - Frontal cortex and stranger anxiety / memory
 - Coordinated motor movements and motor cortex
- Representational Memory
- Through discoveries made in action and in patterns of mutual adjustment and interaction between infant and caregiver

Conclusion

- Fetal pain is a moral blunder based on a false equivalence between observer and observed that misses the process of development beyond the womb
- Distinguishing sensations from thoughts, emotions, or each other requires a conceptual basis on which the distinction is drawn
- We easily forget that this conceptual basis is needed and view pain development as merely about hooking 'alarms' up to 'buttons', forgetting that it is also about subjective experience

Derbyshire SWG. *Brit Med J* 2006; 332: 909-912