

Prenat.Unit1 essays

1.Epigenetics

I watched a video about Epigenetics. I found it very interesting and informative. The question that the scientists are trying to answer is whether or not our genes make us who we are. We are given examples of various couples of twins that are very similar in their facial expressions, body language and habits. Those similarities are more obvious in children. It's understandable because several individuals coming from the same egg share precisely the same genes. We are given an example of two twin sisters where one of the women is diagnosed with cancer. Is it inevitable that they both will get sick? Apparently, it can be avoided. An experiment on mice showed that several genetically identical mice can present different health conditions: some are shown obese and sick, while others are perfectly healthy and in good shape. As identical twins they share same "goody" gene, but in one group of mice it stays on constantly causing obesity, while in others a specific chemical tag causes the gene to turn off resulting in mice's good shape and overall health. Epigenome that consists of chemical compounds make it possible for the genome to change, while telling our cells what to do. We inherit our genome, but epigenome can be altered. As we grow older epigenetic influence on our genes accumulates.

The breakthrough of epigenetics is about the fact that we can change instructions to a cell and make genes reactivate. The experimental study shown in the video demonstrates how epigenetics can be used in curing cancer. Scientists are not trying to kill dangerous cancer cells but change them in order to reverse the cancer damage.

Ch1

The chapter introduces us to a term "competent fetus" that could be understood as a complete and functioning human being. The question that the humankind has been asking itself is whether or not a fetus is fully human and when exactly it can be considered such. Before modern methods of scientific

research appeared, a human fetus was denied of having any personal traits. It was considered as just a frame for a person to be further built on. Fetuses were even denied of their ability to feel pain. Thus, even nowadays fetuses and newborns are often seen as humans under construction.

This dehumanizing theory of a fetus is a convenient option for those who support the idea of an abortion. It gives the procedure a straight medical status while denying the moral consequences. If a fetus is not a person, it can be surgically removed like a tumor. Modern technology lets us look into prenatal development in a different and much more comprehensive way. It's getting very hard to just say that our psychological development starts only when we are born.

2. Early Western thinkers freely speculated about fetal behavior and psychology. They tried to explain fetal development the way they could, based on their circumstances. One of the researches' concerns was about how a fetus received the nutrients in the mother's womb. Alcmaeon created a "sponge theory" meaning that a fetus was able to receive nourishment by the whole body like a sponge. Democritus and Epicurus believed that before birth fetuses could use their mouth to get food. Hippocrates' idea about a fetus receiving nutrients from the mother's blood flow became a breakthrough and led to further research.

Overall, first researchers in embryology mostly focused on physiological development of a fetus and had little to no interest in psychology. Fetal remains of different ages were examined in order to see how a human body is developed. In the 2nd century AD Galen distinguished 4 stages of fetus's physical development that showed its step-by-step growth in a mother's womb.

Some of the experiments that took place seem shocking and gruesome now. Queen Cleopatra's research methods clearly tell us that she didn't think of prenatals as fully human.

3. Indian thinkers, such as Susruta and Charaka were first to introduce the idea of fetal consciousness and sense perception. They stated that mothers' psychological and physical wellbeing was closely connected

with proper development of the fetuses. Susruta believed that a fetus acquired consciousness of its' surroundings once all the major limbs were formed. According to Susruta fetus was able to express their desires through their mothers' ones and failure to fulfill those desires would likely to cause physical and psychological damage to the fetus. Thus, these early non-western thinkers studied not just how a human body was formed but went further to investigate psychological development of a fetus.

Ch2

7. Frank Lake used evidence from the LSD research and the primal integration workshops to develop the maternal-fetal distress syndrome paradigm.

LSD-25 taken under therapists' supervision was used to recover forgotten memories and could go as far as to the time before birth. The research showed that the participants in the research study could remember experiences during and before birth. Frank Lake was able to draw parallels between specific reoccurring prenatal memories with certain outcomes that could happen in future.

During the workshops the participants were subjected to different techniques including relaxation, guided fantasy, deep breathing that allowed them to remember their near birth experience.

I'm a little skeptical about what I read about Frank Lake's workshops since it seems like the preparations for this experimental therapy could give the participants the image of what they were supposed to look for. Is it possible that a human mind just created a very vivid picture of something and then recreated it as a memory? I wonder if something like deep hypnosis ever showed traces of people's prenatal memories without prior studying the whole process. I found the LCD experiment very intriguing since the primary goal of the treatment had nothing to do with recovering specific prenatal memories, but those similarities of the experiences and the outcomes summarized gave the researchers a very interesting question to answer about to what extend we are influenced by our near birth and prenatal experience.

8. According to Frank Lake there is a short stage of a “blastocyst” that happens prior to the establishment of umbilical circulation between a mother and a fetus. This “blastocyst” stage is characterized by the experience of non-attachment when a fertilized ovum travels on its own. Once the connection between the fetus and the mother’s uterus is established the phenomenon of the “umbilical affect” becomes an issue to consider. Lake distinguishes 3 possible manifestations of the “umbilical affect” – positive, negative and strongly negative. Positive affect is characterized by the positive flow from the mother, when the future child is accepted and given all the nutrients to develop. Negative affect is defined by less than ideal conditions for the development of a fetus when a future baby and hi/her needs are not recognized. Strongly negative affect can cause M-FDS and is characterized by physical and mental suffering that a mother shares with a fetus through the blood flow.

Lake distinguishes 4 variations of fetal response – ideal, coping, opposition and transmarginal stress. Ideal fetal response happens when all the needs of a fetus are fulfilled and its’ surroundings are positive. A fetus goes into coping when the maternal affect flow is less than ideal but still tolerable. Fetal opposition is caused by the maternal resentment and distress that is transmitted to the fetus through the blood flow. Transmarginal stress is the type of fetal response that is defined by crossing the level of tolerable pains and going further when a fetus cannot deal with its’ suffering and turns into self-destructive mode.

Reading about the umbilical affect and fetal response made me think about how fragile and strong human beings are. It makes perfect sense that a fetus has to adjust to its’ surroundings that influence its’ development. The struggle for life starts long before we are even born. In a perfect world all the pregnancies would be planned, happy, joyful and all the children would be healthy. Unfortunately, it’s not the case.

9. Going through multiple google pages I can see that more and more scholars are asking questions about prenatal development of a child. The focus is shifted to psychological development of a person. Modern technology allows more comprehensive research that shows that we acquire personal traits long before we are born. A fetus behaves almost exactly as a newborn months before a mother gets a chance to hold her newborn and see the baby in person. A fetus can hiccup and react to loud noises, hear what is going on outside of the mother's womb. It knows what is good or bad, expresses its feelings.... It's truly amazing. I ran into a very disturbing video that showed an abortion performed. It shocked me... It was not a medical procedure but a person that was brutally killed. The saddest part that a lot of people don't see it this way...