Table 2 –Embryogenesis of Teratomas[48], Embryos and ANT/ANT-OAR Biological Entities

	Method of coming into being	Chromosomal configuration	Resulting Problems	Organismal status
Teratoma: Partial Hydatidiform Mole	2 sperm cells fertilize a normal egg	69 chromosomes – 23 maternally derived, 46 paternally derived. Chromosomes in triplet (triploid) rather than paired (diploid).	The presence of 3 copies of each chromosome typically leads to death early in the pregnancy although there have been rare instances of children born with a triploid genome that do not survive past infancy.	Severely deformed human embryo with a tumor.
Teratoma: Complete Hydatidiform Mole	2 sperm cells fertilize an enucleated egg.	46 paternally derived chromosomes.	The resulting mass is made up solely of one type of embryonic cell type- the trophectoderm. No fetal tissue is present only extra-embryonic tissue.	Generally not considered a human embryo because there is no maternal DNA.
Teratoma: Parthenote (note: this is only one instance of parthenogenesis.)	A mature egg is spontaneously activated and divides without being fertilized by a sperm.	46 maternally derived chromosomes.	In vitro, activated human eggs have been able to develop to the blastocyst stage.[49]	Generally not considered a human embryo because there is no paternal DNA.

[48] Nicanor Austriaco, O.P. Are Teratomas Embryos or Non-embryos?: A Criterion for Oocyte-Assisted Reprogramming *National Catholic Bioethics Quarterly* 5 (Winter 2005): 697 – 706.

[49] The organismal status of parthenotes is still undecided; however, for the purpose of this discussion I have conceded that these parthenotes are not embryos. The more important point in this comparison is how chromosomally distinct they are from the ANT/ANT-OAR "biological entities" since epigenetics is being used by Fr. Austriaco as a determining factor in organismal identity.

Table 2 –Embryogenesis of Teratomas, Embryos and ANT/ANT-OAR Biological Entities-Cont'd

	Method of coming into being	Chromosomal configuration	Resulting Problems	Organismal status
Human Embryo (Naturally conceived)	Fertilization of egg by sperm	46 chromosomes – 23 maternally derived and 23 paternally derived - diploid cell	Can either miscarry, be aborted or reach full term.	Human embryo
Human Embryo (cloned via SCNT)	Fusion of somatic cell into enucleated egg using somatic cell nuclear transfer.	46 chromosomes – 23 maternally derived and 23 paternally derived - all from the somatic cell	Brings into being a genetic twin of the person whose somatic cell was used for fusion.	Human embryo
ANT biological entity	Fusion of somatic cell into enucleated egg using somatic cell nuclear transfer.	46 chromosomes – 23 maternally derived and 23 paternally derived - all from the somatic cell. The CDx2 gene in both sets of chromosomes has been silenced.	Brings into being a genetic twin of the person whose somatic cell was used for fusion without the CDx2 gene expressed. As a result, the trophectoderm layer does not develop and implantation cannot take place.	ANT proponents: teratoma-like entity lacking the moral status of an embryo. ANT opponents: a defective embryo that is not able to implant/continue development.

Table 2 –Embryogenesis of Teratomas, Embryos and ANT/ANT-OAR Biological Entities-Cont'd

	Method of coming into being	Chromosomal configuration	Resulting Problems	Organismal status
ANT-OAR biological entity[50]	Fusion of somatic cell into enucleated egg using somatic cell nuclear transfer.	46 chromosomes – 23 maternally derived and 23 paternally derived - all from the somatic cell. The Nanog gene in both sets of chromosomes has been over-expressed.	Brings into being a genetic twin of the person whose somatic cell was used for fusion. Because Nanog is over-expressed, the entity has the epigenetic state of embryonic stem cells rather than the epigenetic state of an embryo.	ANT proponents: teratoma-like entity lacking the moral status of an embryo.
				ANT opponents: a defective embryo that is not able to continue embryonic development

[50] Ibid

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