

ANT 295
Mothers and Infants – Spring 2008

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 Office Hrs: M,W,F 11a-4p

DESCRIPTION: In this course, we will examine mothers, mother-infant relationships and infant development across the primate order and cross-culturally from an evolutionary perspective. Topics will include but are not limited to: parent investment theory, parent-offspring conflict theory, attachment theory, conception, pregnancy, gestation, lactation, human and nonhuman primate infant development and trajectories, infant sex differences, and infanticide.

TEXTS AND OTHER COURSE MATERIALS:


- 1) Altmann, J. 2001. *Baboon Mothers and Infants*, 2nd ed. University of Chicago Press: Chicago.
- 2) Goldsmith, T. 1994. *The Biological Roots of Human Nature*. Oxford University Press: NY.
- 3) Hrdy, S.B. 2000. *Mother Nature: Maternal Instincts and How They Shape the Human Species*. Ballantine Books: New York.
- 4) Blackboard Readings (BR#1-BR#35).

EXAMS & GRADING:

- 1) **Exams: 3 @ 30% = 90%** - Three in-class exams will be given, each covering approximately 1/3 of the course materials.
- 3) **Participation: 10%** - It is your responsibility to complete the readings/assignments before the class for which they are assigned and to participate in class discussions. Lack of participation and absences are noted and will negatively affect your course grade. In short, **absences are not acceptable.**
- 4) **Grading Scale:** F≤ 69.4; D=69.5-73.4; C=73.5-76.4; C+=76.5-79.4; B-=79.5-82.4; B=82.5-86.4; B+=86.5-89.4; A-=89.5-93.4; A=93.5-100

SYLLABUS:

DATES	TOPIC(S)	ASSIGNMENT(S)
Wk 1: 21JAN – 25JAN	Evolutionary Theory	21 st – NA; Preliminaries 23 rd – Goldsmith Preface-2 25 th – Goldsmith 3-4
Wk 2: 28JAN – 01FEB	Evolutionary Theory (cont.) Motherhood in Nonhuman Primates	28 st – Goldsmith 5-6 30 th – Goldsmith 7-Epilogue 1 st – Altmann Forward – 3
Wk 3: 04FEB – 08FEB	Motherhood in NHP's (cont)	4 th – Altmann 4-5 6 th – Altmann 6 8 th – Altmann 7-8
Wk 4: 11FEB-15FEB	Motherhood in NHP's (cont)	11 th – Altmann 9-10 13 th – EXAM 1

	Reproduction Overview & Intro to The Biology & Evolution of Human Motherhood	15 th - Langdon Ch 19 BR#1 Hrды Preface-2
Wk 5: 18FEB – 22FEB	Intro to ... (cont) The Human Female Reproductive System & Cycle Fertilization/Conception & The Embryo	18 th – Hrды 3-5 20 th – Rosen & Cedars BR #2 (WARNING: Technical read! Skip or skim the following sections: pg517 Primary follicle... through pg 519 ...granulosa cells; pg 525 C. Anatomic Causes through pg 528 ...since they are vital.; pg 529 B. Autoimmune Origin... through pg 530 ...antral follicle counts; pg 530 ANOVULATION through pg 539 ,,and hormonal therapy.) 22 nd – Tanner BR#3; Visible Embryo website www.visembryo.com/baby/index.html
Wk 6: 25FEB – 29FEB	Gestation/Pregnancy & Inherent Conflicts	25 th – Taylor & Lebovic BR #4 (WARNING: Technical read!) 27 th – Trivers BR#5; Trivers BR#6 29 th – Haig BR#7
Wk 7: 03MAR – 07MAR	Pregnancy (cont) Parturition/Giving Birth	3 rd – Profet BR#8 5 th – Power & Tardiff BR #9 7 th – Trevathan BR#10 Konner & Shostak BR#11
Wk 8: 10MAR – 14MAR	Lactation/Nursing	10 th – Konner & Worthman BR#12; Hrды,6 12 th – McKenna BR#13 14 th – Vitzthum BR#14 Wysolmerski BR#15 Kalkwarf BR#16
 SPRING BREAK!!! ○		
Wk 9: 31MAR– 04APR	The Mother-Infant Bond/ Attachment and/or the Lack Thereof	31 st – EXAM 2 2 nd – Blurton-Jones BR#17 Susman-Stillman & Erickson BR #18 4 th – Ainsworth BR#19;

		Hrdy 7,8
Wk 10: 07APR – 11APR	Infancy and Infant Development – Cross- Culturally	7 th – Hrdy 12, 13, 14 9 th – Schulkin et al. BR #20 11 th – Hrdy 15, 17; Tronick BR#21
Wk 11: 14APR – 18APR		14 th – Ainsworth BR#22; DeVore & Konner BR#23 16 th – Tronick BR # 24 Tronick BR # 25 18 th – Tronick BR # 26 Tronick BR #27
Wk 12: 21APR – 25APR		21 st – Luster & Bates BR # 28 Tronick BR #29 23 rd – Hrdy 19, 21,24 25 th – Ziefman BR#30; Furlow BR#31
Wk 13: 28APR – 02MAY		28 th – Brett & Niermyer BR#32; Karraker & Coleman BR#33 30 ^h – Harper BR#34; Pedersen BR#35 2 nd – CLASS CANCELLED
Wk 14: 05MAY – 09MAY		5 th – TBA (Review/Catch-up) 7 th – EXAM 3 9 th – Wrap-up

Bibliography for Blackboard Readings

- 1) Langdon, J. 2005. Ch 19 – Reproduction. In: *The Human Strategy: An Evolutionary Perspective on Human Anatomy*. Oxford Univ Press, NY. Pp 244-258.
- 2) Rosen, M.; Cedars, M. 2004. Ch 13 - Female reproductive endocrinology and infertility. In: *Basic & Clinical Endocrinology, 7th ed.* Greenspan, F.; Gardner, D. (eds). McGraw Hill. pp. 511-563.
- 3) Tanner, J. 1989. Ch 3 – Growth before birth & Ch 4 – Sex differentiation up to puberty. In: *Fetus Into Man*. Harvard University Press. pp. 36-57.
- 4) Taylor, R.; Lebovic, d. 2004. Ch 16 – The endocrinology of pregnancy. In: *Basic & Clinical Endocrinology, 7th ed.* Greenspan, F.; Gardner, D. (eds). McGraw Hill. pp. 637-657.
- 5) Trivers, R. 1972. Parental investment and sexual selection. In: *Sexual Selection and The Descent of Man 1871-1971*. Campbell, B. (ed). Aldine Publishing Company. Pp. 136-179.
- 6) Trivers, R. 1974. Parent-offspring conflict. *American Zoologist* 14:249-264.
- 7) Haig, D. 1993. Genetic conflicts in human pregnancy. *The Quarterly Review of Biology* 68:495-532.
- 8) Profet, M. 1992. Pregnancy sickness as adaptation: A deterrent to maternal ingestion of teratogens. In: *The Adapted Mind*. Barkow, J.; Cosmides, L.; Tooby, J. (eds). Oxford University Press. pp. 327-365.
- 9) Power, M.; Tardif, S. 2005. Ch 3 - Maternal nutrition and metabolic control of pregnancy. In: *Birth, Distress and Disease: Placental-Brain Interactions*, Cambridge Univ Press, NY. Pp. 88-113.
- 10) Trevathan, W. 1999. Evolutionary obstetrics. In: *Evolutionary Medicine*. Trevathan, W.; Smith, E.O.; McKenna, J. (eds). Oxford University Press. pp. 183-207.
- 11) Konner, M.; Shostak, M. 1987. Timing and management of birth among the !Kung: Biocultural interaction I reproductive adaptation. *Cultural Anthropology* 2:11-28.
- 12) Konner, M.; Worthman, C. 1980. Nursing frequency, gonadal function, and birth spacing among !Kung hunter-gatherers. *Science* 207:788-791.
- 13) McKenna, J.; Moskow, S.; Richard, C. 1999. Breast-feeding and mother-infant cosleeping in relation to SIDS prevention. . In: *Evolutionary Medicine*. Trevathan, W.; Smith, E.O.; McKenna, J. (eds). Oxford University Press. pp. 53-74.
- 14) Vitzthum, V. 1997. Flexibility and paradox: The nature of adaptation in human reproduction. In: *The Evolving Female*. Morbeck, M.; Galloway, A.; Zihlman, A. (eds). Princeton University Press. pp. 242-258.
- 15) Wysolmerski, J. 2002. The evolutionary origins of maternal calcium and bone metabolism during lactation. *Journal of Mammary Gland Biology and Neoplasia* 7:267-276.

- 16) Kalkwarf, H. 2004. Lactation and maternal bone health. *Advances in Experimental Medicine & Biology* 504:101-114.
- 17) Blurton Jones, N. 1972. Comparative aspects of mother-child contact. In: *Ethological Studies of Child Behaviour*. Blurton Jones, N. (ed). Cambridge University Press. pp. 305-328.
- 18) Susman-Stilman, A.; Erickson, M.. 2002. Ecological influences on mother-infant relationships. In: *Infant Development: Ecological Perspectives*, RoutledgeFalmer, NY. Pp 81-113.
- 19) Ainsworth, M. 1977. Attachment theory and its utility in cross-cultural research. In: *Culture & Infancy*. Leiderman, P.; Tulkin, S.; Rosenfeld, A. (eds). Academic Press. pp. 49-67.
- 20) Schulkin, J.; Schmidt, L.; Erickson, K. 2005. Ch 8 – Glucocorticoid facilitation of corticotropin-releasing hormone in the placenta and the brain: functional impact on birth and behavior. In: *Birth, Distress and Disease: Placental-Brain Interactions*, Cambridge Univ Press, NY. Pp. 235-236 & 249-267.
- 21) Tronick, E. 2007. Ch 6 – Introduction: cross-cultural studies of development. In: *The Neurobehavioral and Social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 97-98
- 22) Ainsworth, M. 1977. Infant development and mother-infant interaction among Ganda and American families. In: *Culture & Infancy*. Leiderman, P.; Tulkin, S.; Rosenfeld, A. (eds). Academic Press. pp. 119-149.
- 23) DeVore, I.; Konner, M. 1974. Infancy in hunter-gatherer life: An ethological perspective. In: *Ethology & Psychiatry*. White, N. (ed). University of Toronto Press. pp. 113-141.
- 24) Tronick, E. 2007. Ch 7 – The role of culture in brain organization, child development, and parenting. In: *The Neurobehavioral and social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 97-101.
- 25) Tronick, E. 2007. Ch 8 – Multiple caretaking in the context of human evolution: why don't the Efe know the Western prescription for child care? In: *The Neurobehavioral and Social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 102-122.
- 26) Tronick, E. 2007. Ch 9 – The manta pouch: a regulatory system for Peruvian infants at high altitude. In: *The Neurobehavioral and Social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 123-134.
- 27) Tronick, E. 2007. Ch 10 – Mother-infant interaction among the Gusii of Kenya. In: *The Neurobehavioral and Social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 134-152.
- 28) Luster, T.; Bates, L. 2002. Understanding the caregiving practices of adolescent mothers. In: *Infant Development: Ecological Perspectives*, RoutledgeFalmer, NY. Pp 115-141.

- 29) Tronick, E. 2007. Ch 22– The impact of maternal psychiatric illness on infant development. In: *The Neurobehavioral and Social-Emotional Development of Infants and Children*, WW Norton & Co., NY. Pp. 305-318.
- 30) Ziefman, D. 2001. An ethological analysis of human infant crying: Answering Tinbergen's four questions. *Developmental Psychobiology* 39:265-285.
- 31) Furlow, F.B. 1997. Human neonatal cry quality as an honest signal of fitness. *Evolution and Human Behavior* 18:175-193.
- 32) Brett, J.; Niermeyer, S. 1999. Is neonatal jaundice a disease or an adaptive process? In: *Evolutionary Medicine*. Trevathan, W.; Smith, E.O.; McKenna, J. (eds). Oxford University Press. pp. 7-25.
- 33) Karraker, K.; Coleman, P. 2002. Infants' characteristics and behaviors help shape their environments. In: *Infant Development: Ecological Perspectives*, RoutledgeFalmer, NY. Pp 165-191.
- 34) Harper, L. 1971. The young as a source of stimuli controlling caretaker behavior. *Developmental Psychology* 4:73-88.
- 35) Pedersen, C. 2004. How love evolved from sex and gave birth to intelligence and human nature. *Journal of Bioeconomics* 6:39-63.