Advanced Criminological Theory Seminar: Biosocial Criminology
The University of Texas at Dallas
CRIM 7351
Fall 2013
Tuesday 7pm – 9:45pm
FO 2.410

Professor: J.C. Barnes, Ph.D.
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Office hours: Tuesday 12:00pm – 1pm and by appointment

It is easiest to reach me via email. I do not always check my office voicemail but I do check email daily.

COURSE DESCRIPTION

Criminology has traditionally been dominated by sociologically oriented theories of crime causation. This focus has underscored the importance of environmental factors while, at the same time, dismissing the importance of biological and genetic factors. Indeed, most criminology textbooks give only a cursory overview of biological research into antisocial behavior, suggesting that these factors are unimportant. This conclusion, however, stands in contrast to a large body of research that identifies biological and genetic factors to be important in the etiology of criminal behavior.

This course will introduce the student to biosocial criminology, an emerging paradigm in the criminological discipline. Biosocial criminology encompasses several perspectives/categories that seek to unpack the association between genes, biology, the brain, the environment, and different types of antisocial behaviors. The course will unfold in three interrelated sections. The first part of the course will present an overview of some of the more popular criminological theories. During this portion of the class, we will discuss some of the reasons mainstream theorists have overlooked biosocial criminology. The second portion of the course will introduce students to concepts, findings, and theories germane to the biosocial focus. This part of the course presents research that will be new to most students. The final section of the course will consider the myriad ways in which biosocial research can and does inform theory and practice. In other words, we will discuss how biosocial research can be used to generate better theories and policies.

REQUIRED TEXTS

1) Beaver, Kevin M. 2013. *Biosocial Criminology: A Primer* (2nd Edition). Dubuque, IA: Kendall/Hunt. (ISBN: 978-1-4652-1881-0)

2) Research articles (see Course Schedule below)

3) Strongly recommended: Plomin, Robert, John C. DeFries, Valerie S. Knopik, and Jenae M. Neiderhiser. 2013. *Behavioral genetics* (6th Edition). New York: Worth Publishers. (ISBN: 1-4292-4215-9)

4) Strongly recommended: Harris, Judith R. 1998. *The nurture assumption: Why children turn out the way they do*. New York: Free Press.

RECOMMENDED TEXTS (by subject)

Biosocial Criminology

DeLisi, Matt, and Kevin M. Beaver. 2014. *Criminological theory: A life-course approach* (2nd Edition). Sudbury, MA: Jones & Bartlett.

Raine, Adrian. 1993. *The psychopathology of crime: Criminal behavior as a clinical disorder*. San Diego, CA: Academic Press.

Rowe, David C. 2001. *Biology and crime*. Los Angeles, CA: Roxbury.

Walsh, Anthony. 2002. *Biosocial criminology: Introduction and integration*. Cincinnati, OH: Anderson.

Walsh, Anthony, and Kevin M. Beaver. 2009. *Biosocial criminology: New directions in theory and research*. New York: Routledge.

Walsh, Anthony, and Jonathan D. Bolen. 2012. *The neurobiology of criminal behavior: Gene-brain-culture interaction.* Burlington, VT: Ashgate.

Wright, J. P., Tibbetts, S. G., and Daigle, L. E. 2008. *Criminals in the Making: Criminality across the Life Course*.

Evolutionary Psychology

Dawkins, Richard. 2006. *The selfish gene*. New York: Oxford University Press.

Pinker, Steven. 2002. *The blank slate: The modern denial of human nature*. New York: Penguin.

Ridley, Matt. 1993. *The red queen: Sex and the evolution of human nature*. New York: Harper Collins.

Genetics (Molecular and Behavioral Genetics)

Carey, Gregory. 2003. *Human genetics for the social sciences*. Thousand Oaks, CA: Sage.

Ridley, Matt. 2003. *Nature via nurture: Genes, experience, and what makes us human (also The agile gene: How nature turns on nurture)*. New York: Harper Collins.

Rutter, Michael. 2006. *Genes and behavior: Nature-nurture interplay explained*. Malden, MA: Blackwell.

GRADING

Your grade will be determined based on your performance on two (2) examinations, a research paper, and an in-class presentation of your paper. The exams will consist entirely of essay questions and will be worth 25 points each (50 points combined). Your research paper will be worth 30 points and the in-class presentation will be worth 20 points.

Percent of Total	*Item*
25	Exam 1
25	Exam 2
30	Research Paper
20	In-class Presentation

Grading Scale

A	=	93 - 100
A-	=	90 - 92
B+	=	87 - 89
B	=	83 - 86
B-	=	80 - 82
C+	=	77 - 79
C	=	70 - 76
F	=	0 - 69

COURSE POLICIES

Attendance is mandatory. If you miss a class I strongly encourage you to borrow one of your classmate's notes and then talk with me if you need additional clarification. I do not provide students with my notes nor will I post notes/slides to the Internet.

If you must miss an exam you will need to: (1) notify me within 24 hours AND (2) provide me with an acceptable excuse. Note that I may request written documentation. If you do not follow this procedure you will receive a zero on the examination.

Any student who is found responsible for committing an act of academic dishonesty will receive a grade of F or 0 on that project.

TECHNICAL SUPPORT & UNIVERSITY POLICIES

If you experience any problems with your UTD account you may send an email to: assist@utdallas.edu or call the UTD Computer Helpdesk at 972-883-2911.

University policies can be viewed at: http://go.utdallas.edu/syllabus-policies

COURSE SCHEDULE AND ASSIGNED READINGS

Review of popular criminological theories, aversion to biosocial criminology, and the complementary nature of biosocial research
8/27 & 9/3

Beaver, K.M. (2013). *Biosocial criminology: A primer.* Foreword & chapter 1

Harris, J.R. (1998). *The nurture assumption*, Preface.

Barnes, J.C., Boutwell, B.B., & Beaver, K.M. (forthcoming). Contemporary biosocial criminology: A systematic review of the literature, 2000-2012.

Carrier, N. & Walby, K. (2011). Letter to the Editor.

Cullen, F.T. (2011). Beyond adolescence-limited criminology: Choosing our future—the American Society of Criminology 2010 Sutherland Address. *Criminology* 49:287-330.

Horgan, J. (2011). Born outlaws? A criminally feeble proposition. *The Chronicle of Higher Education*, July 17th.

Udry, J. R. (1995). Sociology and biology: What biology do sociologists need to know? *Social Forces* 73:1267-1278.

van den Berghe, P. (1990). Why most sociologists don't (and won't) think evolutionarily. *Sociological Forum* 5:173-185.

Walsh, A. & Ellis, L. (2004). Ideology: Criminology's Achilles' Heel? *Quarterly Journal of Ideology* 27:1-25.

Wright, J.P. & Cullen, F.T. (2012). The future of biosocial criminology: Beyond scholars' professional ideology. *Journal of Contemporary Criminal Justice*, 28:237-53.

Behavioral genetics
9/10

Beaver, K.M. (2013). *Biosocial Criminology: A Primer*, chapter 2

Plomin, R. et al. (2013). *Behavioral Genetics*, chapters 6 and 7

Harris, J.R. (1998). *The nurture assumption*, whole text.

Beaver, K. M., & Barnes, J.C. (2012). Admission of drug-selling behaviors are structured by genetic and nonshared environmental factors: Results from a longitudinal twin-based study. *Addictive Behaviors, 37*, 697-702.

Ferguson, C. J. (2010). Genetic contributions to antisocial personality and behavior: A meta-analytic review from an evolutionary perspective. *The Journal of Social Psychology* 150:160-180.

Lemery, K. S. & Goldsmith, H. H. (1999). Genetically informative designs for the study of behavioural development. *International Journal of Behavioral Development* 23:293-317.

Mason, D.A. & Frick, P. J. (1994). The heritability of antisocial behavior: A meta-analysis of twin and adoption studies. *Journal of Psychopathology and Behavioral Assessment* 16:301-323.

Miles, D. R. & Carey, G. (1997). Genetic and environmental architecture of human aggression. *Journal of Personality and Social Psychology* 72:207-217.

Rhee, S. H. & Waldman, I. D. (2002). Genetic and environmental influences on antisocial behavior: A meta-analysis of twin and adoption studies. *Psychological Bulletin* 128:490-529.

Rowe, D. C. (1987). Resolving the person-situation debate: Invitation to an interdisciplinary dialogue. *American Psychologist* 42:218-227.

Molecular genetics: Candidate genes and GWAS
9/17 & 9/24

Beaver, K.M. (2013). *Biosocial Criminology: A Primer*, chapter 2

Plomin, R. et al. (2013). *Behavioral Genetics*, chapters 2-6

Beaver, K. M., DeLisi, M., Vaughn, M. G., & Barnes, J. C. (2010). Monoamine oxidase A genotype is associated with gang membership and weapon use. *Comprehensive Psychiatry* 51:130-134.

Brunner, H. G., Nelen, M., Breakefield, X. O., Ropers, H. H., & van Oost, B. A. (1993). Abnormal behavior associated with a point mutation in the structural gene for Monoamine Oxidase A. *Science, 262*, 578-80.

Dick, D. M., et al. (2011). Genome-wide association study of conduct disorder symptomatology. *Molecular Psychiatry* 16: 800-08.

Faraone, S. V., Doyle, A. E., Mick, E., and Biederman, J. (2001). Meta-analysis of the association between the 7-repeat allele of the dopamine D4 receptor gene and attention deficit hyperactivity disorder. *American Journal of Psychiatry* 158:1052-1057.

Guo, G., Cai, T., Guo, R., Wang, H., & Harris, K. M. (2010). The dopamine transporter gene, a spectrum of most common risky behaviors, and the legal status of the behaviors. *PLoS One, 5*, e9352.

Guo, G., Ou, X. M., Roettger, M., and Shih, J. C. (2008). The VNTR repeat in MAOA and delinquent behavior in adolescence and young adulthood: Associations and MAOA promoter activity. *European Journal of Human Genetics* 16:626-634.

Tielbeek, J.J. et al. (2012). Unraveling the genetic etiology of adult antisocial behavior: A genome-wide association study. *PLoS ONE, 7*, e45086.

Viding, E. et al. (2010). In search of genes associated with risk for psychopathic tendencies in children: A two-stage genome-wide association study of pooled DNA. *The Journal of Child Psychology and Psychiatry, 51*, 780-88.

Gene-environment interplay part 1:
Gene X Environment Interaction & Epigenetics
10/1 & 10/8

*Ridley video, Moffitt/Caspi lecture, Nova video

Beaver, K.M. (2013). *Biosocial Criminology: A Primer*, chapter 3

Plomin, R. et al. (2013). *Behavioral Genetics*, chapter 8

Barnes, J.C., Beaver, K.M., & Boutwell, B.B. (2013). A functional polymorphism in a serotonin transporter gene (*5-HTTLPR*) interacts with 9/11 to predict gun-carrying behavior. *PLoS ONE*.

Barnes, J.C. & Jacobs, B. (2013). Genetic risk for violent behavior and exposure to disadvantage and violent crime. *Journal of Interpersonal Violence, 28*, 82-120.

Caspi, A., McClay, J., Moffitt, T. E., Mill, J., Martin, J., Craig, I. W., Taylor, A., & Poulton, R. (2002). Role of Genotype in the Cycle of Violence in Maltreated Children. *Science* 297:851-854.

Foley, D. L., Eaves, L. J., Wormley, B., Silberg, J. L., Maes, H. H., Kuhn, J., & Riley, B. (2004). Childhood adversity, monoamine oxidase A genotype, and risk for conduct disorder. *Archives of General Psychiatry* 61:738-744.

Haberstick, B. C., Lessem, J. M., Hopfer, C. J., Smolen, A., Ehringer, M. A., Timberlake, D., & Hewitt, J. K. (2005). Monoamine oxidase A (MAOA) and antisocial behaviors in the presence of childhood and adolescent maltreatment. *American Journal of Medical Genetics* 135B:59-64.

Jaffee, S. R., Caspi, A., Moffitt, T. E., Dodge, K. A., Rutter, M., Taylor, A., & Tully, L. A. (2005). Nature X nurture: Genetic vulnerabilities interact with physical maltreatment to promote conduct problems. *Development and Psychopathology* 17:67-84.

Kim-Cohen, J., Caspi, A., Taylor, A., Williams, B., Newcombe, R., Craig, I. W., & Moffitt, T. E. (2006). MAOA, maltreatment, and gene-environment interaction predicting children's mental health: New evidence and a meta-analysis. *Molecular Psychiatry* 11:903-913.

Moffitt, T. E. (2005). The new look of behavioral genetics in developmental psychopathology: Gene-environment interplay in antisocial behaviors. *Psychological Bulletin* 131:533-554.

Simons, R.L. et al. (2012). Social adversity, genetic variation, street code, and aggression: A genetically informed model of violent behavior. *Youth Violence and Juvenile Justice, 10*, 2-24.

Simons, R.L. et al. (2011). Social environment, genes, and aggression: Evidence supporting the differential susceptibility perspective. *American Sociological Review, 76*, 883-912.

******EXAM 1 DUE: 10/15******

Gene-environment interplay part 2:
Gene X Environment Correlations (*r*GE)
10/15

Beaver, K.M. (2013). *Biosocial Criminology: A Primer*, chapter 3

Plomin, R. et al. (2013). *Behavioral Genetics*, chapter 8

Barnes, J.C., & Kevin M. Beaver. (2012). Marriage and desistance from crime: A consideration of gene-environment correlation. *Journal of Marriage and Family* 74(1): 19-33.

Beaver, K. M., Wright, J. P., & DeLisi, M. (2007). Delinquent peer group formation: Evidence of a gene X environment correlation. *The Journal of Genetic Psychology* 169:227-244.

Cleveland, H.H., Wiebe, R. P., & Rowe, D. C. (2005). Sources of exposure to drinking and smoking friends among adolescents: A behavioral-genetic evaluation. *The Journal of Genetic Psychology* 166:153-169.

DiLalla, L.F. (2002). Behavior genetics of aggression in children: Review and future directions. *Developmental Review* 22:593-622.

Kendler, K.S., & Baker, J. H. (2007). Genetic influences on measures of the environment: A systematic review. *Psychological Medicine* 37: 615-26.

Scarr, S. (1992). Developmental theories for the 1990s: Development and individual differences. *Child Development* 63:1-19.

Scarr, S. & K. McCartney. (1983). How people make their own environments: A theory of genotype → environment effects. *Child Development* 54:424-435.

Methodologies
10/22

Beaver, K. M. (2013). *Biosocial Criminology: A Primer*, chapter 7

Plomin, R. et al. (2013). *Behavioral Genetics*, chapter 9

Arseneault, L., Moffitt, T. E., Caspi, A., Taylor, A., Rijsdijk, F. V., Jaffee, S. R., Ablow, J. C., & Measelle, J. R. (2003). Strong genetic effects on cross-situational antisocial behaviour among 5-year-old children according to mothers, teachers, examiner-observers, and twins' self-reports. *Journal of Child Psychology and Psychiatry* 44:832-48.

Barnes, J.C. (2013). Analyzing the origins of life-course-persistent offending: A consideration of environmental and genetic influences. *Criminal Justice and Behavior, 40,* 519-41.

Barnes, J.C., Beaver, K. M, & Boutwell, B. B. (2011). Examining the genetic underpinnings to Moffitt's developmental taxonomy: A behavioral genetic analysis. *Criminology, 49*, 923-54.

Beaver, K. M., Barnes, J. C., May, J. S., and Schwartz, J. A. (2011). Psychopathic personality traits, genetic risk, and gene-environment correlations. *Criminal Justice and Behavior* 38:896-913.

DeFries, J. C. and Fulker, D. W. (1985). Multiple regression of twin data. *Behavior Genetics* 15:467-473.

Mednick, S. A., Gabrielli, W. F., and Hutchings, B. (1984). Genetic influences in criminal convictions: Evidence from an adoption cohort. *Science* 224:891-894.

Moffitt, T. E., Caspi, A., and Rutter, M. (2006). Measured gene-environment interactions in psychopathology: Concepts, research strategies, and implications for research, intervention, and public understanding of genetics. *Perspectives on Psychological Science* 1:5-27.

Tal, O. (2009). From heritability to probability. *Biological Philosophy* 24:81-105.

Biosocial Interactions
10/29

Beaver, K. M. (2013). *Biosocial Criminology: A Primer*, chapter 5

Barnes, J.C., & Beaver, K. M. (2010). An empirical examination of adolescence-limited offending: A direct test of Moffitt's maturity gap thesis. *Journal of Criminal Justice, 38*, 1176-85.

Beaver, K. M. and Wright, J. P. (2005). Biosocial development and delinquent involvement. *Youth Violence and Juvenile Justice* 3:168-192.

Booth, A., Granger, D. A., Mazur, A., and Kivlighan, K. T. (2006). Testosterone and social behavior. *Social Forces* 85:167-91.

Ellis, L. (2005). A theory explaining biological correlates of criminality. *European Journal of Criminology* 2:287-315.

Moffitt, T. E. (1993). Adolescence-limited and life-course persistent antisocial behavior: A developmental taxonomy. *Psychological Review* 100:674-701.

Tibbetts, S. G., and Piquero, A. R. (1999). The influence of gender, low birth weight, and disadvantaged environment in predicting early onset of offending: A test of Moffitt's interactional hypothesis. *Criminology* 37:843-77.

Raine, A. (2002). Biosocial studies of antisocial and violent behaviors in children and adolescents: A review. *Journal of Abnormal Child Psychology* 30:311-326.

Raine, A., Brennan, P., and Mednick, S. A. (1994). Birth complications combined with early maternal rejection at age 1 year predispose to violent crime at age 18 years. *Archives of General Psychiatry* 51:984-88.

The Brain
11/5

Beaver, K. M. (2013). *Biosocial Criminology: A Primer*, chapter 4

Plomin, R. et al. (2013). *Behavioral Genetics*, chapter 10

Beaver, K. M., Wright, J. P., & DeLisi, M. (2007). Self-control as an executive function: Reformulating Gottfredson and Hirschi's parental socialization thesis. *Criminal Justice and Behavior* 34:1345-1361.

Dobbs, D. (2011). Beautiful brains. *National Geographic* October:36-59.

Ikram et al. (2012). Common variants at 6q22 and 17q21 are associated with intracranial volume. *Nature Genetics*.

Mednick, S. A., Volavka, J., Gabrielle, W. F., & Itil, T. M. (1981). EEG as a predictor of antisocial behavior. *Criminology* 19:219-29.

Raine, A., Lencz, T., Taylor, K., Hellige, J. B., Bihrle, S., Lacasse, L., Lee, M., Ishikawa, S., & Colletti, P. (2003). Corpus callosum abnormalities in psychopathic antisocial individuals. *Archives of General Psychiatry* 60:1134-1142.

Raine, A., Moffitt, T. E., Caspi, A., Loeber, R., Stouthamer-Loeber, M., & Lynam, D. (2005). Neurocognitive impairments in boys on the life-course persistent antisocial path. *Journal of Abnormal Psychology* 114:38-49.

Sowell, E. R., Thompson, P. M., & Toga, A. W. (2007). Mapping adolescent brain maturation using structural magnetic resonance imaging. in *Adolescent psychopathology and the developing brain*, D. Romer and E. F. Walker (Eds.). New York: Oxford.

Taal et al. (2012). Common variants at 12q15 and 12q24 are associated with infant head circumference. *Nature Genetics*.

Thompson, P. M., Cannon, T. D., Narr, K. L., van Erp, T., Poutanen, V.-P., Huttunen, M., Lonnqvist, J., Standertskjold-Nordenstam, C.-G., Kaprio, J., Khaledy, M., Dail, R., Zoumalan, C. I., & Toga, A. W. (2001). Genetic influences on brain structure. *Nature Neuroscience* 4:1-6.

Yang, Y., Raine, A., Lencz, T., Bihrle, S., Lacasse, L., a&nd Colletti, P. (2005a). Volume reduction in prefrontal gray matter in unsuccessful criminal psychopaths. *Biological Psychiatry* 57:1103-1108.

Yang, Y., Raine, A., Lencz, T., Bihrle, S., Lacasse, L., & Colletti, P. (2005b). Prefrontal white matter in pathological liars. *British Journal of Psychiatry* 187:320-325.

Environmental Influences
11/12

Beaver, K.M. (2013). *Biosocial Criminology: A Primer*, chapter 5

Harris, J. R. (2011). Explaining individual differences in personality: Why we need a modular theory. In David M. Buss and Patricia H. Hawley (Eds.), *The evolution of personality and individual differences*. New York: Oxford University Press.

Harris, J. R. (1995). Where is the child's environment? A group socialization theory of development. *Psychological Review* 102:458-89.

Rowe, D. C., & Rodgers, J. L. (1997). Poverty and behavior: Are environmental measures nature or nurture? *Developmental Review* 17:358-75.

Wright, J.P. et al. (2008). Association of prenatal and childhood lead concentrations with criminal arrests in early adulthood. *PLoS Medicine* 5:732-40.

Evolutionary Psychology
******NO IN-CLASS MEETING—ASC CONFERENCE******
11/19

Campbell, A. (1995). A few good men: Evolutionary psychology and female adolescent aggression. *Ethology and Sociobiology* 16: 99-123.

Ellis et al. (2011). The evolutionary basis of risky adolescent behavior: Implications for science, policy, and practice. *Developmental Psychology* 48:598-23.

Tooby, J., & Cosmides, L. (2005). Conceptual foundations of evolutionary psychology. In D. E. Buss (Ed.), *The Handbook of Evolutionary Psychology*. Hoboken, NJ: Wiley.

******THANKSGIVING – NO CLASS******
11/26

Applications to Criminological Theory & Policy
12/3

Beaver, K. M. (2013). *Biosocial Criminology: A Primer*, chapter 6 and chapter 8

Barnes, J.C. (2012). The impact of biosocial criminology on public policy: Where should we go from here? In *Criminological Theory: A Life-Course Approach* (2nd Edition), eds. Matt DeLisi and Kevin M. Beaver. Sudbury, MA: Jones and Bartlett.

Brody, A. L. et al. (2001). Regional brain metabolic changes in patients with major depression treated with either paroxetine or interpersonal therapy. *Archives of General Psychiatry* 58:631-640.

Brody, G. H., Beach, S. R. H., Philibert, R. A., Chen, Y., & Murry, V. M. (2009). Prevention effects moderate the association of 5-HTTLPR and youth risk behavior initiation: Gene x environment hypotheses tested via a randomized prevention design. *Child Development* 80:645-661.

Collins, R. E. (2004). Onset and desistance in criminal careers: Neurobiology and the age-crime relationship. *Journal of Offender Rehabilitation* 39:1-19.

Martin, S. D., Martin, E., Rai, S. S., Richardson, M. A., & Royall, R. (2001). Brain blood flow changes in depressed patients treated with interpersonal psychotherapy or venlafaxine hydrochloride. *Archives of General Psychiatry* 58:641-648.

Moffitt, T. E., Ross, S., & Raine, A. (2011). Crime and biology. In J. Q. Wilson & J. Petersilia (Eds.) *Crime and public policy*. New York: Oxford.

Raine, A. (2008). From genes to brain to antisocial behavior. *Current Directions in Psychological Science* 17:323-28.

Ridley, M. (2003). *Nature via nurture: Genes, experience, and what makes us human*, chapter 10

Thase, M. E. (2001). Neuroimaging profiles and the differential therapies of depression. *Archives of General Psychiatry* 58:651-653.

Vaske, J. Galyean, K., & Cullen, F. T. (2011). Toward a biosocial theory of offender rehabilitation: Why does cognitive-behavioral therapy work? *Journal of Criminal Justice* 39:90-102.

Walsh, A. (2000). Behavior genetics and anomie/strain theory. *Criminology* 38:1075-1108.

******EXAM 2 DUE & PAPER PRESENTATIONS******
12/10

******FINAL PAPER DUE******
12/18

Notes: Articles will be posted to eLearning. This schedule is not a binding contract. I reserve the right to make changes at any time and it is your job to stay abreast of these changes.