

Peter B. Gray

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Director, Human Behavioral Endocrinology Laboratory
University of Nevada, Las Vegas
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EDUCATION

Harvard University, Cambridge, MA

- Ph.D., Biological Anthropology 2003
- A.M., Biological Anthropology 2000

UCLA, Los Angeles, CA

- B.A., Anthropology, Departmental Highest Honors 1996
- B.A., Geography/Environmental Studies 1996

CURRENT RESEARCH INTERESTS & COLLABORATIONS

- Investigating the hormonal correlates of grandmothering in Jamaica (Peter Gray, P.I. with Maureen Samms-Vaughan and Toni Ziegler).
 - Testing the functional role of prolactin and oxytocin in grandmaternal care.
- Researching physiological correlates of human pair-bond (marital) interactions in cross-cultural settings (with William Jankowiak).
 - Addressing whether cardiovascular, neuroendocrine and immune function change in response to variation within and between societies in pair-bond dynamics.
- Fostering the use of minimally invasive hormone measures (from saliva, finger prick blood spot and urine samples) to address questions concerning the evolution and endocrinology of human behavior.
- Evolutionary and biocultural perspectives on the human family, especially fatherhood (authoring book with Kermyt Anderson on the evolution of human fatherhood).
- Investigating aging and androgens among Ariaal (pastoralists) men of northern Kenya (with Benjamin Campbell and Peter Ellison).

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GRANTS AND AWARDS

2007: UNLV Research Development Award (\$10,000)

2006: Center for Human and Primate Reproductive Ecology, Yale University, Research Grant (\$2,000)

2003-05: Post-doctoral Fellowship in Endocrinology, Metabolism and Molecular Medicine, Charles Drew University of Medicine and Science (\$90,000)

2000-03: Bok Teaching Center, Harvard University, Distinguished Teaching Award (4 semesters)

2000-02: Arthur Green Foundation Research Grant (\$8,425)

2000-01: Frederick Sheldon Traveling Fellowship, Harvard University (\$12,000)

2000: L.S.B. Leakey Research Grant (declined due to Tanzanian permit difficulties)

1998: National Science Foundation Graduate Student Fellowship, Honorable Mention

1998: Mellon Foundation grant for summer research (\$3,000)

1997-2001: Michael Crichton Fellowship, Harvard University

1996: Teague-Melville-Elliott Award (best undergraduate paper in the social sciences), UCLA

PUBLICATIONS

Books and book chapters:

Ellison, P.T. and Gray, P.B., Eds. In press. *Endocrinology of Social Relationships*. Cambridge: Harvard University Press.

Gray, P.B. and Campbell, B.C. In press. Human male testosterone, pair bonding and fatherhood. In *Endocrinology of Social Relationships*, Ellison, P.T. and Gray, P.B., eds. Cambridge: Harvard University Press.

Sanchez, R., Parkin, J., Chen, J. and Gray, P.B. In press. Oxytocin, vasopressin and human social behavior. In *Endocrinology of Social Relationships*, Ellison, P.T. and Gray, P.B., eds. Cambridge: Harvard University Press.

Gray, P.B. In press. The evolution and endocrinology of human behavior: A focus on sex differences and reproduction. In *Human Evolutionary Biology*, Muehlenbein, M., ed. Cambridge: Cambridge University Press.

Anderson, K.G. and Gray, P.B. In prep. *Manhandled: Biology of Human Fatherhood*. Cambridge: Harvard University Press.

Peer reviewed journals:

Manlove, H., Guillermo, C. and Gray, P.B. In press. Do women with polycystic ovary syndrome (PCOS) report differences in sex-typed behavior as children and adolescents? : Results of a pilot study. *Annals of Human Biology*.

Apicella, C.L., Dreber, A., Campbell, B., Gray, P.B., Hoffman, M. and Little, A.C. In press. Testosterone and financial risk preferences. *Evolution and Human Behavior*.

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Yang, C.J., Gray, P.B., Zhang, J. and Pope, H.G. Jr. In press. Second to fourth digit ratios, sex differences, and behavior in Chinese men and women. *Social Neuroscience*.

Campbell, B.C., Gray, P.B., Eisenberg, D.T., Ellison, P.T. and Sorenson, M. In press. Androgen receptor CAG repeats and body composition among Ariaal men. *International Journal of Andrology*.

Eisenberg, D.T., Campbell, B., Gray, P.B. and Sorenson, M.D. 2008. Dopamine receptor genetic polymorphisms and body composition in a subsistence society: An exploration of nutrition indices among settled and nomadic Ariaal pastoralists of northern Kenya. *BMC Evolutionary Biology* 8: 173.

Jankowiak, W., Gray, P.B. and Hatman, K. 2008. Female choice, nationality, and perception of “sexual beauty” in China. *Cross-cultural Research* 42: 248-269.

Van Anders, S. and Gray, P.B. 2007. Hormones and human partnering. *Annual Review of Sex Research* in press.

Gray, P.B., Parkin, J.C. and Samms-Vaughan, M.E. 2007. Hormonal correlates of human paternal interactions: a hospital-based investigation in urban Jamaica. *Hormones and Behavior* 52: 499-507.

Gray, P.B., Ellison, P.T. and Campbell, B.C. 2007. Testosterone and marriage among Ariaal men of northern Kenya. *Current Anthropology* 48: 750-755.

Yang, C.J., Hooven, C.K., Boynes, M., Gray, P.B. and Pope, Jr., H.G. 2007. Testosterone levels and mental rotation performance in Chinese men. *Hormones and Behavior* 51: 373-378.

Campbell, B.C., Ellison, P.T. and Gray, P.B. 2006. Age-related patterns of body composition, physical function and salivary testosterone among Ariaal men of northern Kenya. *Aging: Clinical and Experimental Research* 18: 470-476.

McIntyre, M.H., Gangestad, S.W., Gray, P.B., Flynn Chapman, J., Burnham, T.C., O'Rourke, M.T., and Thornhill, R. 2006. Romantic involvement often reduces men's testosterone levels—but not always: The moderating roles of extra-pair sexual interest. *Journal of Personality and Social Psychology* 91: 642-651.

Gray, P.B., Yang, C.J. and Pope, H.G. Jr. 2006. Fathers have lower salivary testosterone levels than unmarried men and married non-fathers in Beijing, China. *Proceedings of the Royal Society of London B: Biological Sciences* 273: 333-339.

Gray, P.B., Kruger, A., Huisman, H.W., Wissing, M.P. and Vorster, H.H. 2006. Predictors of South African male testosterone levels: the THUSA study. *American Journal of Human Biology* 18: 123-132.

Campbell, B.C., Gray, P.B. and Leslie, P. 2005. Age-related changes in body composition among Turkana males of Kenya. *American Journal of Human Biology* 17: 601-610.

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Gray, P. and Campbell, B. 2005. Erectile dysfunction and its correlates among the Ariaal of northern Kenya. *International Journal of Impotence Research* 17: 445-449.

Gray, P.B., Singh, A., Woodhouse, L., Storer, T.W., Casaburi, R., Sinha-Hikim, I., Dzekov, C., Dzekov, J. and Bhasin, S. 2005. Effects of testosterone on sexual function, mood and visuospatial cognition in older men. *Journal of Clinical Endocrinology and Metabolism* 90: 3838-3846.

Choi, H.H., Gray, P.B., Storer, T.W., Calof, O.M., Woodhouse, L., Singh, A.B., Padero, C., Mac, R.P., Sinha-Hikim, I., Shen, R., Dzekov, J., Dzekov, C., Sushnir, M.M., Rockwood, A.L., Meikle, A.W., Lee, M.L., Hays, R.D. and Bhasin, S. 2005. Effects of testosterone replacement in human immunodeficiency virus-infected women with weight loss. *Journal of Clinical Endocrinology and Metabolism* 90: 1531-1541.

Yang, C.J., Gray, P. and Pope, H.G. Jr. 2005. Male body image in Taiwan vs. the West: *Yanggang Zhiqi* meets the Adonis Complex. *American Journal of Psychiatry* 162: 263-269.

Gray, P.B. 2004. Evolutionary and cross-cultural perspectives on gambling. *Journal of Gambling Studies* 20: 347-371.

Gray, P.B., Campbell, B.C., Marlowe, F., Lipson, S.F. and Ellison, P.T. 2004. Social variables predict between- subject but not day-to-day variation in the testosterone of U.S. men. *Psychoneuroendocrinology* 29: 1153-1162.

Gray, P.B., Flynn Chapman, J., McIntyre, M.H., Burnham, T.C., Lipson, S.F. and Ellison, P.T. 2004. Human male pair bonding and testosterone. *Human Nature* 15: 119-131.

Gray, P.B. 2004. HIV and Islam: Is HIV prevalence lower among Muslims? *Social Science and Medicine* 58: 1751-1756.

Gray, P.B. 2003. Marriage, parenting and testosterone variation among Kenyan Swahili men. *American Journal of Physical Anthropology* 122: 279-286.

Burnham, T.C., Flynn Chapman, J.C., Gray, P.B., McIntyre, M., Lipson, S.F. and Ellison, P.T. 2003. Men in committed, romantic relationships have lower testosterone than single men. *Hormones and Behavior* 44: 119-122.

Gray, P.B., Kahlenberg, S., Barrett, E., Lipson, S. and Ellison, P.T. 2002. Marriage and fatherhood are associated with lower testosterone in males. *Evolution and Human Behavior* 23: 193-201.

Gray, P.B. and Marlowe, F. 2002. Fluctuating asymmetry among a foraging population: The Hadza of Tanzania. *Annals of Human Biology* 29: 495-501.

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In review and in prep:

Campbell, B.C., Gray, P.B. and Radak, J. In review. In the company of men: quality of life and social support among the Ariaal of northern Kenya.

Campbell, B.C., Dreber, A., Apicella, C.L., Eisenberg, D.T.A., Gray, P.B., Little, A.C., Garcia, J.R., Zamore, R.S., Lum, J.K. In review. Testosterone exposure, dopaminergic reward, and sensation-seeking in young men.

Steiner, E.T., Barchard, K.A., Meana, M., Hadi, F. and Gray, P.B. In prep. Testosterone responses to poker competition in men.

Peterson A., Connolly, C., Steiner, E.T., Hadi, F., Gray, P.B. In prep. The acutely and socially sensitive testis: New human data and an evolutionary perspective.

Gray, P.B. and Samms-Vaughan, M.E. In prep. Testing the hormonal correlates of grandmothering in Jamaica.

Book Reviews:

Gray, P.B. 2007. Book Review: *Human Biology of Afro-Caribbean Populations* (By L. Madrigal). *American Journal of Physical Anthropology* 134: 296.

Gray, P.B. 2007. Book Review: *Men: Evolutionary and Life History* (By R.G. Bribiescas). *Journal of Mammalian Evolution* 14: 147-148.

Gray, P.B. 2007. Book Review: *Cambridge Dictionary of Human Biology and Evolution* (By L.L. Mai, M. Young Owl and M.P. Kersging). *American Journal of Physical Anthropology* 132: 318.

Gray, P.B. 2005. Book Review: *Monogamy: Mating Strategies and Partnerships in Birds, Humans and Other Mammals* (ed. By U.H. Reichard and C. Boesch). *American Journal of Physical Anthropology* 127: 124-125.

Presentations and Invited Talks:

“The makings of a man: hormones, pair bonds and fatherhood.” Biological Anthropology Colloquium Series, University of Colorado. Boulder, Colorado. April 2008.

“Human male testosterone, pair bonds and fatherhood: A review of the data.” Society for Cross-cultural Research. New Orleans, Louisiana. February 2008.

“Hormonal correlates of human paternal interactions: A hospital-based investigation in urban Jamaica.” Society for Scientific Anthropology Meetings. New Orleans, Louisiana. February 2008.

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“The makings of a man: hormones, pair bonds and fatherhood.” Department of Anthropology. Cal State, Fullerton. October 2007.

“Neuroendocrinology of human fatherhood.” Human Behavior and Evolution Society Meetings. Williamsburg, Virginia. June 2007.

“Hormonal correlates of fatherhood in Jamaica.” American Association of Physical Anthropology Meetings. Philadelphia, Pennsylvania. March 2007.

“Investigating hormones and implicit social cognition: no relationships between salivary testosterone and cortisol and computer-based tests among Jamaican males.” Human Biology Association Meetings. Philadelphia, Pennsylvania. March 2007.

“Testosterone and marriage among Ariaal men of northern Kenya.” American Association of Physical Anthropology Meetings. Anchorage, Alaska. March 2006.

“Erectile dysfunction and its correlates among the Ariaal of northern Kenya.” Human Biology Association Meetings. Anchorage, Alaska. March 2006.

“Effects of testosterone on sexual function, mood and visuospatial cognition in older men.” Endocrine Society Meetings. San Diego, California. June 2005.

“Fathers have lower salivary testosterone levels than unmarried men and married non-fathers in Beijing, China.” Human Behavior and Evolution Society. Austin, Texas. June 2005.

Session Co-organizer and Chair for “Recent developments in the biocultural study of masculinity.” American Anthropological Association Meetings. Atlanta, Georgia. December 2004.

“Human male body image in cross-cultural perspective: New data from Taiwan and Kenya.” American Anthropological Association Meetings. Atlanta, Georgia. December 2004.

“Human male testosterone variation viewed within a framework of mating and parenting effort.” American Association of Physical Anthropology Meetings. Tampa, Florida. April 2004.

“Pair bonding, parenting and human male testosterone variation.” Behavior, Evolution and Culture Colloquium Series, UCLA. Los Angeles, CA. October 2003.

“Sex differences in gambling?: Evolutionary and cross-cultural perspectives.” New England Biological Anthropology Symposium. Cambridge, Massachusetts. March 2003.

“Sociosexual correlates of testosterone levels.” Human Biology Association Meetings. Tempe, Arizona. April 2003.

“Marriage, parenting and testosterone variation among Kenyan Swahili men.” Human Behavior and Evolution Society. New Brunswick, New Jersey. June 2002.

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“Fluctuating asymmetry among a foraging population: the Hadza of northern Tanzania.”
Human Behavior and Evolution Society. Amherst, Massachusetts. June 2000.

RESEARCH EXPERIENCE

- Biological sample collection, interviews and project (hormones and grandmothing) supervision, Kingston, Jamaica, May-July 2008
- Biological sample collection and project (hormones and paternal care) supervision, University Hospital of the West Indies, Jamaica, June-July 2006
- Ethnographic, survey and endocrine research in east Africa (among Ariaal, nomads in Kenya, August 2004; Swahili of Kenya, March-May 2001; Hadza of Tanzania, July-August 1998).
- Neuropsychological testing at Charles Drew University: administering tests assessing verbal abilities, spatial cognition, short-term memory and other outcomes to determine if performance on these tests varies during testosterone interventions, December 2003-June 2005.
- Administering questionnaires and conducting salivary testosterone research among U.S. men, primarily from Boston area, July-October 2002, March-May 2000.
- Conducted salivary testosterone and cortisol assays in the Reproductive Ecology Laboratory at Harvard University, 2000-2003.
- Conducting research on resource conservation in Pacaya Samiria National Reserve, Peru, September-December 1996.

TEACHING EXPERIENCE

- Assistant Professor at UNLV, Fall 2005-present
 - Introduction to Physical Anthropology
 - Anthropology and Ecology
 - Evolution and Biology of Human Behavior
 - Hormones and Behavior
 - Current Thoughts in Physical Anthropology
- Lecturer, UCLA Extension School, Fall 2004
 - Evolution and Biology of Human Behavior
- Teaching Fellow at Harvard University, Cambridge, MA, for the following classes:
 - Biology of Aggression, Spring 2003.
 - Evolution of Human Nature, Fall 2002, Spring 2002.
 - Human Behavioral Biology, Fall 2000, Fall 1999, Fall 1998.
 - Social Relationships, Spring 2000.
- Course Reader for "Rainforest Conservation Ecology", Spring 1999, at Harvard Extension School.

RELATED PROFESSIONAL EXPERIENCE

- Member of the American Anthropological Association, American Association of Physical Anthropologists, American Association of Human Biologists, Human Behavior and Evolution Society, and Society for Cross-cultural Research.

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- Ad hoc Reviewer for *Aging: Clinical and Experimental Research*, *Annals of Human Biology*, *American Journal of Human Biology*, *Archives of General Psychiatry*, *Biology Letters*, *BMC Infectious Diseases*, *Cross-cultural Research*, *Evolution and Human Behavior*, *Hormones and Behavior*, *Human Nature*, *Journal of Urology*, *Medical Anthropology Quarterly*, *Personality and Individual Differences*, *Physiology and Behavior*, *Proceedings of the National Academy of Sciences*, *Proceedings of the Royal Society of London B*, *Psychoneuroendocrinology*, *Social Biology* and *Social Problems*.

Colleagues' and my research has been covered by popular media outlets including, but not limited to: American Way magazine, BBC News, Boston Globe, Denver Post, Fox News, Harvard Gazette, Las Vegas Review Journal, Men's Health, National Geographic television, New Scientist, Psychology Today, UNLV Rebel Yell, Science Daily, Seattle Times, Scientific American, UK Telegraph, Times of India, and the Washington Post.